

## POSTERS

Monday July 6th

### Track A – Biological Sciences

**PA6 001** TRAJECTORIES OF CHANGES IN HEALTH STATUS IN OLDER CANADIANS  
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**Introduction:** Changes in health with aging are ubiquitous. On average, they are presented by decline: physiological impairment, illnesses, functional limitations and an exponential increase in the mortality rate. Even so, different people of the same chronologic age change differently. Here we suggest a stochastic dynamic model to predict changes in individual health states and mortality, given baseline health status. We illustrate how the model allows up to ten years' projection of health status and mortality risk. **Materials & Methods:** We analyzed the data from the National Population Health Survey, a large Canadian study conducted in five waves from 1994 to 2004 (n=4,444) from age 55 y.o. Thirty-three dichotomized variables (coded as deficits), including medical conditions, disabilities and health history were used to calculate each individual's health status, represented by a deficit accumulation count. Probabilities of transitions in the deficit counts were calculated using a non-homogeneous time and state dependent Poisson process. **Results:** The survival probability and the probability of transitions between different health states were calculated as a function of time and state dependent on only four readily interpretable parameters: two represent health transitions of survivors and two other represent the probability of death. The model allows us to estimate the probability of any degree of change, including improvements. The parameters of the model can be adjusted for covariates to analyze the factors influencing changes in health at any degree and in all directions. The performance of the model was exceptionally high, "explaining" more than 99% of variance. **Conclusions:** The kinetics of the model parameters indicates that the changes over time are consistent with a general stochastic Poisson mechanism. This makes possible the prediction of changes in health with a high degree of precision and a means of evaluating interactions of important risk factors.

**PA6 002** SMOKING HABITS AND MORTALITY AMONG THE OLDEST OLD – DOES PREVIOUS SMOKING HISTORY MATTER?  
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**Introduction** Little evidence is present on risk factors for death for the oldest old. The studies done suggest that many of the traditionally risk factors for death among oldest old have a diminished if any effect. For current smoking habits none effect have been observed and it has been hypothesized that smokers alive at 90 is a highly selected group able to withstand the harmful effects of smoking. In this study we further address the paradox that a well known unhealthy lifestyle does not influence risk for death among the oldest old by using various measures of smoking habits. **Methods and materials** The study population comprised all persons born in 1905, which were alive in 1998 and agreed to participate in the study (63%). Based on various kinds of self reported smoking habits we followed up for death from 1998 to 2008, stratifying by age and sex. The death rates were regressed against the various smoking measures and the stratified variables using multiplicative Poisson regression models. **Results** We found further support for a diminishing effect on death rates of various smoking measures at very old ages even though some increased effects were found for current heavy smokers when compared to never smokers (Rate ratio: 1.3, 95% CI: 1.02-1.66). Generally, light smokers had a tendency for a lower risk of dying when compared to never smokers. Also, a tendency for increased risk of dying with increasing pack years was found. **Conclusion** We found that smoking history still show an effect at 90, however the effect is very small when compared to the effects seen at younger age groups. Ours results generally support the hypothesis of a selections pressure leaving only smokers alive with genetic and/or environmental characteristics that protect them against the toxicity from smoking.

**PA6 003** THE SINGLE NUCLEOTIDE POLYMORPHISM RS1050450 IN GPX1 IS ASSOCIATED WITH HUMAN LONGEVITY  
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Center for Molecular Gerontology, Department of Molecular Biology, University of Aarhus (Aarhus C, Denmark); (3) Laboratory of Molecular Gerontology, Biomedical Research Center, National Institute on Aging, NIH (United States of America)

**Introduction** Genetic factors contribute to variation in life span by approximately 25%, a contribution believed to be minimal before age 60 years and most profound from age 85 years. The free radical theory of aging states that reactive oxygen species (ROS) play a key role in age-related accumulation of cellular damage, and consequently influence aging and longevity. Therefore, variation in genes encoding proteins protecting against ROS could be expected to influence variation in aging and longevity. The human GPX1 gene contains a C599T SNP resulting in a Pro200Leu substitution. rs1050450 is associated with age-related diseases and appear to affect the activities of the encoded variant proteins. Here we investigate the possible association of rs1050450 with human longevity. **Material and Methods** rs1050450 was genotyped in 1613 individuals of the Danish 1905 Birth Cohort, a prospective survey of all Danes born in 1905 and being alive in 1998. The survivors were followed either to death or to January 30<sup>th</sup> 2008. At the end of follow-up 1552 (96.2%) were deceased. rs1050450 was genotyped using Taqman based allele discrimination and mortality risk was estimated using the Cox proportional hazard model. **Results** Decreased mortality was observed for TT and CT individuals (HR (CT) = 0.87; HR (TT) = 0.88), while the combined TT/CT genotype group showed a HR of 0.93 (P = 0.008, 95% CI: [0.88-0.98]). When looking at males and females separately it was observed that the decreased survival of TT/CT individuals was most pronounced for males. **Conclusion** This longitudinal study indicates that the rs1050450 might be a risk factor for mortality in the oldest old and hence that genetic variation in GPX1 may be affect variation in life span. Supported by NIA (P01 AG08761-18) and VELUX foundation (95-10311419)

**PA6 004** THE ROLE OF NEUROACTIVE STEROIDS IN THE PROCESSIONS OF LEARNING AND MEMORY OF OLD RATS  
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**Involutional period of development** is accompanied by reformation of functional systems, providing accustoming behavior processes of learning and memory. Out the same time changing the level and correlation of steroid hormones of the process of ageing is accompanied by disruption in behavioral adaptation and conditional reflectory activity. In connection with it we studied the dynamic level of neuroactive steroids in blood plasma and some other structures of old rats brain in the processions of learning and relearning of conditional reflection. To do this were used 40 males and females rats of «Vistar» line at the age of 1,5-2 year. Conditional reflexes was being formed in the course of 5 days in the Morris water marl, and for the next 3 days was redoing early acquired skill. At all stages of realization of conditional activity we were testing corticosterone, testosterone and estradiol in blood plasma, homogenate of hypothalamus, hippocampus, amygdale, cingulated and frontal cortex. Received data were statistically analyzed with the help of «SPSS-13.0». The research results let us find out slowing down of conditional activity formation of avoiding water by old male rats with comparing to female ones, however during the redoing of early acquired skill any sexual differences were not found out. Besides, at all stages of conditional activity realization the old rats of both sexes tested the changing of steroid hormone level as in blood plasma as in hypothalamus, hippocampus, amygdale, cingulated and frontal cortex with comparing to the control. The increasing of testosterone in brain in condition of its constant plasma level in the process of formation and relearning conditional points at the possibility of testosterone formation as in males as in females brains in their involutional period of development. The data of correlational analysis point at the ability to learning and relearning of males and females old rats with dynamic of corticosterone, testosterone and estradiol in brain and blood plasma. The received data testified the hypothesis of elective and sexdimorf involvement of neuroactive steroids and some separate brain structures in formation of conditional activity and rats memory in their involutional period of development.

**PA6 005** THE CELL PROLIFERATION AND APOPTOSIS IN THE PRESENCE OF AMINO ACIDS IN ORGANOTYPIC CULTURE OF TISSUES OF DIFFERENT AGE  
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The regulation of repair processes in tissues of organism through the stimulation of cell proliferation or its inhibition in apoptosis is accomplished by regulatory peptides. An information on different effects of amino acids on some cellular processes is currently appearing. The adequate method for quantitative determination of the effect of preparations being examined is the organotypic culturing of tissue. Changes in the amount of cells in explant growth zone serve as a criterion of the screening evaluation of the biological activity of substances. The effect of 20 L-amino acids on the dynamics of development of spleen explants from 1- and 21-day-old rats on an organotypic tissue culture was studied. The area index (AI) was calculated in arbitrary units as ratio of area of whole explant to the area of the central zone. Asparagine, lysine, arginine, and glutamic acid have the oppositely directed effects that depended on degree of tissue maturity on these processes. At concentrations of 0.05 ng/ml, these amino acids produce an inhibitory effect on cell proliferation in immature (from 1-day-old rats) spleen tissue, by 28-35% compared with control. The same four amino acids induced an opposite effect on the explants of mature tissue: they stimulated cell proliferation, AI was greater by 32-40% compared with control. An immunohistochemical assay of the expression of proapoptotic protein p53 in the growth zone of explants from 21-day-old rats revealed that introduction into the culture medium of asparagine, lysine, arginine, glutamic acid did not affect expression of p53. In 1-day-old rats a sharp increase in the area of expression of p53 was observed, by 52-120% compared with control. One can suppose that four out of 20 amino acids encoded by DNA can regulate proliferation.

#### **PA6 006 GLYCATION AND AGING: THE PRESENT AND THE FUTURE**

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Advanced glycation end-products (AGEs) are involved in cell alteration during diabetes mellitus (glycotoxin) and renal failure (uremic toxin) and participate to the endothelial dysfunction leading to diabetic macro but also micro-angiopathy. These aging toxins also accumulate in tissues and organs during rheumatoid arthritis and Alzheimer disease. No exclusive AGE classification is actually available. Non-enzymatic glycation and glycoxidation with glucose auto-oxidation represent the two main pathways resulting in AGE formation. RAGE (receptor for AGEs) activation altered cell and organ functions by a pro-inflammatory, procoagulant and pro-fibrosis factors cell response. AGEs can also have deleterious effects through glycated protein accumulation or in situ protein glycation. Many in vitro or animal studies demonstrated that AGE deleterious effects can be prevented by glycation inhibitors, AGE cross-link breakers or AGE-RAGE interaction inhibition. New molecules are actually studied as new strategy to prevent or treat the deleterious effects of these aging toxins.

#### **PA6 007 CHROMOSOMES MODIFICATION AT THE OLD AGE**

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Introduction: The object of present investigation is to study mutation level (chromosome aberration covering telomere regions), modifications of chromosome structure (level of condensed chromatin) and reparation under the influence of bioregulators and heavy metals in culture lymphocyte from old individuals. Methods and materials: The methods: of electron microscopy and differential scanning microcalorimetry; of C-and Ag-positive NORs bending; transcriptional activity of DNA-dependent RNA polymerase; of unscheduled DNA synthesis and the frequency of SCE under the single and combined effect of heavy metal salts (NiCl<sub>2</sub> and CoCl<sub>2</sub>) and bioregulators (Epitalon, Livagen, Vilon) have been used in lymphocyte cultures from individuals at the age 80 and over. Results: The analysis of obtained results showed: Chromosome progressive heterochromatinization (condensation of eu- and heterochromatin regions) occurs at aging; 2. Decrease of repair processes and increase in frequency of chromosome aberrations in aging is secondary to the progressive heterochromatinization; 3. Chromosome heterochromatinization is the area where one should seek solutions for the prolongation of the span of life; 4. CoCl<sub>2</sub> alone and combination with the bioregulators (Epitalon, Livagen, Vilon) have different chromosomal target regions proceeding from the intensity of SCE induction, deheterochromatinization of precentromeric and telomeric heterochromatin in lymphocytes of old individuals. Conclusion: Chromosome progressive heterochromatinization is a key factor of aging.

#### **PA6 008 APOPTOSIS INCREASE IN TUMORS OF AGED COMPARED TO YOUNG MICE IS INVERSELY PROPORTIONAL TO AKR LYMPHOMA MALIGNANCY**

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Introduction While incidence of neoplasia is known to increase with age, tumor growth and metastatic spread proceed, paradoxically, at a slower rate in aged as compared to young patients. This intriguing phenomenon is observed in many human and experimental tumors. We have shown this particular behavior in the AKR lymphoma and B16

melanoma. Understanding the mechanisms of this phenomenon is of importance in itself and even more so in view of the possibility that these mechanisms may eventually suggest modalities for age-adjusted anti-tumoral therapy. We have shown that one such mechanism is increased tumor cell apoptosis in the old animals. In the present study we tried to verify whether the induction of tumor cell apoptosis in the aged depends on the malignancy of the tumor. We used variants of malignancy of the AKR lymphoma and tested the degree of apoptosis in young and old mice in several such variants. Methods and Materials The following variants of AKR lymphoma were used: TAU-47, TAU-44 and TAU-33 of low, intermediate and high malignancy, respectively. Apoptotic cell death was assessed according to various cellular (Apoptag staining, DNA flow cytometry) and molecular (ladder type DNA fragmentation, Bcl-2, Fas receptor and caspases 8, 3 and 9 expression) characteristics. Results We found that tumor cell apoptosis was increased in tumors of old as compared to those of young mice in all variants. However this age-dependent increased apoptosis was inversely proportional to AKR lymphoma malignancy. Conclusions Our results may indicate that the tumor inhibitory capacity of the old organism microenvironment is limited by the aggressiveness of the tumor. It is therefore expected that inducing tumor cell apoptosis as a therapeutic modality in the old can be more effective at early stages of tumor development than at late ones.

#### **PA6 009 GROWTH ARREST-SPECIFIC GENE 6 PLAYS A ROLE IN AGEING KIDNEY THROUGH ADVANCED GLYCATION ENDPRODUCTS**

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Introduction: Cellular and molecular basis of ageing kidney remains largely uncharacterized. We reported that growth arrest-specific gene 6 (Gas6) plays a key role in the development of glomerulonephritis and diabetic nephropathy. Here we examined whether Gas6 is involved in the development of glomerulosclerosis associated with ageing. Methods: Glomeruli were isolated from young (1 month) and aged (12 months) mice, and the expression of Gas6 was quantified by real-time PCR. Wild type (WT) and Gas6 knockout (KO) mice were sacrificed at 3, 12, and 24 months. Glomerular surface area and cell number were examined by morphometric analyses. Phosphorylation of Akt was assessed by Western blot analysis. Renal accumulation of advanced glycation end products (AGEs) was quantified by dot blot assay. Transcriptional activity of type IV collagen (Col4) was measured by reporter assay. Results: Glomerular expression of Gas6 was increased by 2 folds at 12 months compared with at 1 month in WT mice. Glomerular surface area and cell number were also progressively increased at 12 and 24 months compared with at 3 months in WT mice. However, the increase in KO mice was significantly less than in age-matched WT mice. Consistently, more phosphorylation of Akt was found in aged glomeruli of WT mice, but not of Gas6 KO mice. Renal AGE accumulation was also increased with ageing. However, renal expression of AGEs was not different between WT and KO mice. In vitro, AGEs increased expression of Gas6 in mesangial cells from WT mice. The transcriptional activity of Col4 was also increased by AGEs in mesangial cells from WT mice, but not in those from KO mice. Conclusions: These results suggest that Gas6 is involved in the development of age-associated glomerular damages via AGE accumulation, and that Gas6 could be a novel therapeutic target for ageing kidney.

#### **PA6 010 A POSSIBLE INVOLVEMENT OF HEAT SHOCK PROTEINS IN PROCESS OF SENESCENCE**

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Involvement of heat shock proteins (HSP) in regulation of cell and organism ageing is an actual problem of modern gerontology. It is known that HSP can control the level of reactive oxygen species (ROS) producing by phagocytes. The goal of this work was to study the influence of normal or modified proteins of autologous serum (AS) on ROS production by neutrophils. Neutrophils of 96-98% pure were isolated from peripheral blood of patients from 16 to 95 years old. Neutrophils were activated by zymosan or AS heated at 100°C during 30 sec or irradiated with 200-280 nm ultraviolet light (UV) before interaction with neutrophils. Cell expression of HSP70 was detected by flow cytometry. Production of ROS by neutrophils was decreased after their treatment by heated and UV irradiated AS comparing with the cells treated with normal AS. Heating of the neutrophils at 42°C from 10 sec to 5 min before the AS treatment resulted in significant reduction of ROS synthesis. Short term heat stress for 10 or 30 sec was quite enough for suppression of ROS production. Flow cytometry analysis showed that heat shock increased HSP70 expression in neutrophils, and it is noteworthy that this effect was higher in young group than in old one. The level of intracellular ROS and expression of HSP70 in neutrophils were changed in the opposite direction after heat shock and treatment by AS. Our results suggest that the known phenomenon, namely enhancing ROS synthesis by phagocytes in senescence, might be caused by frequent stresses and reduction of function of antistress genes. Following decrease of HSP synthesis might result in enhancement of function of NADPH oxidase, the main enzyme of ROS production. Damaging factors of environment

can induce cell stress in organism by action on autologous serum proteins ("serum" mechanism of ageing).

**PA6 011 TOP-DOWN CONTROL ANALYSIS OF AGING EFFECT ON MITOCHONDRIAL OXIDATIVE PHOSPHORYLATION IN RAT SKELETAL MUSCLE**

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**Introduction:** The aging process of skeletal muscle, characterized by a progressive loss of muscle mass and functionality, is highly complex and remains poorly understood. Several experimental findings seem to implicate oxidative phosphorylation dysfunctions, but no clear consensus has been reached. **Methods:** Effect of aging on mitochondrial oxidative phosphorylation was investigated on isolated mitochondria from rat gastrocnemius muscle. Firstly, membrane potential, oxidation and phosphorylation rates were monitored simultaneously to determine the effect of aging on the oxidative phosphorylation parameters. Top-Down control analysis, an integrative approach extensively used in our laboratory, was applied to determine the modifications of the internal oxidative phosphorylation regulation induced by aging. In this approach, the oxidative phosphorylation is described as a branched system composed of three large modules - the substrate oxidation, the phosphorylation and the proton leak modules - linked by a common intermediate, the proton-motive force. **Results:** Maximal oxidative phosphorylation activity was found significantly decreased in older rats ( $752.9 \pm 80.0$  vs  $615.4 \pm 124.5$  nmolATP/min/mg), but no modification of mitochondrial efficiency was observed with aging (ATP/O ratio:  $1.75 \pm 0.10$  vs  $1.76 \pm 0.25$ ). Proton leak kinetic was also found to be unaltered with aging. However, the major result was obtained using Top-Down control analysis, which has revealed dysfunction of the phosphorylation module under intermediate phosphorylation activity inducing a dysregulation of oxidative phosphorylation in older rats. This dysfunction appears to be physiologically relevant since under *in vivo* conditions, mitochondrial oxidative phosphorylation operates below maximal rates. **Conclusion:** This dysregulation of oxidative phosphorylation with aging is certainly responsible of an impaired adaptation of mitochondrial response toward modifications in the required cellular ATP turnover, and in turn may disturb important cellular functions.

**PA6 012 ROLE OF HYOTHALAMIC NEUROPEPTIDE Y IN THE BENEFICIAL EFFECTS OF CALORIE RESTRICTION**

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Calorie restriction (CR) decreases morbidity and increases the lifespan in many organisms including laboratory rodents. These effects of CR are thought to largely depend on insulin/insulin-like growth factor-I (IGF-I) and leptin signaling. From an evolutionary viewpoint, the effect of CR might be effective for thrifty genotype animals that are adaptive during periods of limited nutrient supply, although such animals are prone to obesity under ad libitum (AL) fed conditions. To elucidate whether the insulin and leptin sensitivities are indispensable for the metabolic adaptation to CR, we investigated the effects of CR on insulin and leptin resistant obese Zucker rats. Male 6-week-old lean (+/+) and obese (fa/fa) Zucker rats were fed AL or CR using the Charles River-LPF diet. Rats were euthanized at 6-months of age and plasma parameters, gene and protein expression changes in the neuroendocrine system, adipose tissue and liver were investigated. CR did not fully improve insulin resistance in (fa/fa) rats. Nonetheless, CR in (fa/fa) rats showed a similar response to CR in (+/+) rats, including the induction of neuropeptide Y (NPY) expression in the hypothalamic arcuate nucleus and metabolism related gene expression changes. Moreover, the NPY up-regulation augmented the plasma corticosterone levels concomitantly with the suppression of pituitary growth hormone (GH) expression, thereby modulating the adipocytokine production to induce tissue-specific insulin sensitivity. Thus, central NPY activation via peripheral signaling might play a crucial role in the effects of CR, even in insulin and leptin resistant conditions.

**PA6 013 A STRUCTURAL, PHYSICAL BASIS FOR CELLULAR REPLICATIVE SENESCENCE**

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In the interphase the DNA of higher eukaryotes is organized in supercoiled loops anchored to a nuclear substructure commonly known as the nuclear matrix (NM). The DNA is anchored to the NM by non-coding sequences known as matrix attachment regions or MARs. There is no specific consensus sequence for MARs but it has been established that

only a subset of all potential MARs is actually involved in the attachment of DNA to the NM, these loop attachment regions or LARs define structural DNA loop domains. We have studied the organization of structural DNA loops in primary rat hepatocytes as a function of animal age. Hepatocytes are normally quiescent but preserve a proliferating potential that can be elicited *in vivo* by partial hepatectomy leading to liver regeneration. Yet such a regenerating potential declines with age. We found that natural ageing in the rat liver correlates with a progressive strengthening of the NM framework and the stabilization of the DNA loop-NM interactions. Both phenomena correlate with gradual loss of proliferating potential and progression towards terminal differentiation in the hepatocytes. Our results indicate that an increasing number of potential MARs are actualized as LARs as a function of age leading to a highly structured and thus stable nuclear organization. Since a general trend of physical systems is towards the reduction of asymmetries, a topological configuration in which most potential MARs are actually bound to the NM is a more symmetrical and stable structural attractor. However the structural stability of the cell nucleus opposes the dynamics necessary for major structural transitions resulting in mitosis (such as DNA replication and karyokinesis that involves nuclear disassembly and reassembly), suggesting that thermodynamic constraints leading to a better partitioning and distribution of structural stress within the cell nucleus may constitute a physical basis for replicative senescence.

**PA6 014 ANXIETY, DEPRESSION AND MEDIAL TEMPORAL LOBE ATROPHY IN NORMAL YOUNG-OLD ADULTS: THE PATH THROUGH LIFE STUDY.**

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**Introduction** Anxiety and depression have been associated with increased and decreased hippocampal and amygdalar volume in younger populations. In old age, anxiety, depression and medial temporal lobe (MTL) atrophy have been shown to be associated with cognitive decline and dementia. However, it is not clear whether this relationship holds in cognitively normal older adults and whether anxiety, depression and MTL atrophy can predict each other and future cognitive decline. One avenue to investigate this issue is to examine whether baseline anxiety and depression levels predict future change in MTL atrophy or vice versa. **Methods** Anxiety, depression and MTL atrophy were investigated in 347 cognitively healthy individuals (60-64 years) participating in a longitudinal investigation of mental health and ageing. Anxiety and depression levels were measured with the Goldberg anxiety and BPHQ scales, and MTL atrophy was assessed by manually tracing the hippocampus and amygdala on T1-weighted MRI scans. Measures were taken at baseline and four years later. The association between anxiety, depression and MTL atrophy was investigated by hierarchical regression while controlling for age, sex, education, and intra-cranial volume. Results Strong associations between baseline ( $R = .71$ ,  $p < .01$ ) and change ( $R = .44$ ,  $p < .01$ ) in anxiety and depression scores were detected. Change in MTL volume was significantly predicted by anxiety (LHip: Beta = .120,  $p < .01$ ; RHip: Beta = .115,  $p < .01$ ) and depression (LHip: Beta = .108,  $p < .01$ ; Hip: Beta = .125,  $p < .01$ ; RAM: Beta = .103,  $p < .05$ ) levels, with greater anxiety and depression at baseline being associated with less MTL atrophy. MTL atrophy did not predict change in anxiety or depression. **Conclusion** Contrary to relationships found in dementia, in community-based young-old adults higher anxiety and depression were associated with less MTL atrophy and are therefore unlikely to be sensitive early makers of neurodegeneration in epidemiological samples.

**PA6 015 AGING, BIOSTRUCTURE AND CARCINOGENESIS**

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Aging is accompanied by significant increase in susceptibility to cancer. We suppose this phenomenon is caused by changes of biostructure of cells that take place under aging. To a certain extent about a state of biostructure one may judge by the fraction of bound water that is supposed to be a part of biostructure. A difference between the quantities of water that pass from the tissue to 42% and 25% sucrose solution represents this fraction which was referred as Fraction "Vita". Fraction "Vita" decreased in the tissues of albino rats in ontogenesis (Galavina 2007, 2008). In order to ascertain the state of biostructure of tumor cells we study the fractions of bound water in tumors (1) that spontaneously arise and in Guerin's carcinoma (2). It is revealed that they have very low level of Fraction "Vita" ( $3.65 \pm 0.11\%$  in (1) and  $2.37 \pm 0.16\%$  in (2)) and very high level of fraction that extracted by 25% sucrose solution ( $71.27 \pm 0.57\%$  in (1) and  $74.80 \pm 0.45\%$  in (2)). Such low level of Fraction "Vita" testifies about a decrease of quantity and change in quality of biostructure that take place under tumor transformation. This change of biostructure may be considered as an increase of entropy under tumorigenesis. Both tumors and age tissues have low level of Fraction "Vita" and this fact leads to the supposition that state of biostructure of age cells promotes their tumor transformation. Administration of hydrocortisone provokes the decrease of Fraction "Vita" only in liver of old rats. So in old animal any stress may conduce to tumor transformation. It appears very likely that species-specific differences of

biostucture determine species-specific life span potential and species-specific differences in susceptibility to malignant transformation.

**PA6 016 DECAY OF FREE RECALL WITH SPARING OF MEMORY ENCODING AS A FEATURE OF NORMAL AGING: CLUES FROM THE ENHANCED CUED RECALL TEST**

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Introduction: The Enhanced Cued Recall Test (ECRT) assesses pathological forgetfulness by the recall of 16 items encoded by a visuo-verbal semantic encoding strategy. It controls for fluctuations of attention during encoding, thus providing a robust measure of genuine memory impairments. The ECRT further distinguishes encoding (typical of Alzheimer's disease) from retrieval (typical of fronto-temporal dementia) deficits. Objective: To test the effects of age, gender, and education on the following ECRT subscores: free recall [immediate (FRIMM) and delayed (FRDEL)], total recall (TOT: free plus cued recall), and recognition (REC). Method: We studied 104 volunteers (74 women) leading independent lives (Lawton Inventory) and with normal Mini-Mental State scores. Participants were grouped as "adults" (N = 32; age: 33±11 years, education: 14±2 years) and "elders" (N = 72; age: 72±7 years, education: 5±5 years). Results: Adults and elders differed statistically on free recall [FRIMM: 39±4 and 32±5 items ( $p < 0.001$ ); FRDEL: 14±2 and 12±2 items ( $p < 0.001$ )], but not on TOT and REC. Conclusion: Normal aging was associated with a decline in free recall, but not in recognition and encoding. ECRT tapped this dissociation and may help differentiating forms of dementia according to the mechanism of forgetfulness.

**PA6 017 ROLE OF SMALL PEPTIDES FOR EPIGENETIC REGULATION**

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Experimental studies of small peptides proved that they control gene expression and protein synthesis. Peptides Glu-Trp, Lys-Glu, Ala-Glu-Asp-Gly and Ala-Glu-Asp-Pro alter gene expression profile in myocardium and in brain if administered *in vivo*. Administration of peptides to transgenic mice contributed to 2-4-fold suppression of HER-2/neu mammary gland cancer gene expression, which correlated with reduced adenocarcinoma size. Peptides administered to mice and rats increased IL-2 and c-fos genes expression in lymphocytes and hypothalamic structures, which stipulates immunomodulating, oncomodifying and stress protective properties of these substances. Human fibroblasts, treated with peptide Epitalon, showed telomerase activity induction and a 2.5-fold increase in the mean telomere length as compared to the control. This caused an increase in the quantity of cell divisions by 42.5%, i.e. the overcoming of Hayflick's limit. The study of peptides' effect on the expression of different genes and on DNA synthesis in various experimental models prompted an assumption, that small peptides are activators and agonists of transcription factors. Complementary site-specific binding of a peptide molecule in the DNA major groove is a primary start signal for binding the transcription factor with the promoter. Experiments revealed the formation of a complex, consisting of a tetrapeptide and DNA double helix. Binding of a peptide and double helix is accompanied by a hyperchromic effect, which is an evidence of local splitting of the double helix, launching the mechanism of protein synthesis in cells. Peptide preparations of the thymus and pineal gland, administered to old and very old patients restored the melatonin level, antioxidant system indices, as well as immune, endocrine and cardiovascular system status and brain functions, thus leading to a 2-fold decrease in the death rate in these age groups.

**PA6 018 AGE-DEPENDENT CELLULAR ENERGY METABOLISM IN NEWLY ECLOSED AND OLD HONEYBEES (APIS MELLIFERA)**

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Energy metabolism plays an important role in cellular senescence and honeybee (*Apis mellifera*) has been proposed as a model animal for the study of aging. However, the cellular energy metabolism of newly eclosed and old workers in honeybees is unknown. Here, we use biochemical and microscopic techniques to investigate energy metabolism in the trophocytes and fat cells of newly eclosed and old honeybees. Microscopic studies showed that newly eclosed workers had lower mitochondrial density and higher mitochondrial membrane potential. Biochemical studies showed that newly eclosed workers presented higher ATP levels, NAD<sup>+</sup>levels, NAD<sup>+</sup>/NADH ratio, and SirT1, as well as lower ATP synthase, NADH dehydrogenase, and FoxO. These results concluded that the efficiency of cellular energy metabolism is higher in newly eclosed workers, and lower efficient molecules accumulated with cellular ageing in honeybees.

**PA6 019 AGING ALTERS PPARGAMMA IN RODENT AND HUMAN ADIPOSE TISSUE BY MODULATING THE BALANCE IN SRC-1**

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Introduction: Age is an important risk factor for the development of metabolic diseases (e.g. obesity, diabetes, atherosclerosis). Yet, little is known about the molecular mechanisms occurring upon aging that affect energy metabolism. Although visceral white adipose tissue (vWAT) is known for its key impact on metabolism, recent studies have indicated it could also be a key regulator of lifespan, suggesting that it can serve as a node for age-associated fat accretion. Here we show that aging triggers changes in the transcriptional milieu of the nuclear receptor PPARgamma in vWAT, which leads to a modified potential for transactivation of target genes upon ligand treatment. Methods: We used 3T3-L1 adipocytes treated with H2O2 as "aged adipocytes" as well as adipose tissue from young or middle-aged mice (12 mo old), rats (18 mo old) and humans (40 yr old). Results: We found that in vWAT of these four models, aging induced a specific decrease in the expression of steroid receptor coactivator-1 (SRC-1), whose recruitment to PPARgamma is associated with improved insulin sensitivity and low adipogenic activity. In contrast, aging and oxidative stress did not impact on PPARgamma expression and PPARgamma ligand production. Loss of PPARgamma /SRC-1 interactions increased the binding of PPARgamma to the promoter of the adipogenic gene aP2. Conclusions: These findings suggest that strategies aimed at increasing SRC-1 expression and recruitment to PPARgamma upon aging might help improve age-associated metabolic disorders. Research funded by the Canadian Institute for Health Research

**PA6 020 AGE- AND CASTE-DEPENDENT SIGNATURES OF DNA REPAIR GENE EXPRESSION AND MITOCHONDRIAL MAINTENANCE IN HONEYBEE MUSCLE**

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Introduction: The expression signature of nine DNA repair genes in the wing muscle of the honeybee (*Apis mellifera*) were investigated in a comparative study of long-lived queens and short-lived workers during the aging trajectory. The main aim of the study was to look for genes being specifically downregulated during worker aging and differentially expressed in queens and workers. Materials and methods: Expression measurements were performed by competitive PCR or MassArray, which provides very sensitive measurements of a limited number of genes per array, and is therefore especially suited for studies of low-expression genes like DNA repair genes. The results were followed up by a scanning for mitochondrial mutations in workers and queens using Solexa high-throughput sequencing. Results: Genes involved in base excision repair, mismatch repair and two homologues of human ABH genes, potentially involved in RNA repair, were studied. An ortholog of nth1, as well as a gene encoding a protein which seems to be a fusion of one domain homologous to mammalian mth1/nudix/bacterial mutT and another domain homologous to the mitochondrial ribosomal protein gene s23, showed a distinct downregulation during the aging trajectory in workers and had higher levels of expression in queens than in workers. Two orthologues of human ABH/E.coli alkB, anpg, msh1 and ogg1 had stable expression levels during the ageing trajectory, while, intriguingly, we observed very high levels of apn1 in winter worker bees. The downregulation of the mth1/rps23 suggested a genetically controlled downregulation of mitochondrial maintenance. To investigate this, we have performed a Illumina high-throughput resequencing of wing muscle mitochondria DNA in workers and queens at selected time points along the ageing trajectory. The results indicate at least a 50% reduction of intact mitochondrial fragments in foragers compared to young workers, winter bees and queens. Conclusion: This work shows that there may be sophisticated priorities in genome maintenance during honeybee ageing, and that high-throughput resequencing may be a powerful technology for the study of age-dependent genome maintenance in somatic tissues.

**PA6 021 RESPONSE OF MUSCLE-SPECIFIC E3 LIGASE MAFBX/ATROGIN-1 AND MURF1 TO PRESSURE-INDUCED DEEP TISSUE INJURY**

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Pressure ulcer is a complex and significant health problem particularly in aging population. The cellular signaling and molecular mechanisms responsible for deep pressure ulcer remain to be elucidated. The present study tested the hypothesis that the muscle-specific E3 ligase is activated in pressure-induced deep tissue injury. Adult Sprague Dawley rats were subjected to an experimental model to induce pressure-induced deep tissue injury. The tibialis region of right hind limb of animals was exposed to 100 mmHg of static pressure for 6 hours per day on two consecutive days. The compression pressure was continuously monitored by a 3-axial force transducer equipped in the loading indentor. The left hind limb served as intra-animal control. Tissues underneath the compressed region were collected after the compression procedure and used for histological, fluorescent immunocytochemical, and real time RT-PCR gene expression analyses. Morphological abnormalities were demonstrated in muscle tissue following the compression. These

included rounding of cross-sectional shape of muscle fibers, accumulation of nuclei in the increased interstitial space and central internalization of peripherally located nuclei in muscle fibers. Our immunocytochemical analysis demonstrated that the protein content of MAFbx/atrogin-1 and MuRF1 was significantly increased by 41% and 53%, respectively, in the compressed muscle tissue relative to the control muscle tissue. No significant difference was found in the mRNA content of MAFbx/atrogin-1 and MuRF1 between the compressed and control muscle tissues. Our data demonstrating the upregulation of MAFbx/atrogin-1 and MuRF1 proteins suggest that E3 ligase signaling pathway in muscle tissue may be involved in the underlying mechanism of pressure-induced deep tissue injury.

**PA6 022 CHANGE IN DEHYDROEPIANDROSTERONE SULFATE IS ASSOCIATED WITH CHANGING FUNCTION IN THE OLDEST OLD**

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**Introduction:** Serum dehydroepiandrosterone sulfate (DHEAS) is a putative biomarker of aging though correlates of DHEAS change are not well understood. We describe relationships between DHEAS change and functional change in a very old cohort. **Methods:** DHEAS and functional outcomes (gait speed, grip strength, 3MSE score, DSST score) were measured in 1997-98 and 2006-07 in 991 subjects enrolled in the Cardiovascular Health Study All Stars study [mean (SD) age 85.2 (3.6) years in 2006-07]. We used linear regression to test the association of DHEAS change with functional change over the 9 year period, adjusting for baseline covariates (age, gender, smoking, body mass index, fasting glucose, total cholesterol, total number of medications, hypertension, kidney disease, chronic pulmonary disease, cerebrovascular disease, coronary heart disease, diabetes, arthritis, cancer, depression). **Results:** Mean (SD) DHEAS for women in 1997-98 was 0.555 (0.414) ug/ml and for men was 0.845 (0.520) ug/ml. In the entire cohort, each 0.25ug/ml drop in DHEAS was associated with a 0.021m/s decrease in gait speed ( $p=0.005$ ) and a 0.463kg decrease in grip strength ( $p=0.001$ ). We found a significant interaction between DHEAS change and gender in models of cognitive change and thus stratified results: in men, DHEAS change was not associated with cognitive change; in women, each 0.25ug/ml drop in DHEAS was associated with a 1.13 point drop in 3MSE score ( $p=0.0006$ ) and a 1.25 point drop in DSST score ( $p=0.002$ ). Results did not change substantially with adjustment for baseline DHEAS. **Conclusion:** Over 9 years in a sample of very old individuals, DHEAS change was significantly associated with physical function change in men and women, and with cognitive change in women.

**PA6 023 ON THE NATURE OF AGING**

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Senescence is a complex process and the aging hypotheses concentrated only on one or very few elements of this process. Asking the wrong question, simplifying by model creation etc. all contributed to a poor solution as to why aging occurs. Most of the theories, however, approached and sometimes solved a small part of the problem of aging. Disregarding them would be the same mistake as considering them as a solution of the senescence-problem. It seems that aging occurs because the information level of the system is not good enough to ensure the existence of the human body indefinitely in time against the deteriorating entropy effects. The aging process is a gradual drifting away of the system from the developmentally differentiated state which is a result of the evolution. The information level of the system continuously changes in time; it is altered by external and internal factors, programmed events of the system, perturbations caused by the adaptation process as well as by the fluid character of the genome. Consequently, the maximum life span is determined by the information level of the system, it is influenced by the external and internal factors and it is limited by the weakest element of the chain. Modification of the aging process is possible by optimization of the system but the maximum life span of about 120 years could be lengthened only by changing the information level of the human body.

**PA6 024 FRAILTY SYNDROME AND INFLAMMATORY MARKERS: TNF-ALFA AND STNFR1 ANALYSES IN FRAIL WOMEN FROM COMMUNITY**

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**Background:** Frailty is generally defined as a state of high vulnerability for adverse health outcomes, including physical disability and mortality. Additionally, an important parameter is related to inflammatory markers. Increased levels of TNF-alfa are frequently associated with loss of strength and muscle activity. Given the known relations of inflammation and frailty, the aim of the present study was investigate the differences

between frail subgroups (not-frail -NF, pre-frail -PF and frail -FF) and levels of TNF-alfa e sTNFR1. **Methods:** 20 elderly women aged 66 to 81y. were classified in 3 subgroups (not frail - NF, pre-frail - PF, frail - FF) according to Fried et al., 2001 phenotype. The sample was constituted of 03 NF, 12 PF and 05 FF. Serum levels of TNF-alfa and sTNFR1 were measured by ELISA. The comparison between more groups was done using ANOVA. Statistical analyses were performed using the Statistical Package for the Social Sciences, SPSS 13.0 software (SPSS Inc., Chicago, IL, USA). Differences between two groups were evaluated using the Bonferroni. Statistical significance was set at  $p<0.05$ . **Results:** There was statistically significant difference between groups in sTNFR1 ( $p=0.007$ ) assays, but there was no significant difference between age ( $p=0.654$ ), IMC ( $p=0.843$ ) and TNF-alfa ( $p=423$ ). Bonferroni test showed that PF and FF were different ( $p=0.008$ ). Increased levels of sTNFR1 were found in FF elderly in comparison to PF ones. **Conclusions:** Results demonstrate that frail women had higher levels of sTNFR1 than PF, and this could be an important feature of frailty. Also, the differences observed between TNF-alfa and sTNFR1 indicate that sTNFR1 is the most sensitive marker of immunosenescence and also frailty.

**PA6 025 EVOLUTION OF ASYMMETRIC DAMAGE SEGREGATION**

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**Introduction:** Evolutionary origins of ageing are linked to asymmetric segregation of damage at mitosis. Damaged structures that escape degradation tend to form insoluble aggregates and, if the cell survives to divide, will be inherited by the daughter cells. The effects of stochastic fluctuations (in segregation of damage) that arise in small systems with low numbers of aggregates have not been sufficiently taken into account in previous work. Furthermore, the contribution of resource allocation trade-offs to evolution of asymmetry is not known. **Methods and materials:** We developed a stochastic model consisting of 1000 unicellular organisms in an environment with limited resources. The mode of damage segregation is initially symmetric, subject to mutations afterwards. Cellular events are extrinsic death (e.g. due to cell-cell competition for resources), proliferation, damage accumulation, intrinsic death (i.e. due to the accumulated damage), and mutation in the gene controlling segregation asymmetry. The segregation coefficient,  $\sigma$ , ranged between 0.5 (each unit of damage has equal chances of ending up in each of the two daughter cells) and 1 (all damage segregating into one of the cells) and was averaged over the population. The population was monitored until  $\sigma$  reached a plateau, representing the outcome of evolution. **Results:** In contrast to previous models, we observed that the entire continuum between complete symmetry and compete asymmetry were possible outcomes of evolution depending on model parameters. Damage severity, high rates of damage accumulation, and slow proliferation rates are factors that increase the selection force for asymmetry. **Conclusion:** Our results fit the data on three organisms (*S. cerevisiae*, *S. pombe*, and *Candida albicans*) that use different segregation strategies. Given the trade-off between reproductive and maintenance investments, and their same-direction effects on selection pressure, the model highlights the prominent role of environmental stress on evolution of asymmetry.

**PA6 026 AGE-RELATED IMPAIRMENT OF THE LATE PHASE OF LTP IN PS1 KNOCK-IN MOUSE MODEL OF ALZHEIMER'S DISEASE**

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Presenilin 1 (PS1) mutations are responsible for a majority of early onset familial Alzheimer's disease (FAD) cases. Increasing evidence points to synaptic plasticity impairment as one of the first events in AD before neurodegeneration. Here, we investigated long term potentiation (LTP), a mechanism that underlies learning and memory, in hippocampal CA1 neurons of PS1 M146V Knock-in mice (PS1KI). The role of PS1 is not well understood, as PS1KI mice show age-dependent memory impairment in hippocampus-dependent spatial tasks which paradoxically coincides with an increase in early-LTP (E-LTP). Our study focus on a particular form of LTP, the late-LTP (L-LTP) which is thought to be critical for the storage of long term memory. We performed extracellular recordings in CA1 hippocampal slices from both PS1KI mice and control littermate mice (+/+). E-LTP was induced after a 100Hz burst applied to the schaeffer collateral. L-LTP was induced by four trains at 100Hz. PS1KI mice showed an increase in E-LTP at 6 months of age as compared to +/+ littermates. By contrast, at 9 months of age, E-LTP increase did not persist in PS1KI mice. The L-LTP was impaired in PS1KI at an early stage. We observed an impairment of the maintenance phase at 3 months of age. As the mice age, we observed an impairment of both the induction phase and maintenance phase. As previously described for spatial tasks, PS1KI mice show age-dependant impairment of L-LTP which is thought to be critical for long term memory. PS1KI showed also a transient increase of E-LTP. This result contrasts with the effect of amyloid peptide which is known to greatly decrease E-LTP. This study suggests that mutant PS1 influences

synaptic plasticity involving additional mechanisms than solely an increase in amyloidogenesis.

**PA6 027 STOP OF THE ONTOGENESIS CLOCK, PREDECESSOR MAMMAL'S HIBERNATION POSSIBLE KEY FOR ABOLITION OF AGEING?**

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The analysis of the data specifying occurrence at of some species of mammals of a special euthermal condition, previous hibernation or replacing hibernation is resulted. This condition is characterized by inhibition of cell proliferation, reduction stress reactivity and decrease in metabolism, changes in immune system (seasonal thymus involution). It is shown, that young individuals of some kinds (fat dormouse, red voles, shrews), entering into the given condition (for its designation the new term «neobiosis» is offered), have characteristic biphasic growth with a long delay (apparently, caused by inhibition of cell proliferation), which can last (depending on action of external factors) not certain time. Reversible growth arrest, which duration no limited, can specify on «a stop of the ontogenesis clock» at these animals. The output from neobiosis renews growth (2nd phase), thus the calendar age of animal exceeds their biological age. It is supposed, the given mechanism is started by increase in somatostatin (SST) synthesis with inhibition thus of growth hormone (GH), thyroid stimulating hormone (TSH) and melatonin, and with loss a circadian function suprachiasmatic nucleus of the hypothalamus (SCN). Keywords Hibernation, euthermia, reversible stop of growth, somatostatin, SCN

**PA6 028 RELATIONSHIP OF ALPHA-SYNUCLEIN PATHOLOGY BETWEEN EPICARDIUM AND DORSAL VAGAL NUCLEI**

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Introduction There is increasing evidence that Parkinson disease (PD) is a multiple system disorder with progressive degeneration of the dopaminergic nigrostriatal systems and wide spread pathology. In the brain, alpha-synuclein (a-syn) pathology (Lewy bodies and Lewy neurites) may occur early in the dorsal vagal nuclei (DVN). On the other hand, it is also reported that degeneration of cardiac sympathetic nerve (CSN) begins early in the disease process of PD. Anatomically, the CSN interconnects with DVN, therefore, we immunohistologically examined the relationship between DVN and CSN. Material and methods Left ventricular walls of heart and medulla oblongata including DVN in 204 consecutive autopsied patients from Geriatric Research Hospital (mean age of 72.3 years) were immunostained with antibodies against a-syn, tyrosine hydroxylase (TH) and phosphorylated neurofilament. Results Fifty (25%) of 204 cases had a-syn pathology in DVN, and 10 cases (5%) had a-syn-positive aggregates in CSN. TH-immunoreactivities were preserved in 9 of 10 cases that had a-syn-positive aggregates in CSN, and 2 of these 10 cases had no a-syn pathology in DVN. TH-immunoreactive nerve fibers were decreased in 31 cases (15%) in CSN. Among these 31 cases, 22 had a-syn pathology in only DVN (71%), one case had a-syn-positive aggregates in only CSN, and one case had both a-syn pathology in DVN and a-syn-positive aggregates in CSN. Conclusion In this study, TH-immunoreactivities were decreased approximate 15 % in elderly human population. Our results also suggest that a close relationship between a-syn pathology in DVN and the decreases of TH-immunoreactivities in CSN, and a-syn-positive aggregates in CSN may precede the decreases of TH-immunoreactivities.

**PA6 029 AGING, DIABETES MELLITUS AND ENDOTHELIAL DYSFUNCTION: AN UNEXPECTED RELATIONSHIP**

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Introduction: Diabetes and aging share some factors involved in producing endothelial dysfunction. This fact raises the question about the ability of diabetes to induce endothelial dysfunction in the elderly. Objective: To test the effect of diabetes on the endothelial function in microvessels from old patients. Methods: Microvessels were obtained from 57 patients (range: 21-85). Patients were divided in several groups: Group 1 (healthy < 65 yr), group 2 (healthy > 65 yr), group 3 (> 65 yr with diabetes; DM), group 4 (> 65 yr with hypertension; HT), group 5 (> 65 with DM and HT), and group 6 (> 65 with DM, HT plus 1 or more cardiovascular risk factors). Vessels were mounted in a myograph. Responses to Bradykinin (BK: 0.01-3 µM) were tested in vessels precontracted with KCl (35-50 mM) and expressed as the mean ± SEM of pD<sub>2</sub> values. To test the implication of oxidative stress, especially superoxide anions, some vessels were preincubated with SOD (100 U/ml). To check whether the effect of highly glycosylated oxyhaemoglobin (GHHb), involved in endothelial dysfunction by means of oxidative stress, is age dependent, the microvessels from group 1 and 2 were preincubated with 14% GHHb. Results: pD<sub>2</sub> for BK were 7.516±0.093; 7.184±0.088; 6.983±0.150; 6.978±0.054; 7.020±0.369; 6.730±0.211 for groups 1-6 respectively. Preincubation with SOD in groups 2, 3, and 4,

improved vasodilations evoked by BK. Preincubation with 14% GHHb significantly reduced the BK-evoked vasodilations in group 1, but not in group 2. Conclusions: Diabetes alone does not seem to add any effect to the endothelial dysfunction associated to aging. It is necessary the coexistence of diabetes with one or more cardiovascular risk factors in the elderly to impair endothelial function.

**PA6 030 AGEING AS THE SHRINKAGE OF THE HOMEODYNAMIC SPACE**  
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The survival and longevity of an organism depends on a complex network of maintenance and repair systems (MARS). These pathways include genomic and epigenomic repair, protein degradation, antioxidant defences and stress response. MARS gives rise to a so-called homeodynamic space, which is representative of the buffering capacity against intrinsic and extrinsic causes of disturbances. Shrinkage of the homeodynamic space is considered to be the universal characteristic of ageing. This is because ageing at the molecular level is characterized by the progressive accumulation of molecular damage in nucleic acids, proteins, lipids and carbohydrates. The main sources of damage are environmental and metabolically generated free radicals, spontaneous errors in biochemical reactions, and various nutritional components, such as glucose and its metabolites. Accumulation of molecular damage and increased molecular heterogeneity is the main cause of the shrinkage of the homeodynamic space. This then leads to increased vulnerability, altered cellular functioning, reduced stress tolerance, emergence of diseases and ultimate death. Approaches for testing and developing effective means of intervention, prevention and modulation of ageing aim to prevent or reverse the shrinkage of the homeodynamic space, and to maintain the biological abilities of maintenance and repair.

**PA6 031 INDIVIDUAL LIFE HISTORY, BEHAVIOR, AND BIOMARKERS OF AGEING**  
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The purpose of the research was studying interrelationships between peculiarities of individual life, adaptive behaviour, functioning of the hypothalamic-pituitary-adrenal axis (HPA) and erythrocyte antioxidant enzyme system in different age periods. Fifty young mature (6-8 years) and 37 old (20-27 years) healthy female rhesus monkeys, including eight animals that were exposed to severe stress in neonatal period – maternal deprivation and growing up separately from adult individuals, were investigated. Forty-one per cent of both young and old animals, including the majority of animals, exposed to neonatal stress (75%), showed the depressive-like behaviour (D). At young age the highest values of coefficient cortisol/dehydroepiandrosterone sulfate (F/DHEAS) (due to the increase in F concentration and the decrease of DHEAS level in blood plasma) were revealed. During ageing the sharp increase in F/DHEAS, smoothing circadian rhythm of plasma F, increase in glutathione reductase activity (GR), that is, the parameters considered as biomarkers of ageing, were observed. Twenty per cent of the young and old animals including those, exposed to neonatal stress (12.5%), demonstrated the aggressive behaviour (AG). At young age the minimal values of F/DHEAS (due to the highest DHEAS level) were revealed. During ageing the most expressed decrease in concentration DHEAS was observed. Thirty-nine of the young and old animals including those, exposed to neonatal stress (12.5%), showed the adequate behaviour. At young age F/DHEAS was intermediate between values of this ratio in D and AG animals and the least increase was registered with ageing; insignificant age-related changes were seen in GR and circadian rhythm of F. Thus, D was accompanied with the most expressed age-related disturbances in HPA functioning and GR; neonatal stress increased sharply probability of development of D, neuroendocrine and antioxidant age-related alterations.

**PA6 032 GRAY MATTER VOLUMETRIC CHANGES ON NON-DEMENTED ELDERS: THE GENDER INFLUENCE ON THE CEREBRAL CORTEX**  
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Introduction. Cerebral changes related to normal aging have been the subject of considerable interest due to the need for early diagnostic criteria for neurodegenerative disorders, such as Alzheimer's and Parkinson's diseases. Previous studies have reported regional gray matter (rGM) loss in both frontal and parietal cortices, and rGM preservation in limbic and paralimbic structures. However, more often than not, those studies did not account for the gender influence on their results and investigated samples either relatively small or across the span of life. Methods and materials. In order to describe an accurate pattern of volumetric changes that occur in the seventh and eighth decades, we have studied the influence of gender on rGM loss and relative preservation in a community-based sample of 102 subjects with a narrow age range (65-75 years of age), all classified according to ICD-10 as psychiatric and neurologically normal. They underwent to a

magnetic resonance scan, and voxel-based analyses of Pearson correlation product was performed between age and rGM covaried by total rGM volume. Findings were reported after a family-wise correction for multiple comparisons. Results. rGM decrease in males was greater in the right orbital frontal cortex, in the Heschl's gyri, in the right superior temporal gyrus and in the left parahippocampal gyrus, while in females the left thalamus, the right triangular and the bilateral opercular frontal cortices were predominantly involved. Gender-specific age-related rGM preservation encompassed the bilateral paracentral lobule in males and the inferior temporal gyrus in females. Conclusions. Age-related rGM loss was influenced by gender and heterogeneous, with some areas more vulnerable than others, and specific regions being relatively spared. The findings described in previous studies with healthy adults or large age-range samples may not apply to the elderly population.

**PA6 033 ELDERLY EPILEPSY: INTEREST OF QUANTITATIVE ELECTROENCEPHALOGRAPHY (QEEG)**

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Introduction: The incidence of epilepsy increases with advancing age and its diagnosis in the elderly is often elusive. Seizure imitators are especially frequent and ancillary tests for diagnosis as electroencephalogram (EEG) may show normal age –related variants, sometimes making results difficult to interpret in advanced age. In addition the interictal conventional EEG is often normal in elderly's epilepsy patients. Quantitative electroencephalogram (qEEG) would play a significant role in EEG-based clinical diagnosis. The principal aim of this study was to evaluate the relation between interictal qEEG and ictal epilepsy in the elderly. Methods and materials: 20 patients over 60 years old, with de novo epilepsy were submitted to EEG recordings. Complete conventional EEG and qEEG were blindly interpreted by two independent and experienced electroencephalographers. The peak of low frequency interictal qEEG have been studied; we determine whether interictal quantitative EEG are predictive of ictal epilepsy. The conventional EEG sensitivity has been compared to quantitative EEG sensitivity analysis by Mc-Nemar statistic test. Results: 80% of patients were aged between 70 to 84 years old; most of them were women with a rate of 3/2. In 60 % of patients, qEEG shows interictal lower frequency predicting ictal epilepsy. qEEG has been shown to be more sensitive than conventional EEG (50%) on the occurrence of epileptic seizures in the elderly, but not statistically significant. Conclusion: In complement of diagnosis means existent, quantitative EEG analysis would increase the yield of diagnosis of elderly epilepsy. When performed by electroencephalographers, this method may provide more reproducible ictal EEG data in a clinical setting than the conventional EEG does. Nevertheless further larger investigations will ascertain the relevance of this conclusion.

**PA6 034 STNFR-1 IS AN EARLY INFLAMMATORY MARKER IN COMMUNITY VERSUS INSTITUTIONALIZED ELDERLY WOMEN.**

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Introduction: An increased circulating levels of inflammatory cytokines has been associated with sarcopenia, functional disability, and mortality in the elderly. We evaluated, in this study, sTNFR-1, IL-6 levels and hand grip in the elderly. We also investigated the influence of age on such factors. Methods and Materials: A convenience sample of 110 elderly women ( $71.17 \pm 7.44$  years) was selected. The sample was constituted of 56 community and 54 institutionalized living elderly. Serum levels of sTNFR1 and IL-6 were measured by ELISA. For the measurement of hand muscle strength, the JAMAR' dynamometer was used. Differences between two groups were evaluated using the t-student test. Correlation analyses were performed using Pearson's correlation analysis. Results: Plasma concentrations of inflammatory markers were significantly higher in institutionalized elderly (sTNFR:  $479 \pm 22$  pg/mL; IL-6:  $6.3 \pm 0.8$  pg/mL) in comparison to community residents (sTNFR:  $329 \pm 24$  pg/mL; IL-6:  $2.5 \pm 0.4$  pg/mL)  $p < 0.0001$ . The institutionalized elderly had reduced muscle strength ( $15 \pm 0.8$  Kgf) in comparison to community elderly ( $23 \pm 0.6$  Kgf);  $p < 0.05$ . It was observed that only sTNFR1 was sensitive to detect the difference in the 60 year group (community  $280 \pm 29.6$  pg/mL and institutionalized  $393.1 \pm 31.3$  pg/mL;  $p < 0.05$ ). The levels of IL-6 and hand grip were only different on the groups of 70 and 80 years. Conclusions: our results

demonstrate that being institutionalized have an impact over levels of inflammatory mediators and hand grip in the analyzed subjects.

**PA6 035 SIMPLE SCREENING FOR DRY MOUTH**

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Objective: The application of a novel assay system for screening of dry mouth. Study design: A novel assay system comprised of 3 spots containing 30 microg of starch and 49.6 microg of potassium iodide per spot on filter paper and a coloring reagent, based on the color reaction of iodine-starch and theory of paper chromatography, was designed. For 41 subjects hospitalized in private institutions, we investigated the relationship between resting whole salivary rates and the number of colored spots on the filter. Results: A significant negative correlation was observed between the number of colored spots and the resting salivary flow rate ( $n=41$ ;  $r = -0.803$ ,  $p < 0.01$ ). For all subjects with dry mouth ( $n=9$ ) having cutoff values  $< 100$  microL/min for the salivary flow rate, three colored spots appeared on the paper, whereas for healthy subjects there was one colored spot or less. Conclusion: This novel assay system might be effective for screening of dry mouth not only in healthy, but also in bedridden and disabled, elderly people.

**PA6 036 A NEW CLASS OF MRI STRIATAL DOPAMINERGIC RECEPTOR IMAGING AGENTS**

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Receptor imaging is an important area of research and usually used for better diagnosis or follow up the treatment in many diseases especially degenerative brain diseases like Parkinson's or Alzheimer's diseases. Preparation and imaging procedures of the routine radioligands such as 18F-LDOPA or 11C-Lacropride produce some difficulties such as low half life, high cost and radiation. In this study, a new class of contrast media agents for dopaminergic receptor imaging Gd3+-DTPA-(Levodopa)n=1, 2, 3 were designed and synthesized. Their toxicity was investigated and not found toxic at all In Vitro or In Vivo. The compounds had good therapeutic functions comparing to the unbind levodopa. The effects of compounds on T1 relation time was investigated and compared to the absence or presence of standard Gd3+-DTPA in vitro and in vivo and were found suitable. Then In vitro cell uptake ability was investigated in Substantia Nigra Pars Compacta (SNc) dopaminergic neurons and also compared to Gd3+-DTPA. The compounds were taken up by dopaminergic neurons significantly ( $P < 0.0001$ ) more than Gd3+-DTPA. Finally in vivo imaging studies were performed in normal and parkinsonian rats (at different stages). The qualities of images were found so suitable and staging the disease was possible. It is worthwhile to notify that the best image quality were obtained from GD3+-DTPA-Levodopa)2. Due to results of Gd3+-DTPA-(Levodopa) n=1, 2, 3 also having not any radioactive half life or radiation and low cost this class seems to have a very good future in SNc MRI imaging in Parkinsonian patients.

**PA6 037 TELOMERIC AND SUBTELOMERIC STRUCTURAL CHANGE WITH AGING IN CHRONICALLY ILL PATIENTS**

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Introduction: Telomere in somatic cells becomes shorter with aging of human and other species. However, it is unclear whether subtelomeric methylation status in human somatic cells changes with aging. In order to assess aging-related telomeric structural change, mean telomere length, telomere length distribution, and subtelomeric methylated status of healthy Japanese and hospitalized chronically ill patients are studied. Methods and Materials: Genomic DNA isolated from peripheral white blood cells of 148 healthy Japanese and 44 hospitalized patients was subjected to Southern blot probed with telomere DNA using methylation-sensitive and -insensitive isoschizomer, and the methylation-related alterations of terminal restriction fragment lengths with ageing was analyzed. Results: With aging, long telomeres decrease and short telomeres increase, and contents of telomeres with methylated subtelomere increase in long telomeres. These telomeric and subtelomeric changes tend to be enhanced in some pathophysiological conditions. Conclusion: Our trial indicates that the telomere-length distribution analysis with methylation-sensitive and -insensitive isoschizomer can be a useful tool to assess subtelomeric methylation status of the somatic cell population. The results indicate that the subtelomeric methylation of peripheral blood cells is an indicator for ageing-associated genomic change and provoke us to postulate that telomere neighboring less methylated

subtelomere is prone to be shortened faster with aging and with certain pathophysiological conditions.

**PA6 038 COGNITIVE POTENTIEL (P300): A VALUABLE METHOD TO EVALUATE CEREBRAL SENESCENCE**  
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As adults age, central nervous system function slows appreciably. This phenomenon has been assessed with a wide variety of behavioral paradigms and originates from neurobiological factors related to aging. Given the growth of the elderly population and the concomitant increase in the proportion of cognitively impaired individuals, accurate measurement of the mental changes stemming from aging is an important scientific and social problem. Neuroelectric measures have provided some of the most direct evidence for the relationship between central nervous system function and age-related cognitive changes. They have played an increasingly important role in the quantification and understanding of these effects. The P300 component of the ERP has demonstrated considerable utility in the study of aging because it is thought to result from neural activity associated with attentional and memory processes. P300 amplitude age-variation indexes changes in neural activity across the scalp, the timing of its peak provides a measure of mental processing speed that is independent of behavioral responding, and characterization of its normative values has yielded baseline measures against which cognitive illness can be evaluated. Much progress has been made in the 30 years since the P300 potential was discovered. The P300 component is often elicited with a simple discrimination task. This procedure has been dubbed the "oddball" paradigm because two stimuli are presented in a random series such that one of them occurs relatively infrequently, that is, the oddball. The P300 is measured by quantifying its amplitude and latency. There is a very strong relationship between P 300 and cerebral aging. The P 300 can also help discriminating between neurodegenerative diseases and depression or normal cerebral aging who are all with memory impairments. Our team think that P 300 should be part of all brain studies.

**PA6 039 STUDY OF THE TELOMERE LENGTH AND DIFFERENT MARKERS OF OXIDATIVE STRESS IN PATIENTS WITH PARKINSON DISEASE**  
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Introduction: Oxidative stress and generation of reactive oxygen species are believed to be implicated in Parkinson disease (PD). On the other hand, it has been postulated that telomere length (TL) may be a bio-indicator of aging since it records the cumulative burden of oxidative stress and inflammation. This clinical study is one of the first to evaluate both the dynamic of telomeres and different markers of oxidative stress in patients with PD. Methods and materials: A total of 69 men and women, aged  $78 \pm 7.5$  years, 34 with PD and 35 age-matched controls, were studied. TL was measured by Southern Blotting from DNA samples extracted from white blood cells. Superoxide dismutase (SOD) activity, levels of glutathione and of total protein carbonyls in plasma were determined by using the Cayman Chemical assay Kit according to the manufacturer's instructions. Nitrotyrosine in plasma was measured with a specific enzyme immunoassay (Cayman Chemical). Results: TL was not significantly different in PD patients compared to controls ( $6.03 \pm 0.79$  vs.  $6.45 \pm 0.73$  kb, respectively,  $p=0.12$ ). TL was correlated with age in controls ( $r = -0.548$ ,  $p = 0.03$ ), but not in PD patients. With age, in PD patients, the activity of SOD was significantly decreased and the levels of nitrotyrosine were increased. No association was found between oxidative stress markers and telomere attrition. Conclusion: Despite a trend toward shorter telomeres in PD patients, we could not find statistically significant differences as compared to the control subjects, possibly because of the small size of the population. The absence of telomere attrition with age among PD patients could reflect a telomere regulation by other than age mechanisms. Our study indicates also that there is an imbalance, with age, between antioxidant defense and production of oxidation in PD patients.

**PA6 040 BIOMARKERS OF HUMAN AGEING: THE NEWCASTLE 85+ STUDY**  
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The Newcastle 85+ Study on the biological, clinical and psychosocial factors that contribute to human healthy ageing started in May 2006. During its Phase 1 the study has recruited a cohort of around 800 individuals of 85 years of age that were assessed throughout interviews, functional tests and blood samples. In comparison to many other studies of the same kind, our study has a special focus on Biomarkers of Ageing. In addition to many routine haematological and biochemical markers, a wide range of novel candidate markers has been included such as markers of inflammaging (cytokines TNF- and IL-6), markers of immunosenescence (subpopulations of NK cells and CD27+/− cells

within CD4 and CD8 subsets), markers of oxidative stress (F2-isoprostanes as indicators of levels of lipid peroxidation; blood cell telomere length) and levels of DNA repair capacity in white blood cells. With this comprehensive approach, both the cross-sectional and longitudinal components of this study will provide us with an unprecedented insight into those factors contributing to healthy ageing. At this point we present a comprehensive statistical analysis of all data collected for these biomarkers in an attempt to set a profile of biomarkers that best defines healthy ageing.

**PA6 041 STABLE MAGNETIC ISOTOPES AS THE BASIS FOR THE NEW ANTI-AGING BIOTECHNOLOGY**

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Chemical reactions obey the law of conservation of the total angular momentum (spin): the spin state of reactants must be identical to that of products. As a result, acceleration of reactions can be achieved via magnetic fields of nuclear spins of magnetic nuclei. Among three stable isotopes of magnesium, Mg-24, Mg-25 and Mg-26 with natural abundance 78.7, 10.1 and 11.2%, only Mg-25 has a nuclear spin magnetic moment ( $I = 5/2$ ). Two other isotopes are spinless ( $I = 0$ ) and, for this reason, nonmagnetic. We have for the first time shown that the cells of *E. coli*, which grows on the medium containing 25Mg-sulphate, multiply by about 20 per cent faster than the cells which grows on the nonmagnetic Mg-24 or Mg-26 isotopes. The magnetic isotope works as much more effective cofactor in oxidative phosphorylation, as it was shown for mitochondria (Buchachenko et al, 2004). Moreover, the cells grown on Mg-25 demonstrate essentially less activity of superoxide dismutase, by about 40 per cent, when compared to the cells grown on Mg-24 or Mg-26. Inasmuch as activity of SOD is adjusted to the intracellular level of superoxide radicals, the lower activity of SOD can be considered as evidence for lower production of the radicals as the faulty by-products of respiration. It means that the energy park's bio-nanoreactors work not only more effective but more reliable too while supplied with the magnetic isotope of magnesium by comparison with the case of the nonmagnetic isotopes. Thus, owing to the nuclear spin, magnesium-25 produces the preventive antioxidant effects. It opens the way toward the new anti-aging drug technology based on stable magnetic isotopes. This work was sponsored by Russian Foundation for Basic Research, project 07-03-00897.

**PA6 042 DYNAMICS OF MITOCHONDRIAL CRISTAE, THEIR CONTRIBUTION TO PROTEIN EXCHANGE WITHIN MITOCHONDRIA.**

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The rescue hypothesis of mitochondrial exchange states that impaired mitochondrial proteins may be replaced by functional ones via fusion and fission processes of mitochondria. Indeed, fusion and fission are a prerequisite for long lasting cell survival in culture. Measurements of diffusion of proteins within the outer and the inner membrane of mitochondria using fluorescence recovery after photobleaching (FRAP) revealed values too high as to be in line with the concept of respiratory supercomplexes. These could be due to incomplete integration of the fluorescent labeled proteins into the membranes or to hitherto unknown membrane dynamics. Using blue native gel analysis the first explanation could be excluded. Analysis of high speed confocal laser-scan images of mitochondria in living HeLa cells with differently labeled inner membrane and matrix revealed high speed motions of the inner membrane compartment, changing within a few milliseconds. The location where cristae appear remains constant up to several minutes, however the orientation and probably the size of cristae changes very fast as shown by high resolution videos. We hypothesise that the mass of the cristae membrane may become laterally distributed and reassembling in short time. An alternative is a fast bending mechanism. According to Monte Carlo simulations the first mechanisms seems to be an acceptable possibility as well. A decision between these possibilities is not possible because of the limitations of light microscope resolution. Thus the inner mitochondrial compartment is much more dynamic than assumed so far, giving rise to fast exchange processes which are supposed to add to longevity of cells.

**PA6 043 COMPLEXITY, CHAOS, AND FRACTALITY IN AGING: FRACTAL LACUNARITY CAN MEASURE PHYSIO/PATHOLOGIC AGING**

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Aging can be considered as a temporal evolution of a complex system governed by the laws of deterministic chaos. The advent of fractal mathematics has been accepted by most scientists and fractal dimension has been becoming the most common tool to measure variations of complexity with aging and pathology. Lacunarity, another fractal property,

can measure fractal space filling capacity and lacunarity analysis has been recently introduced as a more general technique to describe complex patterns with random and fractal properties. An original method has been developed in our center to verify the potential of lacunarity in measuring complexity of biomedical structures physiopathologically altered with aging. The method uses a hyperbola model function to approximate the curvilinear plot of lacunarity function. The hyperbola formula contains three coefficients ( $\alpha$ ,  $\beta$ ,  $\gamma$ ) that computed as the solution of a least squares problem univocally characterize the complex structure analysed. The method has been applied to trabecular bone of vertebra MR images from subjects of different age and physiopathologic status. Among the three coefficients, the parameter  $\beta$  undergoes the most significant variation. Parameter  $\beta$  correlates with both age and physio-pathologic status with a decreasing trend of  $\beta$  values from young to old subjects and from healthy young to perimenopausal to osteoporotic patients. The healthy old subjects show a  $\beta$  value higher than the younger osteoporotic patients. The diffusion of paradigms such as complexity, chaos, and fractals in gerontologic field has opened up new perspectives and suggests innovative approaches to understand and study aging in a global vision of the phenomenon. Lacunarity analysis represents a promising tool to give insight into the search of good biomarkers useful to discriminate between physiologic and pathologic aging as well as between age-related and age-associated diseases.

**PA6 044 HIGHER EXPRESSION OF MACROMOLECULAR FORMS AND C-TERMINAL DOMAIN OF PLASMA FIBRONECTIN MORE FREQUENTLY ASSOCIATED WITH ALZHEIMER**

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**Introduction:** Aberrant angiogenesis of the cerebrovascular system could initiate neurovascular events leading to neurovascular disorders. Fibronectin(FN) is known to exert a strong angiogenic influence on endothelial cells in the CNS. FN is a multidomain and multifunctional glycoprotein and conformational changes precede its function. **Objective:** In the present study, alterations in the expressions of the carboxy-terminal(CT-FN), collagen(Collagen-FN), cellular(Cell-FN) and fibrin(Fibrin-FN) domains of plasma fibronectin and the expression of the molecular forms of plasma fibronectin in an Alzheimer's patients(AD), compared with vascular dementia(VaD) and age-matched control groups were analysed. **Methods:** FN domain concentrations were determined by ELISA using a panel of domain-specific monoclonal antibodies. Western immunoblotting using a monoclonal antibody was performed to analyse the FN molecular forms. **Results:** In the AD and VaD groups, the mean values of the concentrations of CT-FN and Collagen-FN were significantly higher than those in the age-matched control group. Immunoblotting revealed the presence of 272-kDa and 311-kDa FN bands besides the 237-kDa and 218-kDa bands corresponding to healthy individuals. The 272-kDa band was present in 89.7% of AD, 75% of VaD and 63.6% of control samples, whereas the 311-kDa FN band was in 72.4% of AD, 33.3% of VaD and in 22.7% of controls. Densitometry analysis of FN immunoblotting showed that the relative amounts of the 311-kDa and 272-kDa FN bands in the AD group were significantly higher than in the VaD and control groups. **Conclusion:** The plasma FN status can reflect the molecular processes associated with AD state and with aging. The findings seems to be a promising test qualifies as a screening tool for disease risk.

**PA6 045 ORAL POLYAMINE DECREASES MORTALITY IN AGED MICE AND THE INCIDENCE OF AGE-ASSOCIATED PATHOLOGIES**

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**OBJECTIVES:** Natural polyamines, spermine and spermidine, rich in beans and fermented foods have anti-inflammatory properties, including the suppression of the expression of leukocyte function function-associated antigen-1 and the production of pro-inflammatory cytokines. Because such polyamine-rich foods seem to suppress age-associated diseases and help prolong longevity, we tested the effects of dietary polyamines on longevity in mice. **METHODS:** Male JC1:ICR mice were fed standard rodent chow until they were 24 weeks old. They were then divided into three groups and fed either high, normal, or low polyamine chow. The low polyamine chow was prepared by eliminating polyamine-rich materials from the standard chow and replacing them with materials with low polyamine concentrations. For the normal polyamine chow, synthetic spermine and spermidine were mixed in doses of 0.002 % (w/w) and 0.008 % respectively, with the low polyamine chow. The high polyamine chow had spermine and spermidine mixed in doses of 0.015 % and 0.06 %, respectively. **RESULTS:** The body weights of mice in all three groups were similar. Mice in the high polyamine group lived longer than mice in the other two groups ( $p = 0.011$ : generalized Wilcoxon). Survival was significantly longer in the high polyamine group than in the low polyamine group ( $p = 0.032$ ) and the normal polyamine group ( $p = 0.003$ ). However, survival in the normal polyamine and low polyamine groups was similar ( $p = 0.432$ ). At 88 weeks old, age-associated pathologies, such as glomerulosclerosis and the decreased expression of senescence marker protein 30, were less frequent in kidneys and livers of mice fed high polyamine chow than those fed low or normal polyamine chow, while at age 20 weeks, neither pathology was found.

**CONCLUSIONS;** Polyamines may be natural anti-aging substances that help prolong longevity and decrease age-associated diseases.

**PA6 046 ORAL POLYAMINE DECREASES THE DEATH IN AGED MICE AND AGING-ASSOCIATED PATHOLOGY**

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**OBJECTIVES:** Polyamines, spermine and spermidine, are generally rich in beans and fermented foods. Epidemiologic studies have shown that such polyamine-rich foods seem to suppress aging-associated diseases and help prolong longevity. Polyamines have ability to suppress inflammatory mediators such as leukocyte function associated antigen-1 and pro-inflammatory cytokines. Because inflammation appears to play an important role in the progression of aging-associated diseases, we tested the effects of dietary polyamines on the longevity. **METHODS:** Male JC1:ICR mice were divided into three groups and fed with standard rodent chow until they grew to 24 weeks old. Then, the mice were fed either with high, normal, or low polyamine chow. The low polyamine chow was prepared by eliminating polyamine-rich materials from the standard chow and replacing them with materials of which polyamine concentrations are low. For the normal polyamine chow, synthetic spermine and spermidine were mixed in doses of 0.002 % (w/w) and 0.008 % respectively, with the low polyamine chow. And, for the high polyamine chow, spermine and spermidine were mixed in doses of 0.015 % (w/w) and 0.06 %, respectively. **RESULTS:** The body weight change among three groups were similar. After 26 weeks of being fed the experimental chows (50 weeks of age), blood polyamine concentrations in mice fed with the high polyamine chow were higher than those of the other two groups. Between around 50 to 80 weeks of age, the survival rate of mice fed with the high polyamine chow was significantly higher than that of the other two groups of mice. Histopathological and immunohistochemical examination revealed that the numbers of glomerulus and the amount of a protein decease with aging (SMP30) in the kidney of mice fed with high polyamine chow were well-preserved. **CONCLUSIONS:** Dietary polyamines help prolong longevity.

**PA6 047 "SCIENCE AGAINST AGING" - A COMPLEX INTERDISCIPLINARY PROGRAM OF FUNDAMENTAL RESEARCH**

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A complex interdisciplinary program of fundamental research directed at increasing lifespan covers major research areas (genetics, immunology, stem cells, proteomics etc.) with concrete goals and tasks defined in each of them. However, creation and moreover implementation of such a program is impossible without changing the existing attitude to the role and purpose of gerontology. Aging is an extremely complicated process. It was formed during evolution and it comprises all levels of life organization. Now it is described by numerous theories and studied in dozens of laboratories. But until now there has been no unified plan of action aimed at a comprehensive study of processes taking place in the organism during aging. A complex, large-scale, interdisciplinary program of scientific research is necessary for the complex study of aging. It is essential to plan and to coordinate scientific research into aging in the world, and to organize the effective international and interdisciplinary cooperation of scientists in order to carry out this project. We would like to bring to your attention the first edition of such program prepared by Russian scientists presenting the non-governmental organisation "For Lifespan Increase".

**PA6 048 MUSCLE STRENGTH BUT NOT FUNCTIONAL CAPACITY IS ASSOCIATED WITH PLASMA IL-6 LEVELS OF COMMUNITY-DWELLING ELDERLY WOMEN**

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**Introduction:** The association of plasma interleukin-6 (IL-6) levels, muscle strength and functional capacity was investigated in a cross sectional study of community-dwelling elderly women from Belo Horizonte,Brazil. Community-dwelling are older people who present controlled chronic diseases with no negative impact in physical, psychosocial and mental functionality. Psychological and social stress due to unsuccessfully aging can represent a risk for immune system disfunctions. **Methods/Materials** IL-6 levels, isokinetic muscle strength of knee flexion/extension, and the functional tests were measured in 57 participants ( $71.21 \pm 7.38$  years). Serum levels of IL-6 were done within one single assay(mouse monoclonal antibody against IL-6; High-Sensitivity, Quantikine®, R & D Systems USA;intra-assay coefficient of variance CV% 6.9-7.4; inter-assay CV% 9.6-6.5; sensitivity 0.016-0.110pg/ml mean=0.039pg/ml). Muscle strength was assessed with the isokinetic dynamometer Biodek System 3 Pro®. After the Shapiro-Wilk normality test was

applied, correlations were investigated, Spearman and Kruskal-Wallis tests. Post hoc analysis was performed using the Dunn test. Results A significant negative correlation was observed between plasma IL-6 levels ( $1.95 + 1.77\text{pg/ml}$ ) and muscle strength for knee flexion ( $70.70 + 21.14\%$ ;  $r = -0.265$ ;  $P = 0.047$ ) and extension ( $271.84\% + 67.85\%$ ;  $r = -0.315$ ;  $P = 0.017$ ). No significant correlation was observed between IL-6 levels and the functional tests (time to rise from a chair  $14.65 + 2.82\text{s}$  and gait velocity  $0.95 + 0.14\text{m/s}$ ). Conclusions The increase in the levels of IL-6 showed a significant inverse correlation with muscle strength, as assessed using an isokinetic dynamometer in community dwelling health elderly women. These results emphasize the need to recognize the action of inflammatory mediators on muscle.

**PA6 049 INTAKE LEVELS AND MAJOR FOOD SOURCES OF ENERGY AND NUTRIENTS IN THE RAJASTHANESE ELDERLY (INDIA).**

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In almost every country, the proportion of people aged over 60 years is growing faster than any other age group; India is not an exception of this. The purpose of this study is to examine dietary intake levels and major food sources of energy and nutrients for the Rajasthani elderly in order to relate nutrient intakes to food choices and to provide suggestions for dietary improvement. Method: The data were derived from the 48-hour recalls from 413 subjects (236 males and 177 females) aged 60 and above. Result: The results revealed that cereals/roots, meat, other protein-rich foods and fats/oils contributed most to daily energy intake. Meat and cereals/roots were the major food sources of protein. The highest ranked food sources for minerals are listed as follows: dairy products, vegetables and milk for calcium; dairy products and cereals/roots for phosphorous; vegetables and meat for iron; and vegetables, cereals/ roots, other protein-rich foods and. The elderly were found to consume more salt, dairy products and vegetables, but less poultry and meat. Conclusion: the dietary patterns of the elderly are in general "healthier". Nonetheless, elderly population needs to increase their intake of calcium, magnesium, vitamins E and B6, and dietary fiber, and decrease their consumption of salt. Promoting the ingestion of whole-grain and nut products may be a useful strategy to improve the nutritional status of the Rajasthani elderly. Keywords : Elder , dietary intake, nutrient

**PA6 050 CONCEPT OF AGE-RELATED PATHOLOGY AND ACCELERATED**

**AGEING PREVENTION, REDUCTION OF PREMATURE MORTALITY**  
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Introduction Recent medical and demographic situation in Russia is characterized by high premature mortality among people of working age, reduced birth rate, and low average life span. All these factors alongside growing number of old and elderly people lead to depopulation and deficit of labor resource. The demographic shifts are inevitably accompanied by changes in the structure of morbidity and hence relate directly to the present and future challenges for public health. Methods and Materials Long-term evidence-based studies of application of peptide bioregulators-geroprotectors, developed at the St.Petersburg Institute of Bioregulation and Gerontology were conducted to estimate their role in prevention of premature ageing and improvement of life quality. These bioregulators reveal a unique property to partially restore a decreased with age protein synthesis in the organism, which is accompanied by improved functional activity of organs and tissues. Results More than 30-year experience has shown that their experimental application contributed to normalization of the main organism functions, reduction of tumors occurrence and increase in mean life span by 15-30%. Administration of the bioregulators to people contributed to improvement of brain, immune and cardio-vascular systems functioning, osseous tissue state, and led to almost a two-fold reduction of death rate during a 12-year period of observation. Basing on these data there has been developed a Concept "Prevention of age-related pathology and accelerated ageing, reduction of premature mortality due to biological factors, and expanding healthy period of life for the population of Russia". Conclusion The objective of the Concept is to improve the quality of life, to expand the period of healthy life of elderly people, as well as to enhance the economic effectiveness of utilization of labor resources due to decreased morbidity and disability and premature death rates.

**PA6 051 HIGH BLOOD PRESSURE IN AGING IS ASSOCIATED WITH AN UP-REGULATION OF AT1 AND DOWN-REGULATION OF D1 RECEPTORS IN THE KIDNEY**

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Introduction: Aging, per se, leads to a decline in physiological functions including altered sodium homeostasis in the kidney associated with an increase in blood pressure (BP). Sodium homeostasis and thus BP is maintained by the balance between dopamine D1

receptor (natriuretic) and angiotensin II AT1 receptor (anti-natriuretic) function in the kidney tubules. Although the underlying mechanism for age-associated increase in BP is not known, we hypothesized that an imbalance in renal D1 and AT1 receptors in rats during aging would favor elevated BP. Methods and Materials: Radioligand, biochemical and western blotting methodologies were used in the study. Results: Aged (21-month) Fischer 344 x Brown Norway F1 hybrid (FBN) rats had higher BP compared to their younger (3-month) counterparts. AT1 receptor numbers were higher and angiotensin II stimulated sodium transporter Na,K-ATPase to a greater degree in renal proximal tubules (RPTs) of aged rats. Markers of oxidative stress (protein carbonyls and 8-isoprostanate) and stress-activated transcription factor NF $\kappa$ B were increased in RPTs of aged rats. Hypertensive (mRen2) 27 transgenic rats studied at 4 and 17 months showed age-related increase in malondialdehyde levels (an oxidative stress marker) and AT1 receptors, and decreases in D1 receptors in RPTs. Stress kinase p38 and stress-activated transcription factor NF $\kappa$ B were up-regulated in RPTs of aged (mRen2)27 rats. Conclusion: These results document age-associated oxidative stress in the RPTs that involves p38 and NF $\kappa$ B, and an associated up-regulation of AT1 receptors and down-regulation of D1 receptors. These age-related changes may provide an underlying mechanism for altered sodium homeostasis and higher BP in aging. (NIH/NIA AG25056, AG29904 and NHLBI HL51952 supported the studies).

**PA6 052 THE EFFECT OF WHOLE BODY VIBRATION AMPLITUDE AND FREQUENCY ON LEG MUSCLE ACTIVITY AND ACCELERATION THROUGHOUT THE BODY**

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Whole body vibration (WBV) has been reported to improve muscle strength, power, balance and bone mineral density and therefore could be beneficial for frail older people. Contradictory findings have been reported, probably due to differences in the populations and protocols used. Vibration can have negative effects and the accelerations experienced throughout the body are unknown. We investigated the effect of high (5.5mm) and low (2.5mm) amplitudes and different frequencies (5-30Hz) on leg muscle activity and acceleration at different body segments. Surface EMG of the soleus, gastrocnemius lateralis, anterior tibialis, rectus femoris, biceps femoris and gluteus maximus muscles was recorded from 12 subjects ( $31 \pm 12$  years,  $1.76 \pm 0.09\text{m}$ ,  $72.7 \pm 17.6\text{kg}$ , mean  $\pm$  SD) and compared to that of a maximal voluntary contraction (MVC) of each muscle. The average rectified acceleration, expressed in g ( $1\text{g} = 9.81\text{ m/s}^2$ ), at the toe, ankle, knee, hip and head was recorded on 15 subjects ( $37 \pm 12$  years;  $1.74 \pm 0.08\text{m}$ ;  $68.1 \pm 8.3\text{kg}$ ) using 3D motion analysis. Increased EMG activity during vibration (~5-50% MVC) was greatest in the lower leg. This was linearly related to frequency except in gluteus maximus and biceps femoris. Activity at high amplitude vibration was greater, but not always significantly ( $p < 0.05$ ). Accelerations were 0.2-9g and greatest in the knee and hip at 10-15Hz. Head acceleration was significantly less ( $<0.33\text{g}$ ,  $p < 0.01$ ) than all other body positions. The greater vibration below the knee is associated with more muscle activity, which damps transmission throughout the body and minimises acceleration of the head, and may result from voluntary or reflex contractions. High amplitude and frequencies generated most muscle activity although it would be unlikely to strengthen young healthy individuals, but may be effective for frail older people.

**PA6 053 AMBIENT TEMPERATURE INFLUENCES CELLULAR METABOLISM IN CANINE DERMAL FIBROBLAST**

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Temperature reduction can extend the lifespan of organisms. How ambient temperature affects cellular metabolism to extend lifespan remains unknown. Here, histochemical and biochemical techniques were used to assay age-related markers, energy metabolic molecules, and cellular degradation function in canine dermal fibroblast cultured at low ( $35^\circ\text{C}$ ) and high ( $39^\circ\text{C}$ ) ambient temperature. The results showed that the expression of senescence-associated , galactosidase, lipofuscin, reaction oxygen species, lipid peroxidation, protein oxidation, and superoxide dismutases activity decreased at low temperature. Mitochondrial membrane potential, mitochondrial density, and ATP level increased at low temperature. Lysosomal function and proteosome activity increased at low temperature. These data suggested that low temperature could retard cellular aging via the increase of energy metabolic efficiency and cellular degradation function, whereas high temperature increased cellular aging via converse effect.

**PA6 054 AGE RELATIONS OF CEREBRAL BLOOD FLOW, CEREBROSPINAL FLUID MOBILITY AND CRANIAL COMPLIANCE**

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Introduction. Cerebral blood flow(CBF), Cerebrospinal fluid mobility(CSFm) and skull biomechanics (CC), significantly change with age. Their comparative contribution to brain metabolic supply have not been clarified due to methodical difficulties. This study reports evaluation of CSFm, CC and CBF changes over ages ranging from adult to the elderly using new noninvasive methodology. Method. Comparative evaluation of aging changes of CBF, CSFm and CC was based on simultaneous recordings of transcranial dopplerogram (TCD) in S1 segment of middle cerebral artery (MCA) and rheoencephalogram (REG) with electrodes positioned fronto-mastoidally on human head. Computer-aid analysis, basing on Chart 5.1 and Canvas 6-11 software, of TCD and REG comparative changes during cardiac pulse for evaluation of CSFm and CC was used. 98 healthy persons of both sexes in age ranges 25 – 85 years were investigated. Results. The data obtained show that CBF gradually decreases with age while both CSFm and CC may vary. By age 40-50 CSFm and CC decrease by 10-15%. In this age group a slight decrease of cognitive brain function was observed, which correlate with decrease CSFm and CC values. After 50 CSFm and CC increase again. By age 70-85 CBF in MCA has decreased by about 25-30%, while CSFm and CC has increased up to 20-25% and 25-35%, respectively. In the elderly group, persons with the comparatively smallest increases of CSFm and CC correlated with significance of brain cognitive dysfunction. Conclusion. The peculiarities of age relations between CBF, CSFm and CC suggest that decreasing CBF, due to changing mechanical properties of cerebral vascular wall, is compensated by increases of cranial compliance and CSF mobility within the skull in order to support brain tissue metabolic supply. Decrease of CSFm and CC in elderly may be reason for cognitive dysfunction.

**PA6 055 CIRCULATING LEVELS OF IL-18 AND APOE GENOTYPE IN ALZHEIMER'S PATIENTS**

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Introduction: Multiple genetic and environmental factors are likely to contribute to the development of Alzheimer's disease (AD). The most important known risk factor for AD is the presence of the E4 isoform of apolipoprotein E (apoE). Interleukin-18 (IL-18), a pro-inflammatory cytokine that plays an important role in the T-cell-helper type 1 response, is a new member of the family of cytokines produced in the brain and its involvement in ageing and in neurodegenerative brain diseases has also been highlighted recently. A number of studies associate Alzheimer's disease with APOE polymorphism and alleles which favour the increased expression of immunological mediators such as cytokines. Methods and Materials: 20 AD patients with clinical diagnosis of according to DMS IV-R and NINCDS-ADRDA (MMSE score > 18) and 10 not demented HC subjects (MMSE score ≥28), matched for sex and age were enrolled. Plasma levels of IL-18 were measured with commercially available ELISA kits. INNO-LiPA ApoE is used for the identification of apolipoprotein E genotypes epsilon2, epsilon3, and epsilon4 in blood samples. Results: We found that plasma concentrations of IL-18 were higher in AD patients versus healthy controls. In the AD group, both ApoE4 non-carriers and ApoE4 carriers exhibited higher IL-18 levels than HC group. When comparing ApoE4 carriers to non-carriers, in the AD group we find that ApoE4 carriers have higher plasma IL-18 levels than non-carriers Conclusions: Our study provides evidence supporting the hypothesis that AD disease is associated with an inflammatory response, and suggests an important role for IL-18 in the pathophysiology of AD. Further studies should be performed as they may add a valuable light to the complex mechanisms involving immune dysregulation and leading to the pathogenic pathways of AD.

**PA6 056 DOES HELICOBACTER PYLORI CHRONIC INFECTION PLAY A ROLE IN ALZHEIMER DEMENTIA OCCURRENCE ?**

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Introduction: Principal cause of dependency, Alzheimer disease has an increasingly high impact on elderly population. Among the recent hypotheses, a potential relationship between H. pylori infection and dementia has been suggested via inflammatory, pro-oxidant and vitamin deficiency mechanisms. Objective: To study the relationship between H. pylori infection and risk of Alzheimer dementia. Patient-methods: A cohort of subjects older than 65 (PAQUID) has been followed since 1988 in south west of France. Socio-demographic status, co-morbidities, and complete cognitive assessment over the 17 years period of follow-up were collected. H. pylori infection was detected by serology (ELISA) and immunoblot at inclusion. Statistical analyses: descriptive, multivariate and survival analysis (Cox) were carried out. Results: A 6.5 years). H.<sub>total</sub> of 605 subjects were included (mean age 73.9 years). H. pylori infection was diagnosed in 391 (64.6%) subjects, and was significantly associated with age ( $p=0.02$ ), and with lower subject's socio economic level i.e., both lower education ( $p<0.0001$ ) and incomes ( $p<0.0001$ ). After adjustment for age and sex, hypertension was statistically associated with chronic H. pylori infection (RR 1.7; 95% CI, 1.1-2.6) ( $p=0.01$ ). During subject's follow-up (17 years), the incidence rate of dementia was 19.1%. After adjustment for age, gender, education, the presence of H. pylori

chronic infection was statistically associated with dementia (HR 1.7; 95% CI 1.1-2.7) ( $p=0.02$ ). The presence of vascular co morbidity did not modify the risk. Conclusion: These prospective results showed that H. pylori chronic infection may be a risk factor for Alzheimer disease, interventional study should be done to confirm this association.

**PA6 057 CAN 'BLUE-ENRICHED' OR CONTROL WHITE LIGHT INFLUENCE SLEEP, MOOD AND ALERTNESS IN OLDER PEOPLE?**

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Sleep disturbances increase with age. Daytime light treatment may alleviate these by targeting the circadian system and non-visual processes which are most sensitive to blue light. The current study assessed the ability of 'blue-enriched' light (colour temperature 17000K) and control light (4000K) to influence sleep, mood and 60 years) with self-reported sleep/alertness in older people (problems (Pittsburgh Sleep Quality Index > 5). Fifteen healthy volunteers participated in an 11-week at-home study (randomised, cross-over design). Volunteers were exposed daily to the light condition (~ 400 lux) for 2 h in the morning and evening for 3 weeks followed by 2 weeks of washout. Participants completed daily sleep diaries, mood and alertness scales, the Karolinska Sleepiness Scale and continuously wore an activity/light monitor (Actiwatch-L). Weekly means were compared using RM one-way ANOVA with post-hoc Bonferroni comparison (data on n=12, 65.3 ± 4.0 years; 7F, 5M). Proc GLM was used to test for carry-over effects (t-test) and to compare light conditions (corrected for baseline). Compared to baseline control light significantly improved subjective sleep-efficiency, reduced sleep-latency and advanced subjective and actigraphic wake-up-time. During washout cheerfulness increased in the morning compared to the 3 weeks of control light; calmness improved in the morning and at lunchtime compared to the second week of control light. No carry-over effect was observed for any parameter. There were few statistically significant differences between the two light conditions. Control light was significantly better than 'blue-enriched' light improving actigraphic sleep efficiency and cheerfulness at lunchtime whereas 'blue-enriched' light significantly decreased sleepiness in the morning compared to control light. In conclusion, light treatment, particularly the control light, has some beneficial effects on sleep, mood and alertness in older people suffering from sleep problems.

**PA6 058 HELICOBACTER PYLORI CHRONIC INFECTION AND ALZHEIMER DEMENTIA: PRELIMINARY RESULTS.**

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Introduction: Actually, there is evidence that Helicobacter pylori (H. pylori) infection has a critical role in different extragastric diseases. Recent case control studies reported an association between H. pylori chronic infection and vascular or Alzheimer dementia. Chronic H. pylori infection, especially CagA strains, would induce an inflammatory cascade (production of pro-inflammatory and pro-oxidant substances), and chronic atrophic lesions (vitamin B12 deficiency and hyperhomocysteinemia). If the relation "H. pylori-Dementia" is proven, H. pylori infection, simple to diagnose and to treat, could be one of the tracks of dementia prevention. Methods: We studied serum and cerebrospinal fluid (CSF) of 75 patients with Alzheimer's disease in collaboration with Neurobiotec, Lyon. For each included patient we assessed: 1) Clinical data (vascular comorbidities, global cognitive assessment); 2) Biological data in serum (C-reactive protein level, B12 vitamin and homocysteine levels, Apolipoprotein E4, and cytokines (IL6, ), and biological data in CSF (cytokines, phospho-Tau<sub>200</sub>IL8, TNF protein, and amyloid beta peptide levels). ELISA and Immunoblot test (Cag A antibody) were used to diagnose H. pylori infection, either in the serum and CSF of all the included patients; 3) Brain MRI data. Statistical analyses were used to compare H. pylori-infected and non infected patients using SPSS 14.0 software. Results are actually in progress. Conclusion: This study will permit to better understand the link between chronic H. pylori infection and Alzheimer dementia.

**PA6 059 STRATEGIES TO REVERSE IRON- AND AGE-INDUCED RECOGNITION MEMORY DEFICITS: THE USE OF ROSUVASTATIN**

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Introduction: Increased levels of iron have been reported in several neurodegenerative disorders, such as Parkinson's and Alzheimer's diseases, as well as in normal brain aging. Previous studies of our research group have demonstrated that neonatal iron loading induces cognitive deficits in the adulthood (3 months old). Here, we evaluate the effects of neonatal iron treatment on cognition in aged rats (24 months old). Since statins are beginning to show benefits in a wide range of neurologic conditions, we also evaluate the effects of Rosuvastatin on iron- and age-induced memory deficits. Methods and materials: Male Wistar rats received vehicle or 10.0 mg/kg Fe+2/kg orally at postnatal days 12 to 14.

When the animals were 23 months old, they received daily injections of saline or Rosuvastatin (0.2 or 2.0 mg/kg/intraperitoneally) for 21 days. 24h after the last injection, they were trained in a novel object recognition task. Test sessions were applied at 1.5h (Short-term Memory) and 24h after training (Long-term Memory). Results: The Vehicle-Saline group showed long-term recognition memory deficits. The Iron-Saline group showed impaired recognition memory at both short- and long-term memory tests. Vehicle-Rosuvastatin and Iron-Rosuvastatin groups showed an improvement in recognition memory. Conclusion: Aged rats naturally present recognition memory deficits. However, aged animals that received iron in the neonatal period presented more severe memory deficits, suggesting that iron potentiates age-associated memory impairments. Interestingly, the groups that received Rosuvastatin at the old age, presented a better performance in the task, indicating that Rosuvastatin was able to improve recognition memory deficits induced by aging or iron loading. The present findings give support for the use of statins as neuroprotective agents against age-associated neurological and cognitive deficits.

**PA6 060** CHANGE IN H-P-A ACTIVITY IN RATS CAUSED BY OXIDATIVE STRESS DURING AGING, AND ITS PREVENTION BY VITAMIN E  
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Change in H-P-A Activity in Rats Caused by Oxidative Stress during Aging, and Its Prevention by Vitamin E Shiro Urano, Takeyuki Takahashi, Naoko Kobayashi Shibaura Institute of Technology, Aging & Health Science Research Center, Saitama, Japan [Introduction] To determine whether oxidative stress during aging involves dysfunction of hypothalamic-pituitary-adrenal (HPA) axis in association with the emergence of cognitive deficit. [Method and Results] When young rats were subjected to hyperoxia as an oxidative stress, thiobarbituric acid reactive substances (TBARS), conjugated diene and lipid hydroperoxides (LOOH) in the hypothalamic, pituitary and adrenal were markedly increased, respectively. Vitamin E inhibited such an increase in lipid peroxides in each organ. Either the level of corticotrophin releasing hormone (CRH) in the hypothalamus or plasma level of adrenocorticotrophic hormone (ACTH) and corticosterone in young rats markedly elevated by hyperoxia. In contrast, young rats fed vitamin E-supplemented diet showed no abnormal hormone secretion even after subjected to hyperoxia. Furthermore, glucocorticosteroid receptors (GR) in pyramidal cells at the CA1 region of the hippocampus in the young rats were markedly decreased by the oxidative stress. Similar phenomena were also observed in the normal aged rats and young rats fed vitamin E-deficient diet kept in ordinary atmosphere. The vitamin E-supplementation prevented the decrease in GR in the hippocampus caused by hyperoxia. [Conclusion] These results suggest that oxidative stress induces oxidative damages in hippocampus and the H-P-A axis during aging followed by pyramidal cell apoptosis, resulting in a cognitive deficit in rats, and that negative-feedback inhibition on HPA activity was markedly dampened due to an increase in a plasma corticosterone level caused by a loss of GR.

**PA6 061** ANTI-LIPOLYtic EFFECT OF eNOS DERIVED FROM ADIPOCYTES ACT THROUGH PROTEIN S-NITROSYLATION, ASSOCIATED WITH REGULATION OF FATTY LIVER.  
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Introduction: Obesity/Metabolic syndrome (MetS) is a most important evolving risk factor for cardiovascular disease such as the major cause of elderly death. We investigate the role of eNOS on lipolysis and the relationship between fatty liver, which causes insulin resistance due to metabolic syndrome. Methods and Results: At 3T3L1 preadipocyte, eNOS were dramatically upregulated during the differentiation. eNOS inhibition (L-NIO and siRNA) significantly augmented lipolysis (270% and 400%, P<0.01). N-ethylmaleimide or auranofin significantly inhibited the effect of NOS inhibitor and reduced lipolysis (12% and 2%, P<0.01). To investigate these effects in vivo, C57BL/6 mouse were assigned to three groups (each n=8). The control group (CG) received normal chow (12 weeks), the obesity group (OG) received high fat diet (HFD) (12 weeks), and the dietetic treatment group (DTG) received HFD (8 weeks) and then normal chow (4 weeks). After 16 weeks, OG gain weight, increased in total fat mass and in fatty liver change significantly than CG, whereas DTG had no significant change. Interestingly, eNOS expression in epididymal fat tissue were decreased in OG compared with CG, whereas significantly recovered in DTG. Changes of Intracellular liver TG (degree for fatty liver) were similar to eNOS expression, OG was higher than CG, whereas DTG had recovered (300%, P<0.01; 14%, P<0.01). Conclusion: eNOS in adipocytes plays anti-lipolytic action through protein S-nitrosylation. Obesity increase fatty liver through potentiating lipolysis due to the reduction of eNOS expression, however, it is recovered by dietetic treatment. Activation of eNOS in adipocytes might be a new therapeutic strategy for MetS and cardiovascular disease.

## Track B – Health Sciences and Geriatric Medicine

### PB6 062 NUTRITIONAL STATUS IN ELDERLY INPATIENTS WITH MILD COGNITIVE IMPAIRMENT

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Introduction. Malnutrition is prevalent in hospitalized elderly people in which leads to complications, increases mortality and is associated with dementia. However, it's still unclear the association between malnutrition and preclinical phase of dementia, particularly mild cognitive impairment (MCI), in the elderly. This study aimed to compare the prevalence of malnutrition in elderly inpatients with MCI, dementia (D) and without cognitive impairment (C). Methods and materials. All patients consecutively admitted to Geriatric Unit of "Paradiso" Hospital, Gioia del Colle, ASL Bari, between May 2007-08, underwent the comprehensive geriatric assessment to evaluate medical, cognitive, affective and social aspects. Mini Nutritional Assessment (MNA) was used to classify subjects as well-nourished (score=24-30), at risk for malnutrition (score=17-23.5), or malnourished (score <17). Diagnosis of MCI was made according to the Petersen criteria, diagnoses of dementia according to NINCDS-ADRDA, NINDS-AIREN and DSM-IV. Results. 623 patients (males=267, females=356, mean age=76.3±7.0 years, range=65-101 years) with diagnoses of MCI=71, D=94 or C=458 were enrolled. The average MNA scores were indicative of risk for malnutrition, with significantly lower MNA scores in patients with cognitive impairment (MCI=20.0±4.4, D=18.5±4.1, C=22.4±3.8; p<0.004). Dividing patients according to the nutritional status assessed by MNA, 17% was well-nourished, 58% at risk for malnutrition, 25% malnourished. MCI patients had significantly lower frequency of well-nourished (MCI=10% vs C=22%; p=0.03) and higher frequency of malnourished (MCI=47% vs C=19%; p<0.0001) than C. No differences in nutritional status were found among patients with MCI and dementia. Conclusions: Malnutrition is prevalent in hospitalized elderly patients. Nutritional status is even poorer in patients with MCI and dementia.

### PB6 063 AMINOFF SUFFERING SYNDROME (ASS) A NEW PATHOLOGICAL ENTITY IN END-STAGE DEMENTIA

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Introduction: There is insufficient clinical evidence for suffering in dying dementia patients and key criterions of irreversible medical condition, which may lead to inappropriate evaluation and insufficient palliative treatment. Purpose of study is to evaluate the suffering syndrome of terminal dementia patients (MMSE=0/30, FIM=18/126) over time, from admission to a geriatric ward and on during six months follow up. Methods and materials: A prospective study of consecutive end-stage dementia patients, admitted to a general geriatric department of a tertiary hospital. Patients were evaluated weekly by the Mini Suffering State Examination scale (MSSE) which developed by us. Results: Two hundreds patients have been studied. During six months follow up survived 88 (44%) and died 112 (56%) of end stage dementia (ESD) patients whom admitted to geriatric department. The MSSE scale score of six months survived ESD patients was low with MSSE=3.41±2.02 at day of admission and decreased during six months follow up to MSSE=2.77±1.90, P=0.003. In contrary, the MSSE scale score of died ESD patients was high with MSSE=4.97±2.46 at day of admission to geriatric department and increased until last day of life until MSSE=5.93±2.39, with significant difference P < 0.0001. Conclusion: Our proposal Aminoff suffering syndrome in terminal dementia is the new pathological and geriatric symptomatology and entity which characterized by high MSSE scale score, irreversible and intractable aggravation of suffering and medical condition until death and less than six months survival. Aminoff suffering syndrome could be key criterion for enrolling ESD patients for palliative treatment. New alternative setting approaches as Relief of Suffering Units should be developed for end stage and dying dementia patients being in Aminoff suffering syndrome.

### PB6 064 MINI-SUFFERING STATE EXAMINATION: POSSIBLE KEY CRITERION FOR 6 MONTHS SURVIVAL AND MORTALITY IN END-STAGE DEMENTIA

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Introduction: Six months of survival as a key criterion is extremely important for decision-making for enrolling critically ill patients to palliative settings. Methods and materials: Prospective cohort study with 6 months of follow-up during a 24-month period performed in Division of Geriatric Medicine in a tertiary general hospital. One-hundred and three consecutively admitted bedridden patients with end-stage dementia were evaluated. Patients were evaluated weekly by the Mini Suffering State Examination scale (MSSE) which developed by us and presented in world and regional congresses in Berlin (1999), Jerusalem (2000), Vancouver (2001), Stockholm (2002), Tokyo (2003), Las-Vegas (2004),

Rio-de-Janeiro (2005), Madrid (2006), Saint-Petersburg (2007), Trondheim (2008), the Committee for Labor, Social Services and Health of the Israeli Knesset (2005) and published in Journals Archives of Gerontology and Geriatrics (2004, 38, 2, 123-130), Age and Ageing (2006, 35, 6, 597-601) and our book – Measurement of Suffering in end-stage Alzheimer's Disease, Dyonon, Tel-Aviv, 2007. Interrelations between Mini-Suffering State Examination score at admission and six month's survival and mortality were evaluated. Results: A significant difference was proved among survival curves of subgroups of patients according to the mini scores (0-3, 4-6, 7-10). Survival was shorter and mortality higher in patients with a high Mini-Suffering State Examination score, as shown by the Kaplan-Meier method using the Log Rank ( $p=0.001$ ) and Breslow tests ( $p=0.001$ ). Conclusion: The Mini-Suffering State Examination scale is useful for predicting the last 6 months of survival and mortality of end-stage dementia patients.

**PB6 065** DIAGNOSTIC OF ALZHEIMER DISEASE IN QUÉBEC. EVALUATION OF PRACTICE PROFIL OF MEDICAL SPECIALISTS  
G. LACOMBE\* (Institut université de gériatrie de Sherbrooke, Sherbrooke, Canada)

Abstract not received

**PB6 066** ASSESSING THE RELATIONSHIP BETWEEN HEALTH UTILITIES, QUALITY OF LIFE, AND HEALTH CARE COSTS IN ALZHEIMER'S DISEASE  
E. MILLER\* (Brown University, Providence, United States)  
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Introduction To examine the relationship between multiple measures of health care costs and health utilities, quality of life, and other factors in Alzheimers Disease (AD). Methods Data were obtained from caregiver proxy raters at baseline and 3- 6- and 9-months post-random assignment concerning 421 AD patients, living with at least one caregiver in a non-institutional setting, who participated in the CATIE-AD trial of antipsychotic medication in the U.S. Spearman rank correlations and mixed models (using logged costs) were used to examine the correlates of service use. Correlates include the AD-Related Quality of Life Scale (ADRQoL), Health Utilities Index (HUI)-III, Neuropsychiatric Inventory, Mini Mental Status Examination, and AD-Cooperative Study Activities of Daily Living Scale. Results Total monthly health care costs averaged \$1,204.51 during the study period, ranging from \$0.0 to highs exceeding \$73,000.00 per month. Average monthly costs for specific services were: \$494.39, inpatient hospital; \$200.71, nursing home; \$58.81, residential care; \$753.91, total institutional; \$242.53, outpatient; and \$208.08, ancillary drugs. On average, total costs tended to be lower for female patients ( $\beta=-.325$ ) with better physical functioning ( $\beta=-.017$ ) and higher HUI-III scores ( $\beta=-.820$ ) and higher for less cognitively impaired individuals ( $\beta=.037$ ) with better qualities of life ( $\beta=.021$ ). Whereas older patients tended have higher outpatient costs ( $\beta=.025$ ), those with better physical functioning tended to have lower institutional costs ( $\beta=-.019$ ). Higher HUI-III scores were inversely related to both outpatient and institutional expenditures ( $\beta=-.692$ ,  $\beta=-.970$ ). Female patients tended to have lower ancillary drug costs ( $\beta=-.427$ ); those with greater psychiatric symptoms ( $\beta=.016$ ) and better qualities of life ( $\beta=.017$ ) higher drug costs. Conclusion Findings suggest that the HUI-III could be combined with other known correlates of costs to inform resource allocation decisions associated with AD.

**PB6 067** GERIATRICS D REFUSAL PHENOMENON WITH END STAGE DEMENTIA PATIENTS  
B. AMINOFF\* (Sheba Medical Center, Tel-Hashomer and Human Suffering and Satisfaction Research Center, El-Ad, Ramat Gan, Israel)

In memory to Geriatrics D department which refused and closed due to failure coping with suffering of end stage and dying dementia patients, caregiver staff, and family members. The "Geriatrics D Refusal phenomenon" of end stage dementia (ESD) patients has never been described in medical literature. Refusal phenomenon is entirely clear-cut different from the well-known "burn out syndrome", and it is separate and independent part of abuse and neglect of elderly patients. In the Geriatrics D Refusal phenomenon every effort is made in order not to admit ESD patients and there are numerous techniques are employed of getting rid these patients from the department. In the Geriatrics D Refusal phenomenon, both sides –the Health Insurance Funds and caregiver hospital staff reject the importance of the challenge to provide appropriate care to ESD patients. The refusal phenomenon of ESD patients by health services is one of main causes of suffering of in end stage dementia. We developed novel objective tool for measuring suffering in ESD Mini Suffering Examination (MSSE) which was published in our book – Measurement of Suffering in end-stage Alzheimer's disease, Dyonon, Tel-Aviv, 2007. The results of our research regarding of measuring suffering of dying dementia patients: was proven that MSSE score on the day of admission was  $5.62 \pm 2.31$ , and increased to  $6.89 \pm 1.95$  at the last day of life ( $P < 0.0001$ ). According to MSSE scale, 63.4% of patients died with high level of suffering, respectively. Only one respond for these disturbed results was closing of

geriatric department in which developed MSSE scale and provided objective experimental suffering measuring of ESD patients.

**PB6 068** RISK FACTORS AND RESILIENCE: HEALTH OUTCOMES IN FAMILY CAREGIVERS OF PEOPLE WITH DEMENTIA  
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Introduction Recent research has identified a range of factors that contribute to the risk of family caregivers of people with dementia developing complicated grief, which has in turn been associated with a range of negative health consequences. The aim of the research project represented in this paper was to determine the predictors of complicated grief and its correlation with health outcomes in this group, and to examine the role of resilience. Methods and materials The first study in this project was a scoping study which incorporated semi-structured interviews with older family caregivers of people with severe dementia or whose relative with dementia had died in the last year. Results of these interviews informed data collection for the second, larger quantitative follow up study of health outcomes in a cohort of family caregivers following bereavement. Results This paper reports on preliminary findings of these two studies which indicate that the issues demonstrating the most impact on family caregivers of people with dementia are not those directly related to day to day care giving tasks. Issues that indicated a greater impact were: characteristics of the caregiver and care recipient, quality of the relationship, death sequelae, encounters with formal care providers - particularly those related to palliative care, and ambiguous loss and disenfranchised grief. Significant issues that also appeared, in varying combinations, to impact on ability of caregivers to move on following bereavement included role appraisal, attitude to the role, support networks and spiritual faith. Conclusion This study highlights the complexity of issues associated with care giving for a person with dementia. Focus on these issues presents the opportunity for further research to identify timely and effective interventions for this group that potentially reduce aged care costs by addressing health risks in caregivers and delaying care facility placement of their relative with dementia.

**PB6 069** MILD DEMENTIA AND OUTCOMES OF GETTING LOST WHILE DRIVING  
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Introduction: Research on driving and dementia reports that drivers who have early Alzheimer disease (AD) may continue to drive for extended periods of time as long as their driving is evaluated or monitored. It is known that the earliest symptoms of AD include loss of recent memory and the inability to recognize familiar environments. AD patients may become disoriented in unfamiliar environments and later have difficulty finding their way in familiar environments. Functionally, this means that drivers start out driving and forget where they intended to go, do not recognize or attend to their own familiar neighborhood streets and landmarks, and consequently become lost. Demented drivers may ask for directions to return home. Yet, they cannot remember information provided and continue to drive becoming more confused and disoriented. Getting lost may result in death or injury. Methods: The data for this study was found through an extensive Internet search for all incidents published in newspapers in which an older adult diagnosed with dementia or Alzheimer disease became lost while driving. To find all relevant data three main strategies were used including exploring Internet search engines, missing person's databases, and publication databases. Multiple combinations of the following search terms were used: dementia, Alzheimer, missing, lost, found, driving, drive, drove, car and truck. Results: We examined 207 reports of lost demented drivers over ten years. One hundred and fifteen were found alive, 35 injured; 29 were found dead; and 63 were not found. Miles driven and days missing were also reported. Conclusion: The tragedies cited in the sample of newspaper articles told stories showing that the effects of dementia on driving navigation need more exploration. The cognitive load of being lost may contribute to accidents.

**PB6 070** SOCIAL INEQUALITIES AND CORRELATES OF COGNITIVE DISABILITY IN THE ELDERLY  
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Introduction: This study assessed social inequalities in cognitive disability and the role of lifestyle factors in mediating those disparities. 60 years), randomly selected $\geq$ Methods and materials: 1,697 subjects (from the Lorraine population completed a postal questionnaire including socio-demographic characteristics, height, weight, socio-occupational category, diseases, smoking, alcohol abuse, perceived income, and cognitive disability. Data were analyzed using the logistic model. Results: Cognitive disability was common (46.6%) and there were strong social inequalities: odds ratio adjusted for age and sex, vs. upper professionals, was: 1.29 (95%CI 0.71-2.36) for intermediate professionals, 1.75 (1.12-2.74) for manual workers, 1.70 (1.08-2.70) for employees, 2.94 (1.71-5.09) for farmers, 1.50

(0.86-2.60) for craftsmen/tradesmen, 2.44 (1.40-4.25) for housewives who never worked, and 1.47 (0.93-2.31) for other/unknown professionals. Among the covariates studied those with significant adjusted odds ratios were: women (1.34, 1.07-1.68), aged 70-79 (1.21, 0.98-1.51) and aged 80+ (1.71, 1.22-2.39) vs. aged 60-69, primary education (1.43, 1.15-1.77), alcohol abuse (2.44, 1.54-3.86), musculoskeletal disorders (1.22, 0.98-1.53), and other diseases (1.52, 1.23-1.87). Conclusion: Disparities in cognitive disability mainly concern manual workers, employees, farmers and housewives. Lifestyle factors do play a role in explaining those disparities.

**PB6 071 ACTIVITY PARTICIPATION IN RESIDENTS WITH DEMENTIA: ANALYSIS OF RESIDENT ANALYSIS INSTRUMENT (RAI) DATA**  
P. WIELANDT\* (University of Alberta, Edmonton, Canada)

**Introduction** The benefits of engaging in activity programs for long-term care residents with dementia are well documented. Indeed many researchers have shown that activity participation can positively influence residents' quality of life, reduce behavioral symptoms and increase self-esteem. Despite this, numerous studies have reported that long-term care residents often spend most of their day alone, engaged in more passive activities and are often rather bored. The RAI data which is widely used in North America collects various information including resident's functional limitations (range of movement and voluntary movement), the use of mobility equipment (mobility methods) and activity participation (average time spent in activities, preferred activity context and activity types. Currently some long-term care facilities in Canada are investigating methods to increase activity levels in residents and are considering using RAI data to inform their decisions. This paper will report on a study which used RAI data to determine whether there was an association between resident's functional abilities, their use of mobility equipment and time spent participating in activity. **Methods and Materials** Anonymized RAI data collected April to June 2007 were analyzed using SPSS (version 14.0) to provide a profile of long-term care residents' functional limitations and activity participation levels. **Results** Findings were consistent with those found in the current literature with the majority of residents spending less than one third of their time engaged in purposeful activity. Anomalies in recorded RAI data regarding residents' functional status and their involvement in activity programs provided were also noted. **Conclusions** Whilst the RAI is useful in collecting data improvements are recommended to ensure that more in depth and meaningful information is collected surrounding residents' functional abilities and activity participation.

**PB6 072 THE RELATIONSHIP BETWEEN MILD COGNITIVE IMPAIRMENT (MCI) AND FUNCTIONAL CAPACITIES**  
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Mild cognitive impairment (MCI) is generally referred to as a transition stage between normal cognitive performance and dementia in the classification of cognitive function in clinical research. MCI subjects still maintain their capacity to complete everyday activities in a normal manner or may show mild functional incapacities. However the use of functional activities as a means to distinguish MCI subjects from those affected by dementia remains ambiguous in the research literature. The purpose of this study is to evaluate the degree of functional incapacity in MCI subjects by examining the evolution of the MCI subjects' cognitive capacities over time as well as the relationship between cognitive difficulties and functional capacity. Sixty-three subjects participated in the first assessment. Among them, 19 were diagnosed with MCI, 21 with Alzheimer's disease and 23 were in the control group. The Activities of Daily Living (ADL) scale and the Mini Mental State Examination (MMSE) were used to assess cognitive functions. The functional capacity of MCI subjects was compared to Alzheimer's subjects and to a control group. Among the MCI subjects assessed during the first evaluation, 16 of them were re-assessed six months later in order to verify the evolution of their cognitive functions and their functional capacity. Among those, 5 had developed a form of dementia six months later. The results from this study show that MCI subjects suffered a significant loss in their functional capacity in contrast to the control group. The results are discussed.

**PB6 073 THE MEASUREMENT OF THE RECOGNITION OF FACIAL EXPRESSION OF EMOTIONS IN THE ALZHEIMER'S DEMENTIA**  
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**Background:** The existence of a deficit of the visual recognition of the facial emotions (DVRFE) in the Dementia of the Alzheimer's type is a known fact. However, the quantification of such deficit is not possible. **Objectives and methods:** To measure a (DVRFE) in the Alzheimer's Dementia (AD) a beginning is made using Method of Analysis and Research of the Integration of the Emotions (MARIE). This tool (MARIE) is based on a continuum of chimerical images created starting from two real images and their mixture in variable proportions. This continuum is a series of images of facial emotional expressions. The subject makes a binary choice. The material comprises 9 series of 19 images each. Participants: 12 AD subjects (H/F = 7/5; age 68±3 years; educational

level; MMSE: 26±2.4; MATTIS: 130±10; Picture Naming = 33±4; Grober and Buschke; and 12 paired healthy subjects (HS) (H/F = 7/5; age 66±6; schooling = 7/4/1; MMSE: 30; MATTIS: 144; Picture Naming = 80; Grober and Buschke). **Results:** Recognition of the emotion by the HS and AD subjects for each emotional series. The visual recognition of the facial emotions is already impaired at an early stage of the disease. AD subjects would be definitely less sensitive to the emotions as manifested by increase in the threshold for identification. The average differential is 16% of answers. The disorder of the recognition of the emotions seems related to the severity of the verbal episodic memory as well as the decline of total intellectual efficiency (cognitive impairment). **Conclusion:** The concurrent measurement of the MATTIS, the verbal episodic memory and the visual recognition of the facial emotions could clinch early positive diagnosis of AD in private clinics at the very onset of Dementia of the Alzheimer's type.

**PB6 074 COMPARISON OF MOTOR PERFORMANCE IN UPPER AND LOWER EXTREMITIES UNDER DUAL-TASK FOR PATIENTS WITH MILD ALZHEIMER DISEASE**

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**Background/Aims:** Alzheimer disease (AD) is a progressive disease that threatens the elderly worldwide in self care. Early diagnosis and early treatment are the key for a better quality of life in AD population. People with dementia are noted not only have memory and cognitive dysfunction, movement and executive disorder are also found. In this study we examine the motor performance of patients with mild AD patients in order to establish an effective diagnostic device for the early stage of AD. **Methods:** The motor performance of both mild AD patients (n=10) and normal (n=10) counterpart were analyzed with the gait analysis device (Vicon MX system) and trail making test. **Results:** We found that backward counting with 3 digits during gait performance in mild AD patients revealed remarkable difference in velocity, cadence, coefficient of variation of stride length and stride time than control group, but not in forward counting with 3 digits test. For upper extremity performance, all trail making tests were very sensitive to detect the difference of reaction time between mild AD group to control group. **Conclusion:** Dual tasks of gait and trail making test performance revealed obvious impairment of executive motor function in very mild AD patients. These inexpensive and portable testing devices could be used as an adjuvant diagnostic tool for early AD.

**PB6 075 STRATEGY STIMULATION OF MEMORY: WORKSHOPS FOR GAMES AND GAMES FOR THE ELDERLY DIAGNOSED WITH LEARNING AMENDMENT TAKE THE JOINT HEALTH UNIT OF WANSBECK-FEDERAL DISTRICT**

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L. SAMARA RAMALHO DOS SANTOS FIGUEIREDO, S. MONTEIRO SILVA

The aging of the population is a world-wide phenomenon, one of the main consequences of the growth of this segment is the increase of the prevalence of disorders related to the cognition. The memory is one of the most important cognitives functions of the man, however in this phase the frequent complaints and the mnemonic deficit are common, being able to generate Light Cognitivo Upheaval decurrent of the physiological processes of the normal aging or a period of training of transition for the dementias. In this study it had the participation of 16 aged ones with diagnosis of Light Cognitivo Upheaval, with superior age the 60 years and superior or equal frequency 50% during the meeting. The research was composed for ten workshops of games and tricks of stimulation of memory objectifying to compare the mnemonic performance, to know the socio-economic-demographic profile of the integrant ones and to appraise the perception of the aged ones on its memory. It is a search social of quasi-qualitative base with the method search action. The appraise of the participants was carried through the half-structuralized script of interview and specific tests of cognition applied before and after the workshops, as: Mini-Mental State Examination (MEEM), Clock Drawing Test (TDR), Memory of Words (original instrument) adapted for Memory of Figures and Verbal Fluency. The results had disclosed that in the group the majority was of the feminine sex with average age of 68 years, married, inactive professionally and with low degree of scholar. The mnemonic performance was observed positively in the Test of Memory of Figures and Verbal Fluency, however in TDR and MEEM it showed unchanged after the interventions, except in the sub-item of the MEEM, attention and calculation where it detected a expressive improvement.

**PB6 076 TO BE (AT HOME) OR NOT TO BE: AN EXAMINATION OF THE MEANINGS, DECISION MAKING PROCESSES, AND EXPERIENCES OF PERSONS WITH DEMENTIA AT THE POINT OF RELOCATION TO A RESIDENTIAL CARE FACILITY**

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**Objectives:** This study explored the perspectives of persons with dementia (PWD) on the meanings and experiences associated with relocation to a residential care facility (RCF).

**Methods:** A qualitative design was employed, which involved in-depth interviews with 16 PWD at their homes within two months prior to relocation. The work of Strauss and Corbin (1998) guided the analysis process. **Results:** At the time of relocation, living at home had become a paradoxical experience for most participants. On the one hand, they had profound, multifaceted and interrelated attachments to their homes (which encapsulated a sense of comfort, choice, control, connection, competence, constancy and continuity). On the other hand, with the progressive decline in their functional competence and other changes in their life circumstances, living at home had increasingly become a source of distress, confinement, isolation, dependency, and intrusion. Participants viewed relocation to a RCF as a major residential change and life transition requiring significant adaptive efforts. Despite individual variations, for most participants, relocation to a RCF: a) symbolized the end of an era and a long established way of life; b) signaled the inevitable downward trajectory of old age, c) meant living a more protected, dependent, structured, and communal lifestyle in a place that is associated with "hospitality" and "rest", and d) presented a life course challenge that could be dealt with by drawing on one's sense of identity as a "survivor". Two key processes ("agency" and "exploration") and three perceptions ("legitimation", "temporality", and "desirability") seem to shape main patterns of response to the relocation decision. **Conclusion:** The findings raise awareness of the subjective meanings of residential transitions in the experience of aging with dementia, and inform supportive interventions to optimize housing decisions for PWD in order to promote successful adaptation to their new living environments.

**PB6 077 HUNTINGTON'S DISEASE: REPORT OF FOUR CASES AMONG BROTHERS**

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**INTRODUCTION:** Huntington's chorea, described by George Huntington in 1872, with an incidence of 5 to 10 cases per 100,000 habitants, is a degenerative, progressive disorder of the nervous system with a dominant autosomic heritage of complete penetration. There are no data in Brazil about its real prevalence or incidence. **MATERIAL AND METHODS:** Case report. **OBJECTIVE:** To describe the presence of this disease in 4 members of a family constituted of 7 brothers. **RESULTS:** ECS, male, 54 years old, married, black, retired driver, graduated, came to the outpatient visit with his wife, referring an episode of convulsive crisis for 6 years, when he started with an anticonvulsant therapy. He also reported a recent memory deficit and humoral liability. His wife confirmed the complaints and informed that the patient has shown choreiform movements of the face and upper members for 5 years. During the physical exam, no changes in the cardiorespiratory, respiratory and abdominal systems were noted. The patient was showing autopsychic orientation preserved, temporal disorientation, gait ataxia, dysmetria, dysdiadochokinesia, upper elastic hypertonia of the upper and lower members, patellar hiperreflexia, presence of choreiform movements of the face and members (especially in the upper members), with power and sensitiveness preserved in the four segments. MEEM 14/30 8-points verbal fluency test, concrete thoughts. A very important fact in his familiar history is the presence of Huntington's disease in 3 brothers with a confirmed molecular diagnosis. The CT of the brain showed right temporal atrophy, the brain perfusion SPECT showed perfusion changes in the ganglion of the compatible base with HD and brain-vascular pathology and molecular diagnosis showed repetitions 29/41. **CONCLUSION:** Considered the most common hereditary neurovegetative disease and with a progressive evolution, it is very important to optimize the diagnosis, conduct and genetic of the patients.

**PB6 078 CASE STUDIES FROM THE FIELD TO INFORM THE PRODUCTION OF AN EDUCATIONAL RESOURCE FOR TERTIARY STUDENTS ON DEMENTIA CARE**

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**Introduction:** Undergraduate healthcare students often lack knowledge and experience of how to interact with a person with dementia. An educational resource was created utilising case studies from healthcare professionals with experience of people with dementia. The resulting filmed case scenarios and accompanying workbook illustrate the theory of person-centred care for undergraduate healthcare students across multiple healthcare disciplines. **Methods and Materials:** Literature about the application of person-centred care was reviewed. Ethical approval was gained and an interdisciplinary advisory group, consisting of healthcare professionals with experience of people with dementia, acted as a focus group and provided case studies of their experiences. This group met bi-monthly to advise, monitor and develop the educational resource. A total of 35 case studies were produced by 18 healthcare professionals from 14 disciplines across 15 organisations. These scenarios were analysed for themes, then scripted and re-enacted as short docu-dramas for a DVD that interrelated with the workbook. **Results:** The case studies were analysed thematically into five behavioural categories: aggression/violence, absconding/repetitive behaviour; negotiation/transportation; resisting/concerning behaviours; and,

food/language/understanding. Each theme was scripted and re-enacted into five case scenarios to demonstrate interactions between healthcare professionals and a person with dementia. Positive person-centred care, as well as malignant psychosocial interactions that can cause deterioration in the wellbeing of a person with dementia, were illustrated. The theoretical underpinning in the workbook correlated with the DVD and reflection exercises for students. **Conclusion:** This educational resource interrelated knowledge of the theory of person-centred care with real life case studies provided by healthcare professionals. It provided students with strategies on how to interact positively with people with dementia to maintain their dignity and personhood. Evaluation by academic key personnel and student cohorts across healthcare disciplines was undertaken before online conversion.

**PB6 079 DOES DEMENTIA CARE MAPPING ADEQUATELY CAPTURE SUBJECTIVE REPORTED PATIENT EXPERIENCE IN HOSPITAL?**

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**Introduction:** Reliable methods are required to improve dignity and person-centred care for older hospitalised people. Dementia Care Mapping (DCM), an observation-based practice development tool, might provide one such method but requires further investigation. Our research objective was to explore the validity of DCM with self-reported patient experience. **Methods and materials:** 58 elderly patients were observed ("mapped") for 84 hours. Semi-structured interviews with seven cognitively intact patients and unstructured conversations with 51 patients were conducted. Concurrent validity was investigated by comparing reported experience with quantitative mapping data. The adequacy of DCM to capture important aspects of patients' reported experience was investigated using framework analysis. **Results:** There was congruence between observed and reported types of activities, but not their frequency. There was less congruence between quantitative assessments of well-being. Reported examples of being treated with or without dignity or respect were consistent with observed staff actions. Patients framed their well-being in terms of their independence and quality of care provided by staff (which are captured by DCM), health status and perceived potential for recovery/returning home (which are not). **Conclusion:** We conclude that DCM has the capacity to record relevant patient issues in a systematic way; but it is not comprehensive and does not identify all the issues of importance for well-being.

**PB6 080 THE FEASIBILITY OF CARE MAPPING ON ELDERLY CAREWARDS**

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**Introduction:** The United Kingdom National Health Service is committed to ensuring patients receive hospital care in a dignified manner. Methods of quantifying and developing dignity in hospital wards are required. Care mapping, otherwise known as dementia care mapping (DCM), is an observational practice development method designed to improve person-centred care for people with dementia in formal care settings. Our research objective was to investigate the feasibility of DCM in elderly care hospital wards, including with patients who have health conditions other than dementia. **Methods and materials:** 58 patients (12 with dementia) in three general hospital elderly care wards and two community hospitals were observed (mapped) using DCM for 84 observation hours between 08:35-19:50 over 21 days. **Results:** 414 patient hours (4,968 five-minute time frames) were mapped. There were no major data collection issues other than the relatively high proportion (942/2,376 (40%) time frames) of missing data in the community hospitals due to time patients spent away from the area being mapped. All 3,624 (73%) of the time frames with patient observed data could be coded utilising the existing DCM Behaviour Category Codes and Mood/Engagement Value coding frameworks. **Conclusion:** The results from this preliminary study are promising and indicate that the DCM method is potentially feasible for use in elderly care hospital wards, particularly in general hospitals, without the need for major modifications to the coding frameworks or method of undertaking data collection.

**PB6 081 INCIDENCE AND PREDICTORS OF EXCESS DISABILITY IN NURSING HOME RESIDENTS WITH DEMENTIA**

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**Introduction:** The inability to walk adversely affects the well-being of the growing number of individuals with dementia. This study aimed to inform prevention and treatment efforts by estimating the incidence and identifying predictors of walking and eating disability in excess of that attributable to dementia. **Method:** During a one-year, prospective cohort study of 120 nursing home residents with middle-stage dementia ability to walk was monitored biweekly. Individual and facility-specific predictors of disability were identified using Cox proportional hazard regression models. **Results:** Among 120 residents, 40.8% (95% CI: 32.7% - 50.2%) developed a walking disability within one year of observation. Approximately half (27.0%; 95% CI: 19.7% - 36.5%) of this disability was not attributable

to dementia. Adjusting for individual and facility-specific predictors of disability, residents with more advanced dementia were estimated to experience 2.1 (95% CI: 1.18 – 3.83) times the hazard of walking disability. Predictors of walking disability included more comorbidities (hazard ratio (HR): 1.8; p=0.05) and less supportive environments (HR: 2.3; p=0.01). Predictors of walking excess disability included using antidepressant drugs (HR: 2.1; p=0.05), not using cognitive enhancer drugs (HR: 2.7; p=0.03), and living in a less supportive environment (HR: 2.0; p=0.07). Conclusion: As more than half of the walking disability in residents with middle-stage dementia was not attributable to their dementia, there are opportunities to target modifiable predictors of disability. Walking disability in nursing homes may be reduced by attending to comorbid conditions, creating supportive dementia environments, considering the use of cognitive enhancer drugs, and being vigilant for adverse effects when treatment with antidepressants is necessary. This research was funded by the Alberta Heritage Foundation for Medical Research.

**PB6 082 "COGNITIVE DECLINE AND GERIATRIC ASSESSMENT IN A MEXICAN UNIVERSITY GERIATRIC UNIT"**  
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Introduction: Cognitive decline has been associated with several diseases during the ageing process, for primary care clinicians there are some barriers to evaluate an elderly patient using the MMSE screening test, due to the multiple pathologies that have been involved. Methods and Materials: This is an observational and retrospective analysis from the database obtained during a 6 month period in the Geriatric Unit of the University Hospital U.A.N.L.; we analyzed 1311 ambulatory patients over 60 years of age from February to July 2008 and a MMSE evaluation was carried out during the first visit. A frequency and Chi square tests were performed using SPSS 13. Results: We obtained 372 males, 936 females, the mean of age was 75.97 years old and 4.44 the mean of level of education. The correlation showed depression and dementia as the principal cause of cognitive decline. Depression was a frequent diagnosis in all processes of cognitive decline with 139 patients (36.1%) in MMSE 26-30, 81 (35.4%) in MMSE 22 to 25, 117 (45.5%) with MMSE 17-21, 124 (46.6%) and finally 47 (55.3%) in MMSE 0 to 10. Alzheimer's disease was the most frequent diagnosis of dementia and its prevalence increased during the cognitive decline process: 9 patients (2.5%) with MMSE 26 to 30, 9 (3.9%) with MMSE 22-25, 37 (14.4%) with MMSE 17-21, 85 (31.8%) with MMSE 11-16 and 35 (41.2%) with MMSE 0-10. Conclusion: MMSE is a screening test in the geriatric assessment and can be used by medical practitioners to evaluate cognitive decline but never to diagnose or to start treatment. The patients may be sent to specialized centers for the memory study to improve the diagnosis' quality and intervention.

**PB6 083 POSATIRELIN (L-PYRO-2-AMINOADIPYL-L-LEUCYL-L-PROLINAMIDE) TREATMENT FOR PERSONS WITH DEMENTIA: A SYSTEMATIC REVIEW AND META-ANALYSIS**  
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INTRODUCTION: Posatirelin (l-pyro-2-aminoadipyl-l-leucyl-prolinamide) is a synthetic tripeptide with neurotrophic, cholinergic, and catecholaminergic properties that has shown potential in improving cognition and behaviour in both animal and human experiments. Posatirelin may therefore be a viable treatment in delaying cognitive decline (as well with other symptoms) associated with dementia. The purpose of this review is to assess the evidence of efficacy of posatirelin treatment in improving function, cognition, mood, behaviour, quality of life, and mortality in older persons with dementia as well as examining adverse drug reactions. METHODS AND MATERIALS: The Specialized Register of the Cochrane Dementia and Cognitive Improvement Group (CDCIG), The Cochrane Library, MEDLINE, EMBASE, PsycINFO, CINAHL and LILACS were searched on 5 June 2008 for relevant trials. Many other trial registers were also searched. The selection criteria included all relevant, randomized controlled trials in which posatirelin treatment was compared to a placebo for the effect of improving function, cognition, mood, behaviour, quality of life, and mortality in older persons with dementia of any type. RESULTS AND CONCLUSIONS: Four trials (n=686) were included. Meta-analysis revealed that posatirelin significantly improves function, cognition, and mood in patients with any dementia type. A sub-group analysis of trials (n=3) revealed significance pertaining to Vascular Dementia and not Alzheimer's Disease. There were no significant reports of adverse drug reactions in 3 trials that reported adverse effects. Since not all included studies incorporated both of these dementia types, further research is necessary to determine what type and level of dementia would benefit from posatirelin treatment. The results of these trials should be replicated before any clinical recommendations can be made.

**PB6 084 DANCE PERFORMANCE AS AN INTERVENTION IN THE CARE OF ELDERLY PERSONS WITH DEMENTIA**  
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There is a need to improve interventions in the care of elderly persons with dementia. Dance is one of the nursing interventions used in elderly care. The aim of this study was to

describe and evaluate the use of dance performance as an intervention in the care of elderly persons with dementia. The task of the research was to describe and evaluate how demented elderly persons experience dance performances and describe dance performance and its essence as an intervention. The method was qualitative evaluation research. The informants of the study were demented elderly persons (13), their family members (4), nurses (7) and practical nurse students (3). There were four dance performances in the nursing home. They were based on elderly persons' memories of seasons. Data were collected using individual interviews of elderly persons, videotaping, heart rate measurements and focus group interviews of family members, nurses and students. The experiences of the demented elderly persons were connected to dance performance as an activity, dance performance, performers, themselves and to the audience and surroundings. Dance performance was evaluated as process intervention, which has an effect on the elderly person and his/hers interaction with the others and also on the family members. Dance performance and its implementation as an intervention in the care of elderly persons with dementia has its own special features. Watching the dance performance is an active event to the demented elderly person. Feelings, memories and sense of community with the others aroused by dance performance are positively significant in the nursing care context. Dance performance is an interactive psychosocial intervention which promotes well-being and elicits resources of the elderly person with dementia. This study has produced information to gerontological nursing. With this information dance performance can be used in similar situations as a goal-directed intervention.

**PB6 085 BEYOND TRADITIONAL MEASURES OF VALIDITY: ADDRESSING VALUES AND ETHICS IN CRITICAL ASSESSMENT OF MEASUREMENT TOOLS**  
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Introduction: Aging in place has become an important priority, yet it needs to be recognized that aging persons with cognitive impairments face challenges impeding their ability to safely do so. Assessing the capacity for seniors with dementia to age in place is an ethical issue and demands that health care professionals critically consider the measurement tools that inform such assessment. This presentation argues that traditional approaches to critical evaluation of measurement tools used in rehabilitation literature are insufficient to inform the development and use of such tools to assess the capacity for safe, independent living. Such approaches often neglect to consider the values embedded within measurement tools and the ethics involved in their use. Methods: After providing an overview of traditional concepts of measurement theories, a framework for construct validity developed by Samuel Messick is explored. Conclusion: This framework of construct validity enables more comprehensive critical analysis of measurement tools, particularly in its attention to the social consequences of test use and scores. Practice implications: The applicability of this framework to the examination of assessments designed to assess the capacity of persons with dementia will be discussed. Authors: Ms. Briana Zur (presenter), CIHR Fellowship in the Area of Aging, Veterans and Dementia, Dr. Andrew Johnson, Dr. Eric Roy, Dr. Debbie Laliberte Rudman

**PB6 086 AKTIVA: A CONTROLLED INTERVENTION-STUDY FOR PREVENTION OF DEMENTIA IN THE ELDERLY [AKTIVA: AKTIVE KOGNITIVE STIMULATION – VORBEUGUNG IM ALTER]**  
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Introduction: The incidence of dementia increases with increasing age. At present, there is no chance of healing the two most common forms of dementia: Alzheimer's disease and Vascular dementia. The prevention of dementia with potential preventive strategies is of high importance to reduce the individual risk. Besides the treatment of established risk factors (overweight, high blood pressure, diabetes, high cholesterol), cognitive activity in the context of leisure activities seems to be a potential preventive strategy. Therefore, a special intervention-program for the elderly was developed, accomplished and evaluated which has its main focus on cognitive activity induced by leisure activities. AKTIVA represents a manual for cognitive stimulation in everyday life and leisure time. The participants were informed about their individual possibilities of prevention and were systematically instructed and reinforced to increase cognitive stimulating activities as part of their daily routines. In addition, some participants got guidance regarding healthy nutrition and sport. Methods: The intervention study consists of 307 men and women from the older population (M = 72 years, SD = 7 years). It is a randomized, controlled pre-post-follow-up design conducted from March 2008 to November 2008. All participants were randomly assigned to 1 of 3 conditions: AKTIVA-intervention-program (N = 126), AKTIVA-intervention-program plus nutrition and sport guidance (N = 84), no-intervention-program control-group (N = 97). The AKTIVA-program consists of 10 training sessions (8 + 2). Main Outcome Measure: Cognitive performance, mental state, life satisfaction and subjective memory decline. Results: At the time of the congress first

results will be available. Hitherto the participants enjoyed the AKTIVA-program and 80% of the informants would recommend it.

**PB6 087 BENEFITS OF ORAL COBALAMIN ON COGNITIVE FUNCTION IN ELDERLY PERSONS WITH VITAMIN B12 DEFICIENCY**

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Introduction Vitamin B12 deficiency is common in elderly persons and has been associated with cognitive impairment. However, evidence from trials of the effects of cobalamin supplementation on cognitive function is limited and inconclusive. Materials and methods We set out to investigate the effects of cobalamin replacement therapy on cognitive function of older people with cognitive impairment and cobalamin deficiency by an open prospective study. Ten patients aged >75 years with cognitive impairment (MMSE score from 10 to 25) and cobalamin deficiency (<0,16µg/L) were recruited. They received 1000µg of oral vitamin B12 daily for 6 days, then weekly for 3 months, then monthly for 3 months. Cognitive function was assessed before and after 3 and 6 months of treatment by Mini Mental State Examination, Verbal Fluency Test and Frontal Assessment Battery at bedside. Results Mean cobalamin serum levels had significantly increased from 0,12+/-0,03µg/L at baseline to 0,22+/-0,15µg/L after 6 months ( $p=0,004$ ). This trial showed an improvement on the MMSE score from 20,44+/-2,9 at baseline to 22,6+/-3,5 after 3 months of treatment ( $p=0,06$ ). The mean MMSE score after 6 months was 21,94+/-3,0 ( $p=0,07$ ). Patients also improved on verbal fluency and FAB score but this was not statistically significant. Conclusion Although the trial was restricted to a small number of patients, we found nearly significant improvement on MMSE score after 3 and 6 months of oral cobalamin supplementation. Moreover, previous studies showed that cobalamin supplementation was unlikely to prevent further cognitive deterioration in patients with long-standing dementia, but could improve cognitive function in patients having mild dementia symptomatic <2years. Therefore all patients with cognitive impairment should be investigated for cobalamin deficiency.

**PB6 088 VALIDATION OF A SHORT COGNITIVE ASSESSMENT TOOL IN THE INDIGENOUS POPULATIONS OF FAR NORTH QUEENSLAND**

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Aims: The burden of dementia is now beginning to become apparent in Australia ageing Indigenous population. The Kimberley Indigenous Cognitive Assessment tool (KICA) has been validated in older Indigenous people of both the Kimberley region of Western Australia, and in the Northern Territory, and appears to be a reliable and valid tool for the assessment of dementia in these groups. Its usefulness has not been determined in Far North Queensland. A short version (sKICA) was developed, specifically for General Practitioners, to screen for cognitive changes. This, combined with an Informant Questionnaire (KICA-IQ), was trialled in the Indigenous Populations of Far North Queensland. Methods: The sKICA and KICA-IQ were tested in 55 Indigenous subjects, over 45 years of age and with varying degrees of cognitive impairment, across Cape York and the Torres Strait. Subjects were interviewed using the sKICA and KICA-IQ, and then reviewed by a Geriatrician, blinded to the previous assessment. Consensus diagnoses were determined by two specialists (geriatrician/old age psychiatrist) using DSM IV/ICD 10 criteria. Results: The sKICA-Cog had a sensitivity of 82.4% and specificity of 88.5%, with a cut-off score of 21/22 out of 25. The free recall item effectively discriminated 88% of dementia cases. , was 0.76. Internal consistency, as assessed by Cronbach's The KICA-IQ had a sensitivity of 88.2% and specificity of 84.6%, with a cut-off score of 3/4 out of 16. Conclusion: The sKICA and KICA-IQ appear to be reliable assessment tools for cognitive impairment in the Indigenous populations of Far North Queensland.

**PB6 089 DEMENTIA IN A SENEGALESE ELDERLY POPULATION 65 YEARS AND OVER: PREVALENCE AND RISK FACTORS**

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Introduction. With the ageing of the population, we conducted a study to assess the prevalence and identify the risk factors of dementia among Senegalese elderly population. Methodology. The study was cross-sectional and intended, through a two-wave process of

data collection, to collect data from March 01 2004 to December 31 2005 among 507 Senegalese elderly population aged 65 years and over utilizing the Medico-social and University Center of IPRES for health care. Sociodemographic, toxic habits, physical activity, social network, medical history, familial history of dementia data were collected with a structured questionnaire completed with a clinical exam and neuropsychological testing. Dementia was diagnosed using DSM IV-R criteria. Results, Forty five patients (8.9%) had dementia. The whole population has a mean age of 72.4 years ( $\pm 5.2$ ), mostly male, married, and non-educated. Hypertension, arthritis, gastro-intestinal diseases, respiratory diseases and cataract were the main health conditions reported in the past medical history. Smoking was important; alcohol consumption was rare, but walking was the main physical activity. The elderly population had a high diversity of ties and frequency of contact with the relatives and friends. Age (OR= 4.26; IC= 1.36-13.30), education, (OR= 2.76; IC= 1.23-6.20), epilepsy (OR= 11.72; IC= 2.10-65.23) and family history of dementia (OR= 7.56; IC= 3.42-16.75) were independently associated with dementia. Conclusion. The results showed the high prevalence of dementia. They confirm the role of age, education, epilepsy and genes in its dementia. Keywords. Dementia, prevalence, risk factors, Senegal.

**PB6 090 ASPIRIN, STEROIDAL AND NON-STEROIDAL ANTI-INFLAMMATORY DRUGS FOR TREATING ALZHEIMER'S DISEASE: A SYSTEMATIC REVIEW**

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Introduction: There were evidences from retrospective studies implicating that the use of aspirin, steroid and non-steroidal anti-inflammatory medications might have a role for treating Alzheimer's disease. Methods and materials: MEDLINE, EMBASE, CENTRAL, PsycINFO, CINAHL, LILACS, mRCT, ISRCTN and ClinicalTrials.gov were searched to identify relevant randomized controlled trials (RCTs). All searches used the terms (anti-inflammatory agent\* OR aspirin OR cyclooxygenase 2 inhibitor\* OR Non-steroidal anti-inflammatory agent\* OR steroid anti-inflammatory agent\*) AND (Alzheimer\* OR dementia OR ((cognit\* or memory\* or mental\*) and (declin\* or impair\* or los\* or deteriorat\*)) AND (random\* OR randomized OR double blind\* OR single blind\* OR placebo\* OR controlled)). Results: Our inclusion criteria resulted in 16 RCTs from 488 review studies. Interventions assessed in these studies were grouped into 4 categories: aspirin (3 studies), steroids (3 studies), traditional NSAIDS (6 studies), and selective Cox-2 inhibitor (5 studies). Risk of bias assessment tool used to assess study's validity and quality showed the range from low (5 studies), high (8 studies) and unclear risk of bias (3 studies). For all categories, there was no significant cognitive improvement although there was a positive trend for aspirin in the first 6 months. High risk of bias studies provided more positive outcome than those of low risk. Patients on aspirin experienced more significant bleeding side effects while patients on steroids tended to have more confusion, agitation and paranoid reaction. NSAID patients had more common side effects such as abdominal pain, nausea, elevated creatinine and liver enzymes, while selective COX-2 inhibitor patients had more side effects relating heart problem. Conclusions: Given current evidence, the use of aspirin, steroids, and non-steroidal drugs is not supported in treating dementia of Alzheimer's patients. The side effect seems to be more significant in intervention group.

**PB6 091 MELANIN HAS THE UNEXPECTED CAPABILITY OF TRANSDUCE PHOTONIC ENERGY INTO CHEMICAL ENERGY**

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Introduction: Melanin is an amorphous substance that is present in the eukaryotic cell. Their relationship structure-activity remains controversial, but the unexpected finding of a dissociative water molecule property started up a great interest, because their pharmacological stimulation increases the redox capability of the eukaryotic cell 4 times or more. Methods: Prospective study, longitudinal, about the three main causes of blindness. Initiated in 1990. Materials: 4635 patients, digital angiography, fluorescein, indocyanin green. Results: The activity of melanin is very important both in health and illness of human eye (body). The pharmacological stimulation of human photosynthesis, produces a notable improvement in various diseases, not only of the eye, but all human body. Given that the increase of the cytoplasmic levels of molecular hydrogen generates better mitochondrial function. Other diseases not directly linked to mitochondrial enzymes may feature dysfunction of mitochondria. These include schizophrenia, bipolar disorder, dementia, Alzheimer's disease, Parkinson's disease, epilepsy, stroke, cardiovascular disease, retinitis pigmentosa, and diabetes mellitus. The common thread linking these seemingly-unrelated conditions is cellular damage causing oxidative stress and the accumulation of reactive oxygen species. Importantly, the mitochondrial electron transport chain is thought to be the main source of intracellular superoxide. These oxidants then damage the mitochondrial DNA, resulting in mitochondrial dysfunction and cell death. Conclusion: The Pharmacological modulation of human photosynthesis, which is: the capability of eukaryotic cell to take energy from water is a new and exciting therapeutic method that breaks the ground. It's implications in various age related diseases, like AD,

PD, OAD, Cardiac failure, and probably many others, represent promissory hope to increased quality of life in the elderly population.

**PB6 092 ACETYLCHOLINESTERASE INHIBITORS' USE FOR ALZHEIMER'S DISEASE IN THE SOUTH OF TUNISIA: ANALYTIC STUDY**

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Introduction: Acetylcholinesterase inhibitors (AChEIs) are used for Alzheimer's disease in Tunisia since about ten years. In this retrospective study, we analyze the frequency, the diagnosis and the medical treatment of Alzheimer's disease in the South of Tunisia. Methods and materials: To get AChEIs, insured patients have to deposit an application to the National Health Insurance Fund (CNAM) where a special commission agrees to give medication after studying files. The application has to be renewed each six months. During a period of three years and three months, 133 files were studied. Results: The special commission of the CNAM received only 133 requests from a population over two million persons from the South of Tunisia, which means many cases are still under diagnosed or untreated. From the 133 applications, 60 (47.24%) were satisfied, with 31 men and 29 women (Sex-Ratio: 1.06); 16 (26.6%) have not renewed their application one year after the first agreement. 48 (37.8%) applications were not in accordance with the legal mentions of the AChEIs then rejected. Conclusion: We conclude that Alzheimer's disease is still under diagnosed and many cases are untreated by the AChEIs. This situation needs more efforts and training in the field of geriatrics and dementia for a better diagnosis and management of Alzheimer's disease in Tunisia.

**PB6 093 THE RELATIONSHIP OF BLOOD PRESSURE AND PULSE TO COGNITIVE FUNCTION IN A NATIONALLY REPRESENTATIVE SAMPLE OF US ADULTS**

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Introduction: There is growing evidence that cardiovascular (CV) health is closely linked to brain health, but there are few large-scale population-based studies with direct measures of CV health and cognitive function to study this relationship. Methods: We used data on a nationally representative sample of N=7,203 individuals aged 50+ from the 2006 wave of the Health and Retirement Study (HRS) to determine the cross-sectional relationship of measured blood pressure (BP) and pulse to performance on the HRS cognitive test. BP was measured 3 times using an automated cuff. The lowest of the 3 BP measurements was used. Cognitive function was measured using a battery of validated neuropsychological tests of verbal memory, time orientation, and verbal fluency. Results: Hypertension (systolic blood pressure [SBP] > 140 mm Hg) was associated with a 1-point poorer performance on the 27-point cognitive scale compared to individuals with normal (SBP 100-139) or low (SBP<100) blood pressure ( $p < .01$ ). This negative relationship remained statistically significant even after controlling for a wide-range of sociodemographic and health (chronic conditions and use of hypertension medications) variables. Similarly, a 10 beats / min increase in pulse was associated with a 0.13 point decrease in performance on the cognitive scale ( $p < .05$ ), and this negative relationship remained significant after controls for the same confounders. Conclusions: Elevated blood pressure and pulse were associated with significantly poorer cognitive function in this nationally representative sample of US adults. This suggests that optimal treatment of hypertension may prevent or delay cognitive impairment in later life. Possible causal pathways for this BP-Pulse-Cognition relationship, and modification of this relationship by age and medications will be presented.

**PB6 094 BOLD RESPONSE CHANGES WITH AGEING EVIDENCED DURING A SEMANTIC FLUENCY TASK**

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Aging is often considered as "negative". We studied age-related changes during a language task using fMRI. 22 young (22-35y) and 21 old (76-91y) right-handed subjects without cognitive decline performed a silent word generation task during fMRI with blocked paradigm (1.5-T GE). Individual activation maps were first computed and used for a second GLM analysis (with age as regressor) to localize clusters depicting age-related changes. Signal time course was analyzed in these clusters. We therefore divided blocks two halves for analysis. First half (0-15s): There was no age-related change in the inferior frontal gyrus usually involved in this task. As age increased, higher levels of activations were observed in 6 clusters that were grouped according to a similar time-course of MR signal : Clusters of group 1 were located in both temporo-occipital regions and in medial parietal lobe. In young subjects, the initial peak of the average Bold response was followed by a signal decrease below the baseline. In older, this signal drop was missing suggesting a lack of redistribution of cognitive resources from cortical areas normally active at rest

(default state network) to areas specially involved in the task. Clusters of group 2 were bilaterally located in posterior lateral fissure and in right post central sulcus. The average Bold signal remained close to the baseline for younger whereas it increased in older, suggesting compensatory mechanism. Second half (15-30s): There were significant age-related changes in Broca's area. Bold signal remained constant in young subjects for the whole block whereas it rapidly decreased in older suggesting a lack of compensatory mechanisms. We demonstrated differences in language activation pattern between young and old subjects with different dynamic of Bold response during language.

**PB6 095 A SURVEY OF PREVALENCE AND RISK FACTORS OF COGNITIVE IMPAIRMENT, DEMENTIA AND DEPRESSION IN HOSPITALIZED VETERANS**

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In order to have a better care for veterans, we surveyed the prevalence and risk factors of depression, dementia and cognitive impairment in hospitalized elderly veterans. One thousand two hundred and eighty-six patients aged 65 and older with written consents were included for the study between January and December, 2007. Method: Psychiatric problem was diagnosed within the first 24 hours after admission and treated accordingly. All patients underwent a global geriatric evaluation including clinical history, physical examination, laboratory tests, surgical risk evaluation, and functional and mental evaluations. Mental status of mild cognitive impairment (MCI), dementia and depression was evaluated by Clinical Dementia Rating Scale (CDR), Geriatric Depression Scale (GDS), Instrumental Activities of Daily Living (IADL), Family APGAR and American Psychiatric Association Age-Related Cognitive Decline (ARCD DSM IV), Mini-Mental State Examination (MMSE). Patients were evaluated with mental status with three levels of test from nurses, research assistants and psychiatrists. Results: The mean age of patients was  $78.76 \pm 4.84$  years old (ranged from 65 to 97). Seven hundred and eleven (55.3%) patients had normal mental status. MCI had a prevalence of 18.7%, dementia of 13.1% and depression, 12.8%. Risk factors of dementia were associated significantly with lack of exercise, head injury, BMI and stroke ( $p < 0.01$ ). Depression was associated significantly with single, diabetes and stress ( $p < 0.01$ , 0.03 and 0.01, respectively). Blood pressure, cardiac, hepatic, renal and arthritic diseases showed no association with mental status in these patients. Conclusion: The study suggests that exercise practice is the key for normal mental status among elderly patients. Exercise may slow down the progression of dementia by increasing circulation, reducing blood sugar, lipid levels and preventing stroke and diabetes. Encouragement of participating social or church activities would help these patients.

**PB6 096 PREVALENCE OF DEMENTIA AMONG PUERTO RICAN VETERANS**

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INTRODUCTION Dementia prevalence rates vary greatly in different regions of the world. Even within a single country like the United States (US), significant differences in prevalence of dementia have been noted among races. This study sought to estimate prevalence of dementia among Puerto Rican Veterans receiving medical care at the Department of Veterans Affairs Medical Center in San Juan, Puerto Rico (SJVAMC). A secondary goal of this study was to compare the prevalence of dementia between these SJVAMC users and all Veterans in the US. METHODS AND MATERIALS Sample: All Puerto Rican Veterans aged 65 and over who visited the SJVAMC between October 1, 2005 and March 30, 2007. Assignment of diagnosis: Veterans were assigned a diagnosis of dementia if they had one or more of the following ICD-9 dementia codes: 290.XX, 291.2, 294.XX, 331.XX, 046.1, or 046.3. Statistical analyses: Overall prevalence of dementia and prevalence by subtype and by age group were calculated from SJVAMC data and compared with the existing rates for US Veterans. RESULTS Prevalence rates of dementia were higher in the SJVAMC than in the VA system-wide in each age group and also among the whole sample (12.69% vs. 7.3%). The age-adjusted Standardized Morbidity Rate (SMR) was 1.49. The percentage of vascular dementia cases was higher in the SJVAMC (15.14% vs. 11.9%). CONCLUSION The results of this study suggest that prevalence of dementia is significantly higher among PR veterans than among VA system-wide users. A second finding was that vascular dementias are more prevalent among PR veterans. These differences merit further study and its implications could be crucial for the establishment of public health policies in Puerto Rico and among Hispanic communities in the US.

**PB6 097 FAMILY RELATIONSHIPS: STABILITY IN THE EYE OF THE DEMENTIA STORM?**

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Relationships with family members contribute to the meaning in individuals everyday lives. Despite this, much of the research on dementia has traditionally focused on biological causes. More recently the notion of personhood has gained attention leading researchers to focus on the relationships that are possible within dementia. If family relationships are

explored, research often centers on the caregiver strain experienced by family members. A small growing body of research suggests that dementia is experienced relationally both by the individual and by family members. More research about this phenomenon is needed to support families experiencing dementia. Methods and Materials: This study is part of a larger qualitative investigation of how people with dementia engage in meaningful activities. This naturalistic study uses interpretive phenomenological methods to explore the experiences of two families in which a father is experiencing dementia. The purpose of the inquiry is to examine the influence of family relationships in a person with dementia's experience of meaningful activities. Five in-depth interviews and participant observation were conducted with each person who was experiencing dementia. Family members were also interviewed in-depth. Results: Interpretive analysis revealed commonalities and distinctions between the two individuals with dementia's ability to engage in meaningful activities. Both participants found meaning and comfort from their involvement with family members. In one participant's world the stability of his family and their long history together enabled him to continue his engagement in meaningful activities. In another participant's world, family relationships and family members' understanding of dementia limited his ability to stay engaged in activities he found meaningful. Conclusion: Meaningful activity is understood and experienced both by the person experiencing dementia and the family through the lens of their historical relationships.

#### **PB6 098 THE DRIVING AND DEMENTIA TOOLKIT**

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Introduction: The diagnosis of dementia does not necessarily imply an automatic license suspension. However the health professional must ask if the person with dementia (PWD) drives, and if so, the person's safety should be evaluated. This is a challenging area of dementia care. Methods: An interdisciplinary team of clinicians and researchers from the following disciplines have developed a toolkit to bridge the gap in addressing this challenging area of dementia care: geriatrics, psychiatry, family medicine, occupational therapy, nursing and the Ottawa chapter of the Canadian Alzheimer Society. Results: The toolkit contains background information on driving and dementia, an algorithm on how to navigate the process, an office based Dementia and Driving Checklist, recommendations on how to communicate with the PWD and family caregivers, and finally resources on alternative transportation means and other community services for PWD and family caregivers. Conclusions: This toolkit provides invaluable information, strategies and tools to health professionals in addressing the issue of driving safety in PWD.

#### **PB6 099 ETIOLOGY AND PREDICTORS OF URINARY INCONTINENCE IN PATIENTS WITH DEMENTIA**

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Introduction Urinary incontinence associated with dementia is a significant problem and resulted in medical co-morbidities. The aim of this study is to determine the prevalence of urinary incontinence and to identify the etiology and factors associated with urinary incontinence in dementia patients. Materials and Methods Patients were recruited from the memory clinic of a regional hospital in Hong Kong with MMSE scores from 10 to 26. Basic demographic data, types and duration of dementia, usage of cholinesterase inhibitor and other drugs with anti-cholinergic effects, carer stress measurement by Zarit Burden interview and presence of urinary incontinence in the previous 6 months were recorded. Urodynamic studies were carried out with measurements on the postvoid volume, detrusor pressure and peak flow rate. The urodynamic diagnoses were also recorded. Results 144 subjects with a mean age of 78 years (SD 6.8) were included. 36.8 % were male. 48 (33.3%) has urinary incontinence. There was no statistically significant difference between continent and incontinent groups with respect to age, MMSE, duration of dementia, usage of cholinesterase inhibitor and usage of drugs with anti-cholinergic effects. Use of walking with aids (OR 2.9), presence of nocturia (OR 4.1) and carer stress (OR 1.03) were independent predictors of urinary incontinence. Urodynamic studies were done in 38 subjects with incontinence. It showed that 21 had overactive bladder, 13 had bladder outlet obstruction, 2 with low compliance bladder, 2 with small bladder capacity, 4 with detrusor hyperactivity and impaired contractility. Conclusion Urinary incontinence commonly occurs in dementia subjects. Poor mobility and presence of nocturia increase the risk of urinary incontinence. Correction of the possible reversible factors may help to reduce the prevalence of urinary incontinence in patients and reduce carer stress.

#### **PB6 100 DOMINANCE AND BURDEN DOES DOMINANCE IN PARTNERSHIP MODIFY CAREGIVER BURDEN IN DEMENTIA?**

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Introduction: Three-fifths of the dementia patients live at home and are cared for by their families, most often by their partners. The caregiver's burden is high and it depends on

various factors. In this study we can show the effect of a factor not previously investigated - that dominance in the partnership has an influence on the caregiver's burden. Methods and Materials: This is a retrospective pilot study with a cross-sectional design. All 62 patients (31 men, 31 women) had a diagnosis of Alzheimer's disease. The dominance in the partnership before the onset of the illness is measured by the healthy partner's response to two questionnaires: Dominance scale (Hamby) and STDL (Share of Tasks of Daily Life) scale. Results: The higher the patient's dominance before the onset of the Alzheimer's disease, the greater the burden felt by the caregiver. With the scores of two questionnaires to measure dominance as well as the NOSGER-score (rating of dementia severity in 6 dimensions by caregiver), we can explain 76% of the caregiver's burden variance. The predictors of the dominance explain 36% of the caregiver's burden variance, MMS or CDR-score only 1%. Conclusion: The factors of dominance in the relationship are more important for the caregiver's burden than the cognitive impairment measured by MMS and CDR. A feature of the relationship is much more important for the burden felt by the caregiver than the severity of dementia. We can postulate, that the relationship (and we did not measure the quality but the ratio of dominance) is more predictive for the caregiver's burden than the severity of the dementia. These findings determine the need of psychological support for the caregiver in addition to medical care for the patient.

#### **PB6 101 BREAKING BARRIERS TO MEDICAL MANAGEMENT OF ALZHEIMER**

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Introduction: During the interactive educational session, I will discuss that an estimated five million Americans diagnosed with Alzheimer's disease (projected to rise to 16 million by 2050,) is causing an increased burden on primary care physicians to recognize the symptoms and accurately diagnose Alzheimer's disease and other dementias. Latinos are at increased risk for developing dementia. Recent data from the University of Pennsylvania: the average age of onset of Alzheimer's in Latinos was 68.8 years and 73.5 years for whites. Latinos are expected to develop dementia at twice the rate of whites. Therefore, early diagnosis and treatment need to become priorities for clinicians who serve Latino patients and their caregivers. Further, I will provide instruction on how to break down language barriers and overcome cultural barriers; medically manage patients with Alzheimer's disease; and maximize available healthcare resources, thereby optimizing care and improving outcomes for Latino patients with Alzheimer's disease and their caregivers. My goal is to provide a comprehensive presentation that includes realistic recommendations which can be incorporated into your daily practice. Specifically, participants will learn about • Overcoming obstacles to cultural beliefs in the diagnosis of Alzheimer's disease • Implementing management strategies for the spectrum of Alzheimer's disease symptoms • Describing the rationale for treatment of Alzheimer's disease This presentation was delivered in 6 different cities through South United States as part of a continue medical education program targeting over 100 clinicians from different specialties psychiatry, primary care, neurology, nursing. This program has been sponsored by the American Academy of Physician Education.

#### **PB6 102 SCREENING OF ALZHEIMER'S DISEASE IN THE ELDERLY WITH DIABETES MELLITUS USING SELF-REPORTED QUESTIONNAIRE**

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Introduction: Diabetes has been proposed to increase the risk of Alzheimer's disease (AD). However, adverse effects of cognitive decline are often overlooked in management of chronic illness such as diabetes. For detection of AD, information on recent impairment of memory and activities of daily living (ADL) from the caregivers is crucial, but such interviews are not always accessible in the ambulatory care. The aim of this study is to develop a self-reported questionnaire for screening AD consisting of brief cognitive tests and succinct physical parameters. Methods: 496 diabetic elderly were recruited in Kobe university hospital. For screening of AD, we used a computer-based screening program. Accordingly, 25 were diagnosed as possible AD according the criteria from NINCDS-ADRDA and 380 were normal in cognitive function. On the first visit, participants were asked to fill out a questionnaire regarding memory disturbance and instrumental ADL. Information on therapy of diabetes and complications was obtained from clinical chart. Temporal orientation was also tested. A multivariate logistic regression was used to examine the independent association of these clinical variables with AD. Results: AD group was characterized by higher age, shorter duration of education, lower diastolic blood pressure, and impaired temporal orientation. Drug compliance, preparing meal, shopping, financial management, and habitual use of memorandum were significantly impaired in AD. Backward regression identified six factors (age, diastolic blood pressure, drug compliance, preparing meals, habitual use of memorandum, and temporal orientation) independently associated with AD. ROC analysis revealed the satisfactory discrimination of AD among diabetic elderly (95.0% of sensitivity and 86.6% of specificity). Conclusion: We have developed a self-reported questionnaire containing physical parameters, instrumental ADL, and temporal orientation, which is available for screening of AD among

elderly diabetes. However, the clinical usefulness of this index needs to be validated by large-scale prospective studies.

**PB6 103 ASSOCIATION BETWEEN DIABETES MELLITUS, PRE-DIABETES AND ALZHEIMER'S DISEASE**

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Introduction: Diabetes mellitus(DM), pre-Diabetes(PD) and Systemic Hypertension(SH) can be risk factors for Alzheimer's Disease(AD). We investigated the association between these conditions using cerebral Quantitative Magnetic Resonance Imaging(QMRI) and neuropsychological evaluation. Methods and materials: 64 Volunteers, both sexes, 60-75 years old, were divided in groups: AD(n=10), DM(n=13), DM+SH(n=12), PD(n=9), PD+SH(n=10), and healthy controls (HC)(n=10). Gray (GMP) and White Matter Percentage(WMP), Brain Parenchyma Fraction(BPF), Gray (GMR) and White Matter Relaxometry(WMR) and Gray (GMMTR) and White Matter Magnetization Transfer Ratio(WMMTR), were compared using ANOVA. Results: AD was different from HC by GMP( $p<0.01$ ), BPF( $p<0.01$ ), GMR( $p<0.01$ ), WMR( $p<0.01$ ), GMMTR( $p<0.02$ ) and WMMTR( $p<0.01$ ). DM+SH was different from HC by BPF( $p<0.01$ ), GMR( $p<0.01$ ), WMR( $p<0.01$ ), GMMTR( $p<0.01$ ) and WMMTR( $p<0.03$ ). WMMTR differentiated DM from HC( $p<0.01$ ). GMR differentiated AD from DM+SH( $p<0.04$ ). GMP( $p<0.01$ ), GMR( $p<0.01$ ) and WMR( $p<0.02$ ) differentiated AD from DM. PD/PD+SH were differentiated from AD by: GMP (PD/PD+SH;  $p<0.01$ ), GMR (PD+SH;  $p<0.02$ ) and (PD;  $p<0.01$ ); WMR (PD;  $p<0.01$ ); GMMTR (PD+SH;  $p<0.03$ ) and (PD;  $p<0.04$ ) and WMMTR (PD+SH;  $p<0.02$ ) and (PD;  $p<0.04$ ). DM+SH presented cognitive dysfunction on attention and executive functions (Stroop Test). Conclusion: AD presents WM subcortical lesions (vascular type). QMRI is useful in diagnosing myelin breakdown and in identifying patients with AD. The findings suggest an association between PD, DM and AD.

**PB6 104 QUALITY OF LIFE IN DEMENTIA: CLINICAL AND ECONOMIC FINDINGS FROM NEW ZEALAND**

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Introduction: To date, multivariate analyses of quality of life (QoL) in dementia are relatively rare. This study aims to measure QoL of persons with dementia and their family-caregivers. In addition, the study examines, what interventions from primary and secondary care in New Zealand are helpful for enhancing QoL, and what these interventions cost. Methods: Questionnaires investigating various QoL-domains were administered to outpatients, recently diagnosed with dementia, and their caregivers at baseline and 12 months follow-up. Economic factors, including the time spent caring and direct and indirect costs were estimated using questionnaires and diaries. Results: Fifty-three patient/caregiver dyads were included. 3MS ranged from 49 to 91; CDR from 0.5 to 3. At baseline, all but one measurement confirmed the predicted correlations. Patients' QoL was strongly correlated with the stage of illness, depression, neuropsychological behaviours, functioning and their caregiver's QoL and burden. Caregivers' QoL was linked to patients' QoL and daily functioning, and carers' burden and subjective informal support. Joint income/pension and financial burden of care were (negatively) correlated with carers' QoL, depression, and burden. The level of cognitive impairment and the level of formal support were not associated with patients' or caregivers' QoL. Preliminary findings from the follow-up period will show if these correlations remain stable over 12 months. Conclusions: Depression in patients and caregivers, each other's QoL, patients' neuropsychological behaviours and functioning, as well as caregivers' burden, and the level of informal care can predict QoL in dementia. Reducing the intensity of informal care - by treating depression and difficult behaviours in patients - might reduce caregivers' stress and burden. Developing financial incentives that reward informal caregivers for their time spent caring could be a key factor in supporting informal caregivers in their role and therefore delaying institutionalization.

**PB6 105 BEHAVIOR PROBLEMS IN DEMENTIA. DIFFERENCES BETWEEN A POLYVALENT GERIATRIQUE MEDICINE STRUCTURE AND A COGNITIVE PSYCHOGERIATRIC UNIT.**

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Dementia is a major public health issue. Behavior problems frequently come with dementia pathologies. These phenomena are hardly predictable and stress factors for the nursing teams. Methods and materials : Compare methods of behavior problems care between a polyvalent geriatric medicine unit and a psychogeriatric unit. Clinical audit on 30 cases from

February to April 2008, by nurses and doctors filling an assessment grid on behavior problems care. Results : Most frequent behavior problems met in both structures are cries, aggressiveness, and wandering. Most problematic cases in polyvalent geriatric medicine units regard wandering possibly leading to escaping away from the unit. Relational care is firstly achieved in polyvalent geriatric medicine units in 92% of cases, 80% in psychogeriatric units. When drugs are to be prescribed in polyvalent geriatric medicine units, neuroleptics are ordered in 88% of cases, among which 38% in intramuscular. In psychogeriatric units, neuroleptics are only ordered in 25% of cases, among which 5% in intramuscular. Restraints are used in both units, more frequently in psychogeriatric units, probably due to heavier problems. Nursing staff in psychogeriatric units have a better knowledge regarding the pathology causing behavior problems. They are also better trained to handling these problems. Conclusion : A cognitive psychogeriatrics structure is crucial in behavior problems care. Differences in the care process are mainly due to the environmental characteristics of the structure, and to the specific training of the nursing staff.

**PB6 106 COGNITIVE TESTING IN PARKINSON DISEASE DEMENTIA**

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Introduction :To compare the clinical and cognitive features of patients with Parkinson disease dementia (PDD) and PD without dementia, as defined by the new Movement Disorders Society (MDS) recommendations. Methods and Materials : Amongst 22 patients fulfilling prior DSMIV criteria for PDD we distinguished the patients also fulfilling MDS criteria (group I; n=14) from the other ones (group II; n=8). We compared the both groups using seven backwards, pentagons, 3- words recall of MMSE, Free and Cued Selective Reminding Test (FCSRT), copy of the Rey- Osterrieth Complex Figure Test (ROCFT), Mattis Dementia Rating Scale (MDRS)total score. Results : In group I mean age was 77 +/- 4.57 (versus 79 +/- 4.17 in group II) , sex ratio M/W 0.55 (vs 0.33) , PD duration 9.5 +/- 3.83 years (vs 12 +/- 6.78), age at beginning of PD 68 +/- 7.09 (vs 68 +/- 9.70), Hoehn & Yahr stage 3.1 +/- 0.51 (3.1 +/- 0.70), there was 2.1 in group I antiparkinsonian treatments vs 2.5 in group II. Seven backwards score was normal for 2 patients(14%) in group I versus 7(87 %) group II, pentagons copy in 2(14%) vs 5(62%), 3-words recall normal score in 3(22%)vs 5(62%), 3FCST was normal (up to 40) in 3(21%) vs 6(75%) ; ROCFT was under the 3-5 percentiles in all group I and 5(62%) were above 19-28 percentiles ; MDRS total score was normal for none in group I versus 5(62%) in group II. Conclusion : PD age at onset, sex, duration, H&Y stage are not statistically significant. Seven backwards subtest, MDRS total score, copy ROCFT score seem useful to characterize cognitive disorders with statistically significant values between cognitive disorders related to PDD and PD without dementia.

**PB6 107 ENHANCING COGNITIVE REASONING IN OLDER ADULTS: CAN PLAYING GAMES HELP?**

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Introduction: Cognitive reasoning skills are critical for complex decision making. They are particularly important for independent community living but decline with normal ageing. Hence training programs which are easy to administer and enjoyable could prove highly beneficial. The purpose of this study was to determine whether brief training in playing the popular game sudoku could enhance cognitive reasoning in both younger and older adults. It was expected that cognitive reasoning would improve with training but that younger adults could potentially benefit even more from training than older adults. Method: A fully randomised controlled trial was conducted with 30 young adults ( $M = 19.8$  years) and 40 older adults ( $M = 67.8$  years) Participants completed measures of sudoku and the WASI Matrix Reasoning subtest twice at a two week interval. Those allocated to training were asked to complete sudoku problems of increasing difficulty using advanced tactics demonstrated in guidelines provided during the interval. Results: A series of two way (Age x Training) ANOVAs on change scores over time showed that training significantly improved performance on both cognitive reasoning tasks for younger and older adults. In addition an interaction between age and training was demonstrated on the Sudoku measure, with younger adults improving more with training. Further, a main effect for age was found on the WASI . Conclusion: Training in playing sudoku enhances cognitive reasoning in both younger and older adults. Young people may improve their sudoku playing more than older adults with sudoku training, but older adults may be able to improve cognitive reasoning skills as assessed through the WASI cognitive reasoning subtest as much as young people can. These findings are very promising, suggesting that older adults have considerable cognitive plasticity in cognitive reasoning, and that playing games like Sudoku may stimulate enhanced cognitive performance.

**PB6 108 REVERSIBLE COGNITIVE IMPAIRMENT DUE TO THALIDOMIDE**

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Introduction: Thalidomide is an interesting therapeutic option for some disorders such as multiple myeloma (MM). Only one case of reversible dementia secondary to thalidomide

has been reported. Objective: to describe a case of a reversible cognitive impairment in a patient treated with thalidomide for MM. Methods and results: A 82 years old woman started dexamethasone and thalidomide for MM. She had a previous history of hypertension and depression. Two months later the patient's daughter noticed that she was unable to take care of herself and she had serious memory deficits. She had also problems for taking her medications and for managing money. A cognitive evaluation while she was only taken thalidomide (dexamethasone had been withheld one month before) showed an alteration in attention, memory, and executive functions: MMSE 26/30, CDR 1, digit span direct (DD) 4, indirect (ID) 3. Rey Auditory Verbal Learning (RAVLT) test 1-5 24 words (percentile 5), RAVLT 6 and 7, 3 and 0 points (< percentile 5). Trail Making Test A and B (TMT), 90 and 315 seconds (percentile 10 and < 5). Phonologic (PF) and Semantic (SF) Fluency test in one minute, 18 and 14 (percentile 5 and 25). Clock drawing test (CDT) 6/7 points. No sign of depression was found. Thalidomide was stopped. She was reassessed one month later: MMSE 28/30. DD 6, ID 4. RAVLT 1-5 40 points (percentile 50); RAVLT 6 and 7, 4 and 5 worths (percentile 10). TMT A and B, 60 and 205 seconds (percentile 50 and 5). PF and SF 18 and 15 worth (percentile 5 and 25). CDT 6/7 points. Moreover, the patient was able to live alone again recovering her autonomy. Conclusions: Thalidomide may be associated with reversible cognitive impairment. Signs and symptoms improve after removing it.

#### **PB6 109 THE DETERMINANTS OF END STAGE RENAL DISEASES PATIENTS WITH DEMENTIA**

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Introduction: End stage renal disease (ESRD) is a prevalent chronic, debilitating, and life-threatening condition that profoundly affects the patient's behavior, mood, cognitive processing, working capability, socioeconomic status, and quality of life. The purposes of this study were to examine the prevalence of ESRD with dementia, to investigate the difference between ESRD patients with and without dementia, and to determine the risk factors of ESRD patients with dementia. Methods and materials: We conducted secondary data analysis using administrative database from Bureau of National Health Insurance in Taiwan between 2000, 2002, 2004, and 2006. We firstly selected the patients diagnosed as ESRD and dementia, and then merged the data sets. Descriptive analysis was used to analyze the prevalence rate. T-tests and chi-square tests were used to explore the differences or association in demographic status, comorbidity, hospital characteristics and utilization between ESRD patients with and without dementia. Logistic regression was used to examine the risk factors of ESRD patients with dementia. Results: The prevalence of ESRD with dementia were 0.35%, 0.46%, 0.89%, and 1.08% for years 2000, 2002, 2004, and 2006, respectively. ESRD patients with and without dementia was significant difference in age, comorbidities, outpatient visits, and medical expenditures. Results from logistic regression indicated that patients were older, more comorbidities, using hemodialysis as their treatment therapy, and more outpatient visits had higher probability associated with dementia across all years. Conclusion: The prevalence of ESRD with dementia was lower than National's prevalence rate. ESRD patients who were older, had more comorbidities, had more outpatient visits, and undergone hemodialysis should receive more attention on dementia issue.

#### **PB6 110 STUDY OF MENTAL AND REGULAR TRAINING (SMART) IN PEOPLE WITH MILD COGNITIVE IMPAIRMENT: PRELIMINARY SCREENING RESULTS**

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Introduction The aim of the SMART trial is to determine whether mental, physical or combined mental and physical training can prevent or slow cognitive decline in older adults at high risk of dementia. Methods and Materials 200 people with subjective memory complaint and mild cognitive changes determined by neuropsychiatrists, without an identified cause or dementia diagnosis will be randomly assigned to 6-months of supervised computer-based mental exercises, weight-lifting exercise, both interventions together, or a control condition for 90minutes, 3/week. Participants will have their cognitive abilities tested at baseline, 6-months, and 18-months, to determine whether long-term benefits occur. Results and Conclusion To date, 495 individuals have been telephone screened; mean age 69±8years, 63% female, mean Informant Bayer IADL score (functional deficits attributable to cognition) 1.7±0.9, and mean Telephone Interview Cognitive Status score (TICS) 26±4 out of 39 (equivalent to MMSE score 28). As planned, our cohort is in the range of the MMSE (>24) that is considered "not demented". Informant Bayer IADL was unrelated to age, gender or TICS. TICS was inversely related to age ( $r=0.22, p=0.005$ ); and TICS was significantly higher in women than in men ( $26±4$  vs.  $25±4, p=0.05$ ), but when controlled for age, this relationship was non-significant ( $p=0.10$ ). Seventeen eligible subjects (3% of those

screened) have been identified; main reasons for ineligibility include inability to commit (33%), too far to travel (17%), too physically active (9%), medical (8%), and below age cutoff (6%). Fifty-one percent of those screened in-person were ineligible, primarily because they were cognitively intact (mean MMSE score  $29.6±0.7$ ) Eight participants have commenced the intervention and no adverse events have occurred. Preliminary results are expected in 2010.

#### **PB6 111 CHARACTERISTICS OF ALZHEIMER'S DISEASE PATIENTS WITH A RAPID WEIGHT LOSS DURING A SIX-YEAR FOLLOW-UP**

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Background and aims: Weight loss in Alzheimer's disease (AD) may either be progressive or rapid, with different implications. The aim of this study was to characterize massive weight loss ( $\geq 5$  kg over 6 months) during a 6.5-year follow-up. Methods: 395 patients with AD (mean age 75.4 years) were included in a prospective single-centre cohort study (mean follow-up 2.5 years). A standardized gerontologic assessment was performed every six months, including nutritional, neuropsychological, functional, and caregiver burden evaluations, along with recording all intercurrent events before weight loss. Results: Among the 127 cases of weight loss (for 110 subjects, 27.8% of the population), we identified 60 cases of intercurrent illnesses and 88 cases of behavioral and psychological symptoms of dementia (BPSD) during the six months before weight loss. Three factors were independently associated with rapid weight loss: higher initial weight (HR=1.06, 95%CI [1.02,1.08]), higher Prognosis Inflammatory and Nutritional Index (HR=2.16, 95%CI [1.26,3.72]) and a higher Cohen-Mansfield agitation inventory score, reflecting BPSD (HR=1.05, 95%CI [1.01,1.10]). Cholinesterase inhibitors appeared as protective (HR=0.33, 95%CI [0.15,0.73]). Rapid weight loss was predictive of death at 6 months (HR=3.01, 95%CI [1.73,5.22]). Conclusion: BPSD play an important role in rapid weight loss and should be managed effectively. Biological assessment of malnutrition may be warranted.

#### **PB6 112 OPINIONS OF SPOUSAL CAREGIVERS OF PERSONS WITH ALZHEIMER'S DISEASE RELATED TO THE SERVICE SYSTEM – A QUALITATIVE ANALYSIS**

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Introduction: Dementia caregiving families are often dependent on services available. However, their subjective opinions about the service system has yet been studied fairly little. The aim of this study is to describe the opinions related to the service system of spousal caregivers of persons with Alzheimer's disease. Material and methods: A cross-sectional survey was performed to a random sample (N=1943) Alzheimer patients' spouses in Finland in 2005. In addition to structured questions related to the service needs and satisfaction with the services received, an open-ended question was inquired: "What kind of problems have you faced with the services?" These responses were analyzed qualitatively. Results: The response rate was 74%. Of them, 515 offered a written opinion of their service situation. The mean age of caregivers was 78.2 years and 63% were females. The opinions included critics to the service system: both to outpatient health and social services (N=140) as well as about problems related to the respite care or getting permanent nursing home bed (N=16). Caregivers criticized the decisions of social benefits, secrecy around the decisions and lack of money in communities (N=104). Bureaucracy was raised up in many responses. According to the opinions it was very difficult to get information related to the services (N=71). Non-constructive attitudes from health care workers were experienced among some caregivers (N=36). Suggestions were given to enhance the official service situation. Caregivers' own voice could be heard in their responses. Examples of the opinions will be given in the congress. Conclusions: The officially organized services meet the needs of spousal caregivers of demented individuals insufficiently. The opinions and needs of caregivers should be listened more carefully in order to improve the service system.

#### **PB6 113 CLINICAL UTILITY OF VOXEL-BASED SPECIFIC REGIONAL ANALYSIS SYSTEM FOR ALZHEIMER**

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Introduction: Voxel-based Specific Regional Analysis System for Alzheimers Disease (VSRAD) has recently been developed as an adjunctive diagnostic tool for early Alzheimers disease (AD) in Japan. This method, using three-dimensional (3D) MRI with statistical parametric mapping (SPM), provides objective information of brain atrophy. VSRAD can automatically calculate mean Z-score in the parahippocampal gyri. We investigated a correlation of Z-score with the severity of cognitive impairment to determine

whether VSRAD is useful for the clinical diagnosis of AD. Methods and materials: Forty-eight patients with mild very mild AD (MMSE score 26.8+/-1.6, range 28-25), 68 patients with mild AD (MMSE score 22.1+/-1.5, range 24-20), 33 patients with moderate to severe AD (MMSE 15.8+/-2.3, range 19-11) and 18 normal controls underwent 3D-MRI. First, VSRAD was used to conduct voxel by voxel analysis and Z-score mapping of all 3D-MRI images. Necessary Control Normal Database for the mapping was previously built into the software. Secondly, positive Z-score mean in the ROI was calculated. Results: Mean Z-scores were 1.83+/-1.35 in very mild AD patients, 2.13+/-1.31 in mild AD patients, 2.91+/-1.54 in moderate to severe AD patients, and 0.72+/-0.48 in normal controls, respectively. Z-scores in all AD groups were significantly higher than those in normal controls. In addition, Z-scores of parahippocampal gyri correlated significantly with MMSE scores. Conclusion: VSRAD is a useful method for the early diagnosis of AD, and also detect pathological atrophy of parahippocampal gyri reflecting the severity of the disease.

#### **PB6 114 PROGNOSIS OF MILD COGNITIVE DEFICIT ABOUT THE EVOLUTION TO ALZHEIMER'S DISEASE**

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Mild Cognitive Deficit (MCD) is a memory disorder which can develop Alzheimer's disease. In this study we evaluate 86 patients with MCD, following with neuropsychological tests during two years, and a factor of conversion around 20% was found in this period. Predominant factors of risk with epidemiologic significance for the progression to Alzheimer disease are social stress, change of usual place and disorders of verbal and visuo-spatial memory. Objectives: Determine the predominant factors of risk which affect the evolution of MCD to Alzheimer disease. Materials and Method eighty six patients were tested taking into account all the criteria for the diagnosis of MCD. Previously two tests were applied: Yesavage test and Mini-Mental Standard Examination (MMSE). A survey was applied in this people and includes sex, age, profession or trade, educative level, etc. The statistical analysis was made with de software Stata, version 8.0. Results: Eighty six persons participated in the study, distributed in 32 men and 48 women. Six patients die for cardiovascular disease (2), pulmonary disease (2) and stroke (2). We found a prevalence of MCD of 34%. We follow the patients for two years. Sixteen patients developed Alzheimer's disease, 6 patients in the first twelve months and 10 patients during the second year of following. In the study of the variables, values of statistical significance was obtained in the levels of hypertension, diabetes, alcoholism, social stress, change of place, displacement and high points in the evaluation of the visual and verbal memory. Conclusions: In our environment have a high prevalence of MCD, for this is important the study of psycho-biological or neuro-psychological processes which involve the mental health. Between the risk factors found, is necessary take educational and public health measures to prevent hypertension, diabetes and alcoholism.

#### **PB6 115 PREVIOUS HEPATITIS A VIRUS INFECTION IS RELATED TO SLOWER PSYCHOMOTOR SPEED IN ELDERLY**

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Introduction: Patients with chronic viral hepatitis are at a higher risk of cognitive dysfunction. Little is known about the association between hepatitis A virus (HAV) infection and cognitive function. Methods and materials: From the National Health and Nutrition Examination Survey, 1999-2002, we selected study participants ( $\geq 60$  years,  $n = 1529$ ) without hepatitis B, C or D virus infection, without previous hepatitis A vaccination, and without abnormal liver function. HAV-seropositive participants represented people with previous HAV infection. Cognitive function was measured by the Digit Symbol Substitution Test (DSST). Lower cognitive performance was defined if DSST scores fell below the 25th percentile of the study population. Results: HAV-seropositive participants had lower DSST scores than HAV-seronegative participants (mean, 39.8 vs. 51.1,  $P < 0.001$ ). We designated HAV-seronegative participants as the reference group. Univariate analysis demonstrated that the odds ratio (OR) of lower cognitive performance was 3.99 (95% confidence interval [CI], 2.86 to 5.57,  $P < 0.001$ ) and the coefficient of DSST score was -11.3 (95% CI, -13.2 to -9.3,  $P < 0.001$ ) for the HAV-seropositive participants. In a multivariate model, the adjusted OR of lower cognitive performance was 1.54 (95% CI, 1.04 to 2.29,  $P = 0.027$ ) while the adjusted coefficient of DSST score was -2.01 (95% CI, -3.66 to -0.37,  $P = 0.016$ ) for the HAV-seropositive participants. Conclusions: HAV seropositivity is associated with slower psychomotor speed among the US community-dwelling elders.

#### **PB6 116 LIGHTHOUSE PROJECT ON DEMENTIA, ULM, GERMANY – IMPROVEMENT OF ADVICE AND DIAGNOSTICS FOR PEOPLE SUFFERING FROM DEMENTIA AFTER THE CLASSIFICATION OF THEIR LEVEL OF CARE (ULTDEM STUDY).**

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Introduction: The Geriatric Center Ulm scientifically supported a three-year pilot study (ProjektDEMENZ Ulm), in which numerous findings on the system of care regarding people suffering from dementia and their relatives were determined. One of the most important conclusions is the significant lack of information on the well-functioning network of the care system in Ulm. The full potential of the network is not being exploited. The situation in the Alb-Donau-Kreis – the area surrounding Ulm – is very similar.

Objective: Our aim is to improve the utilization of the system of care for those suffering from dementia in Ulm/Alb-Donau-Kreis by using a newly designed advisory approach. Patients and family members are provided with the relevant information at the time it is actually required by combining the advisory service with care level classification. The purpose of the study is to prove the effectiveness of this procedure by using a prospective, open, randomized, controlled, interventional study. Methods: After the randomization, the interventional group is given comprehensive, individual advice about available treatment possibilities for people suffering from dementia. In addition, they have the opportunity to re-evaluate their present diagnostic procedure. The participants of the control group receive the standard treatment. Inclusion criterion is the application of a care level (level 0 or 1). Recruitment will take one year. A final assessment will be taken every six months. Outcome measures: using parallel targets e.g. quality of life, cost-effective, using support possibilities. Results: Since the study is going to last until the end of the Year 2009, only preliminary data are available. A successful conclusion to the project will lead to easy implementation in neighbouring areas, because existing care systems do not have to be adapted in any way. (Supported by the Ministry of Health, Germany)

#### **PB6 117 BULLOUS PEMPHIGOID AND DEMENTIA IN ELTERS**

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INTRODUCTION: Bullous pemphigoid (BP) is an autoimmune subepidermal blistering disease seen primarily in elderly persons and is clinically characterized by the development of blisters. The coexistence of BP with various neurological disorders has been reported, although the relationship between these entities has yet to be explained. Our aim was to study the relation between the occurrence on BP in an institutionalized population and its possible association with dementia in these patients. METHODS: We performed a ten-year prospective study of all elders with blistering disease living in a nursing home. Standard skin biopsy procedure and direct immunofluorescence study of blisters were performed. Clinical variables were: dementia diagnosis, according DSM-IV criteria, and cause of death, if the patient died in the ten year period. This information was obtained from clinical records. Chi-square, t-test for independent samples and survival analysis were performed. RESULTS: We followed during the ten-year period a total population of 477 elder. Of them, 59 (52 women and 7 men) presented with skin blisters. After excision-biopsy of one blister per person, 31 showed pathologic criteria for BP. There was neither age difference between elders with or without BP, nor in survival or pursuing months after diagnosis (85.9 vs 86.3 years and 17.5 vs 24.5 months respectively,  $p: 0.81$  and  $p: 0.22$ ). Cross tab between BP and dementia does not show differences by Pearson chi-square (value: 0.69, 1 df,  $p: 0.40$ ). Survival curves in the group of BP and the group of non immune blisters were similar CONCLUSIONS: BP showed a high incidence in our institutionalized elder population. We did not find differences in survival time after diagnosis when comparing BP and non immune blisters, and there was no relationship between BP and dementia.

#### **PB6 118 AN AUDIT OF NATIONAL GUIDANCE ON STRUCTURAL IMAGING IN PATIENTS WITH SUSPECTED DEMENTIA**

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Introduction: In their guidelines 'Dementia: supporting people with dementia and their carers in health and social care' (2006) the National Institute of Clinical Excellence (NICE) state that structural imaging should be used in assessment of elderly patients with suspected dementia to exclude other cerebral pathologies and help establish subtype diagnosis. Magnetic Resonance Imaging (MRI) is preferred to assist with early diagnosis and detect subcortical vascular changes, although Computerised Tomography (CT) scanning could be used. However, a cost utility analysis (Foster 1999) indicates that imaging is most useful in under-65's with uncertain clinical diagnosis. We set out to establish adherence to NICE guidelines on structural imaging in patients with suspected dementia referred to the older adult service in Birmingham & Solihull Mental Health

Foundation Trust. Method: In June 2008, we audited all new referrals with suspected dementia to our service between September 2007 and June 2008. Data was recorded and cross-checked with medical and electronic records. We expected to find 100% criteria to meet with the standard. Results: Of 40 referrals with suspected dementia, mean age was 79 years (range 65 – 93). Structural imaging to confirm diagnosis was requested in 26 cases (65%); 19 patients had CT scan of the head, 1 patient had MRI, 4 patients were awaiting scan and 1 patient refused the CT scan appointment. Diagnosis of dementia (Alzheimer's, Vascular and Mixed type) was confirmed using the results of the structural imaging in 20 patients. In 15 patients diagnosis had been confirmed on clinical basis. Conclusion: For the 35% patients who were not offered structural imaging and were diagnosed with Vascular dementia, a possible change in diagnostic classification following a CT scan would have allowed access to anti-dementia drugs. However, this may not be the preferred choice based on clinical opinion and cost utility.

#### **PB6 119 DEVELOPING CHAIN OF CARE FOR HOME-DWELLING PATIENTS WITH DEMENTIA**

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Introduction: In Helsinki the number of dementia patients will increase 25% in 10 years. Dementia will intensify the need for social and health care services. Yet, only half of the patients are properly diagnosed, and there is accumulating evidence of underused treatment models which may improve dementia patients' care. For example, dementia care coordinator and comprehensive geriatric assessment can postpone institutional care of these patients. Even small changes in the therapeutic practice could significantly reduce the costs of treatment and improve these patients' quality of life. Methods and material: In Helsinki, in 2005-8 home nursing was reorganized and includes now seven physicians specialized in geriatrics, and five dementia care coordinators. A project to develop the chain of care among patients with dementia was started in order to intensify the diagnostics of dementia, and to improve the quality of care. A half-a-year education with activating learning methods was created for home nursing teams to improve their knowledge and skills in dementia. Structured feedback was collected from the teams participating the education (Likert scale). Results: Multiprofessional team developed the model for chain of care for dementia patients (N>3500) in Helsinki home nursing unit. Diagnostics were implemented by the home nurses and geriatricians during the normal home visits. The principles in the development of the chain of care were to improve continuity and comprehensiveness of care. The professionals participating the educational process benefitted from training: especially in internalizing the guideline of dementia care (mean 3.5), in learning about behavioural symptoms of dementia (3.8), and in applying the learned issues on their own patients (3.8). A detailed analysis of the project and educational feedback will be presented. Conclusions: It is possible to implement evidence-based practice in geriatric home nursing even in a short period of time.

#### **PB6 120 REDUCING SUNDOWNER SYNDROME IN ALZHEIMER'S WITH SLEEP AND REST**

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Introduction This study was designed to address the major care issue of late afternoon disturbed and dysfunctional behaviours in residents with Alzheimer's and non-Alzheimer's dementia, by the introduction of managed, person focused rest and sleep routines. The research was based on Progressively Lowered Stress Threshold model (Hall, 1987), for sufferers of Alzheimer's disease and related disorders. The use of a theoretical model for planning, implementing and evaluating care for clients with a dementia syndrome should provide guidelines for interventions and a mechanism for evaluating outcomes Method A series of case studies was used in a rural based aged care facility, where residents with dementia were not in a specific unit. Of the five major stressor groups identified as causing disturbed and dysfunctional behaviours this study focused on fatigue as the cause of late afternoon disturbed and dysfunctional behaviours (Sundowner Syndrome). The six (6) residents selected for the study were permitted to wake spontaneously in the morning and had rest periods introduced during each afternoon. The Cohen Mansfield Agitation Inventory (CMAI) was used to measure the behaviours pre and post intervention. Results There was better than expected results, with marked changes in each person's behaviours. Changes included episodes of wandering being reduced by 50% in some of the residents and cursing and verbal aggression episodes being reduced from 15 to 8 episodes. The interventions worked at various levels for each of the residents but had no detrimental effect of night time sleep. Conclusion While there were only six (6) case studies, with marked but varying levels of effect for each resident, this had a flow on effect of reducing staff stress and provided an alternative to the use of chemical and physical restraints. Further research is required.

#### **PB6 121 BLOOD MERCURY LEVEL AND RISK OF DEMENTIA: THE CANADIAN STUDY OF HEALTH AND AGING.**

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Introduction: Mercury exposure may be involved in the pathophysiology of neurodegenerative diseases including Alzheimer's disease (AD). Fish consumption may protect against dementia, partly because fish is rich in omega-3 polyunsaturated fatty acids (n-3 PUFA). However, fish can be contaminated with methylmercury. Methods and materials: The Canadian Study of Health and Aging (CSHA) is a population study of a representative sample of persons aged 65+ years, conducted from 1991 to 2002. We evaluated the association between blood mercury level and the incidence of dementia or AD in the CSHA while adjusting for n-3 PUFA, apolipoprotein E epsilon4 allele and other confounders. Analyses were based on 669 subjects with complete clinical assessment, who had provided blood samples and for whom follow-up information was available. Results & conclusion: After a mean follow-up of 4.8 years, there were 150 incident cases of dementia, including 106 cases of AD. The median blood mercury level was 3.2 nanomol/L (interquartile range, 1.5 – 6.1 nanomol/L), well below reference values for toxicity. Mercury level was not associated with an increased risk of dementia. In contrast, in Cox regression models with age as the time scale and adjustment for n-3 PUFA and other confounders, a mercury level in the highest quartile was associated with a reduced risk of dementia (hazard ratio of 0.54 (95% confidence interval: 0.34, 0.86)). Risk reductions were similar for AD. These associations were modified by n-3 PUFA blood level, as significant risk reductions were limited to subjects presenting above median levels of both mercury and n-3 PUFA, two biomarkers of fish consumption. These results do not provide evidence for an adverse association between comparatively higher mercury levels and incident dementia, but may indicate a protective effect of fish consumption.

#### **PB6 122 GLOMERULAR FILTRATION RATE (GFR) MEASUREMENT AND ESTIMATION IN HEALTHY ADULTS WITH AGING**

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Introduction -Mounting evidence showed that GFR declines during aging, but whether the cause is aging per se is still unknown. So we conducted cross-sectional study in Beijing to determine the relationship between GFR and age, the associated factors and the accurate method of GFR in healthy adults. Methods and materials-201 healthy subjects were selected from 1627 community-dwelling population, aged 30-88.8 years. Renal function was determined using the technetium 99m labeled-diethylenetriamine pentaacetic acid (99mTc-DTPA). Estimated GFR was evaluated with the Cockcroft-Gault(CG)equation, Modification of Diet in Renal Disease (MDRD) equation, and plasma clearance of creatinine (Ccr). Blood sample analysis was performed for cystatin C, biomarkers of inflammatory and endothelial cells function. Protein intake was assessed with Food Frequency Questionnaire (FFQ); Carotid artery intima-media thickness (IMT) and plaque formation were assessed with ultrasonography. Results- In healthy adults, Measured and estimated GFR declined with age after 40 years( $P<0.001$ ), while Cystatin C serum level had positive correlation with age( $p<0.001$ ). In the multiple regression model, age, cystatin C, uric acid, CRP and body mass were associated with 99mTc- DTPA -GFR. GFR of those subjects who ingested over 1.1g/(kg/day) of protein people declined more slowly than those below 1.1g/kg per day. Carotid artery intima-media thickness and plaque formation had no association with GFR in multiple variate analysis. As for the area under ROC, the best parameter for estimation of GFR was Ccr, MDRD equation was less accurate in all methods( $P<0.001$ ). Conclusion: In healthy adults, measured and estimated GFR decreased with aging, which was associated with protein intake, but not atherosclerosis. CG, MDRD equation and Ccr can be used to estimate GFR, but there was significant bias with 99mTc- DTPA -GFR.

#### **PB6 123 WELLNESS IN OLDER WOMEN: BEING AND DOING**

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Introduction: As a result of increased longevity and better healthcare there are growing numbers of women who will live beyond 85 years of age. The study to be reported examined perceptions of wellness in older adults and found that women aged 85-90 had lower perceptions of wellness than those 65-70, 70-75 or 80-85. This finding was further examined with a qualitative approach and these results will be reported Method: .Focus groups were conducted with women (N=24) and men (N=4) aged 85-90 to explore the findings of the earlier survey. A realist method of thematic analysis was used to report the experiences, meaning and realities of the participants. Themes were identified from the insights it provided into how older women viewed wellness. Results: For older women perceptions of wellness related more to being able to do what they wanted to do than to how they viewed health; co-morbidities did not impact on their perception of wellness unless it interfered with their ability to do what they wanted to; social networks of friends and family were very important, with sub-themes of wanting to be involved in the lives of their children and grandchildren, and needing to manage loneliness as a result of changing life circumstances and loss of long term irreplaceable friendships. Older old women

viewed shopping centres as social hubs that they used to remain in touch with the community, to manage loneliness and for exercise. Loneliness was a significant contributor to how the women experienced their perception of wellness. Conclusion: For older adults, in particular older women, to stay well, an holistic approach is needed that includes paying attention to the social environment, opportunities for safe socialising and supporting older adults to stay active and engaged with their communities.

**PB6 124 OPPOSITE EFFECTS OF METABOLIC SYNDROME AND CALORIE RESTRICTION UPON THE PREVALENCE OF DISABILITY: BRAZIL AND JAPAN AS OPPOSED POPULATIONAL MODELS OF BIOLOGICAL AGING.**

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Introduction: Japanese people have the lowest prevalence of obesity and Metabolic Syndrome (Met.S), and the highest life expectancy in the developed world. In this sense, Japan can be considered a populational model of calorie restriction. In contrast, the Southern Brazilian region has one of the world highest prevalences of obesity and Met.S. We aimed to evaluate how much calorie intake, Basal Metabolic Rate (BMR), and Met.S might contribute to explain the apparently large different prevalence of Functional Dependence (FD) between Brazilian (42.0%) and Japanese elderly (6.5%), as previously described by different researchers using similar ADL scales. Methods: We evaluated 422 community-dwelling elderly in Brazil and 410 in Japan. FD was evaluated using validated ADL, IADL, and Neurosensorial scales. Diet was evaluated using the Japanese-Brazilian Diet Frequency Questionnaire. All reported p-values were < 0.05. Results: FD was 2.7-3.7 times more common in Brazil than in Japan. Mean BMI was 27.9 Kg/m<sup>2</sup> in Brazil and 22.6 in Japan, and percentage of fat mass was 32.8% and 26.9%, respectively. Prevalence of Met.S was 39.3% in Brazil, but only 7.3% in Japan. Mean 'caloric intake/height in meters' was 1,717 Kcal/day in Brazil, but only 1,141 in Japan. Adjusted mean BMR was estimated to be 31.4 Kcal/kg in Brazil and 21.9 in Japan. Conclusions: Japanese elderly had a 33.6% lower 'height-adjusted caloric intake' and a 30.3% lower BMR than Brazilians. Met.S explained 65.1% of the FD prevalence gap between Brazil and Japan. The much higher prevalence of FD in Brazil, as compared with Japan, points toward a more accelerated biological aging among Brazilians, which is in accord with their higher caloric intake and BMR.

**PB6 125 PERCEPTION OF SKIN AGEING IN A POPULATION AGED OVER 60 YEARS IN FRANCE: SURVEY RESULTS**

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Study objective: People aged between 60 and 75 years form an active population. When they retire they wish to enjoy a new episode in their lives and to maintain for as long as possible a physical and mental state. Worries about appearance are quite justified and use of cosmetic products and procedures is growing rapidly. We conducted a national survey in order to gain a more detailed knowledge of perception of the signs of skin ageing, habits with regard to sun exposure, and cosmetic routines in the French over-60 age group. Methods: Survey conducted from May to October 2008. 18,000 questionnaires were sent out with the magazine "Ageing with Success" to clubs for the elderly in all regions of France. This questionnaire was intended for men and women over the age of 60 years. Results: 506 questionnaires completed were analysed. Mean age was 72.6 years; 84.2% women and 15.7% men. Results showed that the French over-60 population has had little exposure to the sun. Sixty years was the mean age at which this population seemed to become aware of the signs of skin ageing such as wrinkles, loosening of the skin and pigment spots. As regards cosmetic routines, 78% of the senior population, largely women, used cosmetic products on the face, 52% on the body. Moisturisers and nourishing products were used. As regards cosmetic treatments, less than 4% of the population said they had undergone aesthetic treatment such as cosmetic surgery, laser treatment, peels, Botox or hyaluronic acid injection. Discussion: Surprisingly, 60 years seems to be the age at which men and women both start to notice the signs of skin ageing. Population of mean age 72 years had had very little recourse to aesthetic treatments.

**PB6 126 ELDERLY BLADDER PHAECHROMOCYTOMA : A CASE REPORT**

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Introduction: Bladder phaeochromocytoma is a rare bladder tumour resulting from neuroectodermic cells; approximately 220 cases have been reported in literature. It is exceptionally diagnosed after 65 years of age. The oldest patient previous reported is 81-year-old. Methods and materials: We report a case of bladder phaeochromocytoma in an 87-year-old man, diagnosed during an encephalopathy hypertension assessment. Results: Common presenting features of this tumour include: hematuria or catecholamine hypersecretion symptoms related to micturition. However the clinical manifestations of this rare neoplasm are often elusive. Diagnostic modalities include measurement of plasma and urinary catecholamine, cystoscopy, computed tomographic (CT) scanning, and [131I] meta-iodobenzylguanidine (MIBG) radioactive scintigraphy. The treatment of choice is partial cystectomy, with appropriate control of blood pressure and blood volume. Postoperative follow-up is required, as recurrence has been observed. In our observation, the resection of the bladder tumour was postponed due to the patient's important comorbidities. Conclusion: Although exceptional, bladder pheochromocytoma could be diagnosed in the elderly. Our patient is the oldest with a bladder phaeochromocytoma ever reported.

**PB6 127 CAN WE LIMIT POSTOPERATIVE DELIRIUM IN PATIENTS MORE THAN 75 YEARS AFTER SURGERY FOR DIGESTIVE CANCER ?**

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The purpose of this prospective study was to determine the incidence and risk factors of delirium after digestive surgery in elderly patients with cancer. Methods: During the 2 years of the study, 108 patients aged more than 75 years were included. Inclusion criteria were major elective surgery and a score over than 10/30 at the Mini Mental State Examination (MMSE). Before surgery, they received a geriatric assessment including an assessment of autonomy with the Activities of Daily Living (ADL) and the Instrumental Activities of Daily Living (IADL), cognitive function (MMSE), mood by the mini-Geriatric Depression Scale (mini-GDS), functional autonomy (Timed Get up and go test), comorbidities and lifestyle. A new geriatric assessment was carried out within four postoperative days. The Confusion Assessment Method was used to confirm the diagnosis of delirium. Results: The mean 5 years. Among these patients, 73 have age of patients was 81 colorectal resection, 15 oesogastric resection, 12 pancreatic surgery and 7 liver surgery. Delirium was observed in 27 patients (25%). In all cases, delirium symptoms were reversible at one month. In multivariate analysis, 3 independent risk factors of postoperative delirium have been identified: ASA score ( $p = 0.03$ ), functional autonomy ( $p = 0.01$ ) and use of tramadol to control pain after surgery ( $p = 0.0002$ ). Morbidity and mortality were not statistically different between patients who experienced delirium or not. Postoperative length of stay was  $19 \pm 11$  days in patients with delirium and  $13 \pm 8$  days in others ( $p = 0.01$ ). Conclusion: A preoperative geriatric assessment is desirable before surgery for digestive cancer after age 75 when autonomy is reduced or ASA > 2. Tramadol should be prohibited in post-operative course for this population. Delirium during this period is not correlated to surgical complication but extends the length of hospitalization.

**PB6 128 AGEING E AUTO ANTIBODIES**

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It's known that the aging of the organism is accompanied to a greater probability to contract diseases (tumour, insanities, cardiovascular diseases) in whose pathogeneses the immune system often carries out a not secondary role; with the aging, in fact, the ability of the immune system would come to get lost to discriminate among "self" and "not self", made this that it would justify on one side, the presence auto-antibodies directed towards own structures of the organism; and from the other the progressive inability to produce antibodies towards exogenous antigens. The present study has tried to estimate if the advanced age and much being left over greater frequency of auto-antibodies. 245 subjects have participated to the study apparently heal of age comprised between the 18 and 98 years subdivided into 3 groups: group A n=70 (ages 18 - 65 average  $44.8 \pm 3.87$ ); group B n=136 (ages 66 - 85 average  $78.79 \pm 4.2$ ); group C n=39 (ages more 86 average  $89.5 \pm 1.96$ ). All the patients have been recruited near the Assisted Sanitary Residence "S.Pertini", the National Institute of the Tumors; these patients were in good conditions of health and they were not subordinates to therapies in a position to interfering with the immune system. We have estimated the frequency of positiveness for ANA (n=211),

ASMA (n=157), APCA (n=150), Antibodies anti-LKM (n=149), ENA (n=68), Antibodies anti-nDNA (n=105), HTGA (n=158). Our data have not evidenced meaningful differences in the presence of auto-antibodies in the different age classes, in exception of the ANA, for which we have observed an increase of the positiveness correlated age: group A=3,6%, group B=30,1%, group C=34,5% (p less 0.05).

**PB6 129 USEFULNESS OF FRAILTY MARKERS IN THE ASSESSMENT OF THE HEALTH AND FUNCTIONAL STATUS OF OLDER CANCER PATIENTS REFERRED FOR CHEMOTHERAPY: A PILOT STUDY**

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Background: Older cancer patients seen in an oncology clinic seem to be healthier and less disabled than traditional geriatric patients. Choosing the most sensitive tools to assess their health status is a major issue. This cross-sectional study explores the usefulness of frailty markers in detecting vulnerability in older cancer patients. Methods: The study included cancer patients  $\geq 70$  years old referred to an oncology clinic for chemotherapy. Information on comorbidities, disability in instrumental activities of daily living (IADL) and activities of daily living (ADL), and seven frailty markers (nutrition, mobility, strength, energy, physical activity, mood, and cognition) was collected. Patients were classified into four hierarchical groups: 1- No frailty markers, IADL, or ADL disability; 2- Presence of frailty markers without IADL or ADL disability; 3- IADL disability without ADL disability; 4- ADL disability. Results: Among the 50 patients assessed, 6 (12.0%) were classified into Group 1, 21 (42.0%) into Group 2, 15 (30.0%) into Group 3, and 8 (16.0%) into Group 4. In Group 2, 7 patients (33.3 %) had one frailty marker, and 14 (66.7%) had two or more. The most prevalent of the frailty markers were nutrition, mobility, and physical activity. Conclusion: The assessment of seven frailty markers allowed the detection of potential vulnerability among 42% of older cancer patients that would not have been detected through an assessment of IADL and ADL disability alone. A longitudinal study is needed to determine whether the use of frailty markers can better characterize the older cancer population and predict adverse outcomes due to cancer treatment.

**PB6 130 EXPERIENCE OF XEROSTOMIA, MANAGEMENT AND OUTCOME IN PATIENTS WITH HEAD AND NECK CANCER POST RADIATION**

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The purpose of non experimental descriptive crosssectional study design was to describe experience of xerostomia, management and outcome, and its relationship in patients with head and neck cancer post radiation. The model of symptom management revised by Dodd, et al. (2001) was applied as the conceptual framework of the study. The participants included 100 patients with head and neck cancer post radiation, recruited by means of purposive sampling from Otolaryngology at In and Outpatient Department, Department of Radiology of a university hospital. Data were collected using a set of questionnaires, which included a patients' profile form, xerostomia-related quality of life questionnaire, xerostomia questionnaire, a symptom management strategies questionnaire during January to April 2008. Descriptive statistics and Pearson Product Moment Correlation were used in data analysis. Results showed that, the major of the participants were male (70%), ages between 18 to 77 years, had nasopharyngeal cancer(41%), and received combination treatment with chemotherapy and radiation therapy. The actual range of experience of xerostomia score were 5 to 95 (mean=51.45, SD. = 22.32). The top five most favorable methods for management were: 1) foods containing water, sipping water (99%); 2) avoiding spicy food, salty taste (98%); 3) mouth rinsing and avoiding alcoholic drinking and tobacco smoking (96%); 4) toothbrushing after meal (95%); and 5) following up with dentist (92%). The sources of knowledge in managing the symptom were physicians (84%) and nurses (61%). More than half (57%) reported that their xerostomia had gained improvement. The overall xerostomia related quality of life actual score was 1 to 56 (Mean=17.61, S.D =11.13). There were significant correlation between xerostomia and quality of life, xerostomia and dose of radiation. The findings suggested that all patients had mild to severe xerostomia. There are baseline data to develop the practice guideline.

**PB6 131 UNKNOWN GERIATRIC SYNDROMES DEPICTS BY COMPREHENSIVE GERIATRIC ASSESSMENT IN ELDERLY CANCER PATIENTS. PRACTICE OF A FRENCH PILOT UNIT OF GERIATRIC ONCOLOGY**

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Introduction : In 2006, nine Pilot Unit of Geriatric Oncology were created to promote education information and clinical research in geriatric oncology. In Marseille it is based on the coordination of a geriatrician an oncologist and a nurse practitioner. We report on the first 170 elderly patients seen during one year. Methods and Materials: Patients were

seen on request of oncologists, hematologists, or geriatrician. A comprehensive geriatric assessment and a social questionnaire were administered by nurse practitioner. Functional dependencies were assessed by Katz Index and Lawton Index. Cognition was assessed with the mini COG. The mini GDS screened for depressive symptoms. Pain was assessed with EVA and nutrition was evaluated through the Mini-MNA. Comorbidities and comedications were listed. At the end of the consultation a treatment schedule was proposed. Results : 170 patients were referred. Median age was 83, 106 were female, 33% had more than 3 co-morbidities, 82% had more than 4 co-medications. 60% had no disability on ADL and 86% had at least one disability on IADL. 54% of patients present malnutrition and 26% had cognitive impairment. 26% of patients had probability of depression. 43% had gynecological tumors, 36% genitourinary tumor, 11% colorectal carcinoma and 10% had other tumors. 51.7% had metastatic involvement. 52% of patients received chemotherapy, 12% hormonal therapy, 17% radiation or radiochemotherapy, and 19% best supportive care. Social intervention was needed in 22% of patients. Supportive cares were initiated in 10% of patients. Patients with cognitive impairment (40) received less chemotherapy, more hormonal therapy, radiation therapy and supportive care. Conclusion : Our study depicts geriatrics and oncologists characteristics of elderly cancer patients. A longitudinal study is necessary to describe patients' outcomes according to their geriatric assessment. Involvement of nurse practitioner was crucial making geriatric assessment feasible and less time consuming in an oncologist environment.

**PB6 132 LYMPHOMA OF THE PITUITARY STALK: ABOUT ONE CASE AND REVIEW OF THE LITERATURE**

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Introduction : Tumors of the pituitary stalk are rare and it is sometimes difficult to determine the cause.Methods and materials: We have reported a case of a primary lymphoma of the pituitary stalk in a 78 years old patient with a review of the literature. Results: only 8 similar cases have been published. In this series, symptoms were dominated by headache, asthenia and diplopia. Biologically, anterior pituitary hyposecretion and/or hyperprolactinemia were found in the majority of cases. In terms of imagery, only 3 patients presented an initial and isolated lesion of the stalk. The histological evidence was provided by a trans-sphenoidal biopsy in case of hypothalamic or pituitary associated lesion, or by a trans-cranial biopsy in the event of an isolated lesion. As an alternative, a lumbar puncture could be performed, less invasive but also less performant. Current treatment relies on chemotherapy with intra-venous methotrexate and intra-thecal methotrexate infusion if the cytology is positive in the cerebrospinal fluid. Radiation therapy can be prescribed depending on age. Unfortunately, the results remain disappointing with a median survival of 9 months. Conclusion: primary lymphomas of the pituitary stalk are rare and have very bad prognosis.

**PB6 133 LEVEL OF FUNCTIONING AND MORTALITY AMONG US STROKE SURVIVORS**

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Objectives: 1) To assess the association of health care access and mortality in a recent national sample of US stroke survivors. 2) To determine whether this association differs for disabled and non-disabled US stroke survivors. 3) To identify factors associated with increased mortality among US stroke survivors that may inform potential health policy solutions. Scientific Rationale: In 2004, 5.7 million US stroke survivors required comprehensive care and secondary prevention including risk factor modification. Stroke survivors have an increased risk of cardiovascular events that increase their morbidity, mortality, and health care costs. Our research has found that a significant proportion of disabled and non-disabled US stroke survivors have reduced access to health insurance, physician care and medications. Little is known regarding the relationship between health care access and mortality among US community-dwelling stroke survivors and whether this relationship varies by neurological disability. We will examine the association of health care access and mortality in US stroke survivors using a population-based survey. Methods: Among 3,222 stroke survivors aged  $\geq 18$  years who responded to the National Health Interview Survey (NHIS) 1997-2000, we will measure 2-year mortality using the NHIS Linked Mortality Files which link records of adult NHIS participants with death records from the National Death Index. The main outcome will be all-cause mortality and the secondary outcome will be cardiovascular mortality. The primary dependent variable will be health insurance status. The secondary dependent variables will be inability to afford medications, no general doctor visit, no medical specialist visit and out-of-pocket medical expenses. With Cox regression analysis, we will adjust associations between access measures and death for age, sex, race/ethnicity, and other measures.

**PB6 134 RISK FACTORS OF CAROTID INTIMA-MEDIA THICKENING AND PLAQUES FORMATION IN HEALTHY ADULTS**

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**Introduction**—Although assessment of carotid artery intima-media thickness (CIMT) is a surrogate marker of atherosclerosis, the information on the multiple risk factors of CIMT in healthy adults is limited. Whether there is difference in CIMT among regions in North China is still unknown. So we conducted a population-based study to evaluate the prevalence and risk factors of CIMT and plaques formation in healthy Chinese people and determine the difference among three regions in North China. Methods and Materials—412 healthy adults were selected from 2876 non-institutionalized residents in Beijing, Shenyang and Dalian after health questionnaire survey and detailed physical examination, with an age range of 30-88.1 years old, including 183 male and 229 female. Imaging CIMT by B-mode carotid ultrasonography and other procedures were standardized. Traditional risk factors, inflammatory markers and nutrients intake were assessed as well. Results—The prevalence of the maximum CIMT  $\geq 0.9$ mm and  $\geq 1.0$ mm was 42.2%, 23.3%, respectively. The traditional risk factors had an positive association with IMT in male and female in the univariate analysis, but disappeared in the multiple regression models. Multivariable linear model revealed that IMT was associated with age, HDL, waist circumference and region in female, but associated with age, uric acid as well as region in male. Maximum CIMT was higher in Beijing ( $0.963 \pm 0.010$ mm), lower in Dalian ( $0.832 \pm 0.014$ mm), lowest in Shenyang ( $0.714 \pm 0.013$ mm). After adjusting the traditional risk factors and nutrients intake, the difference was still significant ( $p < 0.05$ ). Age, region and serum uric acid were independent risk factors of plaque formation. Conclusion—In community-dwelling clinically-healthy Chinese people, age and region are the most important factors of atherosclerosis. Moreover, the risk factors of CIMT between men and women are different.

**PB6 135 OPTIMIZATION OF THE USE OF B-TYPE NATRIURETIC PEPTIDE LEVELS FOR RISK STRATIFICATION AT DISCHARGE IN ELDERLY PATIENTS WITH DECOMPENSATED HEART FAILURE**

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**Background** In elderly patients hospitalized for decompensated heart failure, B-type natriuretic peptide (BNP) levels at discharge and the change in BNP during hospitalization may provide different information and may need to be taken into account simultaneously to best reflect the response to therapy. The aim of this study was to determine whether the most accurate risk stratification is obtained using BNP level after stabilization on treatment, the change in BNP under optimal treatment, or a combination of both markers. Methods This prospective cohort study included 157 consecutive patients aged  $>70$  (mean, 83 years), hospitalized for decompensated heart failure. Clinical, radiologic, biologic and ultrasonography data were collected on admission and at discharge. Results The median BNP level on admission was 1057 pg/ml, and the mean change during hospitalization was -42%. Cardiac death or readmission were independently predicted by both predischarge BNP (best threshold :  $>360$  pg/ml), HR 3.35 (1.94-5.75) and the change in BNP levels (best threshold : 50%, HR 2.52 (1.59-4.01)). The highest event rate was observed in patients with both a predischarge BNP  $>360$  pg/ml and a decrease  $<50\%$  during hospitalization (HR 5.97 (2.98-11.94)) compared with patients with a predischarge BNP  $<360$  pg/ml and a decrease  $>50\%$  after adjustment for potential confounders. The remaining patients constituted an intermediate risk group (HR 3.13 (1.44-6.77)). Conclusion Predischarge BNP and inhospital BNP change should not be interpreted independently from each other. The highest risk group includes patients with a high predischarge BNP level corresponding to more than the half of the BNP on admission. These patients would benefit from close monitoring for signs of decompensation.

**PB6 136 CHORMIC DISEASES, AGING, LIFE QUALITY**

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This study intended to evaluate the effect of common chronic diseases (CD) in elder's quality of life (QOL). Two groups of elders (age 60 – 80 years old) were evaluated: 48 old people from the Geriatric Ambulatory (GA) of the State University Hospital in Campinas (SP); 58 old members from the Third Age Group (TAG) of SESC in Campinas (SP). The evaluation was based in an interview about the known co-morbidities and the used medications, besides the WHOQOL – bref questionnaire. In matter of CD, the study showed that 20.6% from TAG and 29.2% from GA were diabetic; 20.69% from TAG and 43.75% from GA presented a cardiac disease; 39.66% from TAG and 70.83% from GA presented arterial hypertension ( $p=0.001$ ); 17.24% from TAG and 37.50% from GA were depressive ( $p=0.001$ ); and 27.6% from TAG and 33.3% GA presented any other kind of CD. In terms of medicine, 34.2% from TAG and 8.7% from GA took one medicine per day; 28.9% from TAG and 31.4% from GA took three medicines per day; and 20.6% from TAG and 58.3% from GA took six or more medicines per day ( $p<0.001$ ). The WHOQOL-bref showed in the physical domain: 67.92 points to TAG elders and 48.21 points to GA elders ( $p<0.001$ ); in the psychological domain: 68.97 points to TAG elders and 57.90 points to GA elders ( $p<0.001$ ); in the social domain: 64.51 points to TAG elders and 61.98

points to GA elders; in the environmental domain 66.06 points to TAG and 52.60 to GA ( $p<0.001$ ). It is necessary to develop strategies for the prevention of CD.

**PB6 137 PROGNOSTIC ROLE OF EXERCISE CARDIOPULMONARY VENTILATORY PARAMETERS IN ELDERLY PATIENTS WITH CHRONIC HEART FAILURE**

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**INTRODUCTION:** The cardiopulmonary test (CPX) is one of the main tools for the prognostic stratification of patients (pts) suffering of chronic heart failure (CHF). The aim of our study was to determine the most reliable prognostic CPX parameters in elderly CHF pts, who were able to undergo stress testing. **METHODS:** We studied 324 elderly CHF outpatients, median age 75 (72-78) years, 29.1% female, 33% diabetics, 49% ischaemic CHF; **RESULTS:** median value of LV ejection fraction (EF) was 40%. All pts underwent peak/maximum CPX using a cycle-ergometer with 10 WATTS/min increases. Median peak oxygen consumption (PVO<sub>2</sub>) was 12 ml /kg/min. The median slope of the regression line relating to the relationship between ventilation and CO<sub>2</sub> production, (VE/VCO<sub>2</sub> slope) was 33.83. The median VE/VCO<sub>2</sub> slope/PVO<sub>2</sub> ratio was 2.78. We tested the predictive value of the ventilatory parameters for the combined end-point of cardiovascular mortality and HF hospitalizations. 117 events occurred during a median follow-up of 24 months. Bivariate Cox analysis showed that values below the pVO<sub>2</sub> median value (HR 0.63, CI 95% 0.44-0.91,  $p<0.05$ ), above the VE/VCO<sub>2</sub> slope median value (HR 2.16, CI 95% 1.47-3.16,  $p<0.001$ ) and above the VE/VCO<sub>2</sub> slope/PVO<sub>2</sub> median value (HR 1.36, CI 95% 1.15-1.60,  $p<0.001$ ) were significant predictors of the combined end-point. After adjustment for age, gender, LVEF and diabetes, the VE/VCO<sub>2</sub> slope and the VE/VCO<sub>2</sub> slope/PVO<sub>2</sub> were independently and directly associated with a worse prognosis. **CONCLUSIONS:** the VE/VCO<sub>2</sub> slope and the VE/VCO<sub>2</sub> slope/PVO<sub>2</sub> proved to be important parameters in the assessment of the prognosis of elderly pts affected by CHF.

**PB6 138 HOT WEATHER WARNING MIGHT HELP TO REDUCE MORTALITY AMONG THE OLDER POPULATION IN HONG KONG**

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**Introduction** There was evidence on the relationship between extreme hot weather and the increase in mortality, particularly from ischaemic heart disease (IHD) and cerebrovascular disease (stroke). In France, the 2003 heat wave killed about 14,800 people, who were mainly older people. Older people are more vulnerable mainly because they have diminished capacity to detect outside temperature and deteriorated ability to regulate body temperature. Furthermore, the limited adaptive ability may also be affected by pre-existing diseases and/or the use of medications. While the summer in Hong Kong, which has a sub-tropical climate, is not fatally stressful, mortality among the older people has shown to be associated with weather stress in summer. On the other hand, some researchers suggested that early warning systems might reduce mortality. In this study, the relationship between Very Hot Weather Warning (VHWW) and mortality was examined in the context of Hong Kong. **Methods and Materials** An observational study was conducted on the daily number of deaths due to IHD and stroke in the Hong Kong older population (aged 65 or above) during summer in 1997 to 2005. Multiple linear regression models were used to study the association between VHWW and the daily mortality rates from IHD and from stroke respectively. **Results** Among the identified 4,281 deaths from IHD and 4,764 deaths from stroke, it was found that absence of VHWW was associated with an increase of 1.633 deaths from IHD and 1.289 deaths from stroke per 1,000,000 population per day. **Conclusions** VHWW might help to reduce mortality among the older population in Hong Kong. Public education is required to inform the older people and their caregivers to take appropriate preventive measures. Warning systems tailored for the older people could also be considered.

**PB6 139 NOCTURNAL BLOOD PRESSURE DIPPING ANALYSIS IN THE ELDERLY**

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**Introduction** During sleep period there is a physiological decline in blood pressure. Such absence is associated with increased cardiovascular risk. Our objective was to assess nocturnal blood pressure dipping status through ambulatory blood pressure monitoring (ABPM) in adults and elderly. **Methods** 860 consecutive ABPM readings performed at a diagnosis service were assessed. Three age groups were created, which were analyzed regarding the use or not of antihypertensive medication: youngsters aged 15 to 39 (n=180); adults - 40 to 59 (n=397); and elderly - 60 or older (n=283). Nocturnal blood pressure (considered 23-7h) systolic and diastolic dipping was compared among the groups. Continuous data described by minimum, maximum, median, mean, standard deviation. The groups were compared considering continuous variables through two-factor analysis of variance (age and use of antihypertensives) and analysis of covariance to gender, BMI and

smoking. Results Mean nocturnal systolic dipping (NSD) for youngsters, adults and elderly was: with antihypertensives = 11.7/12.4/8.8%, without = 13.7/12.3/10.0%. NSD of subjects aged 60 years or older was lower ( $p < 0.001$ ) when compared to the other groups, even when adjusted for covariates ( $p < 0.001$ ). Mean NDP for youngsters, adults and elderly was: with antihypertensives = 16.2/14.4/11.4%, without 16.5/14.8/12.3%. NDP of subjects aged 60 years or older was lower ( $p < 0.001$ ) when compared to younger subjects, even when adjusted for covariates ( $p < 0.001$ ). When all groups were compared, NDP decreased progressively with age regardless the use of medication. Conclusions Elderly subjects experienced lower nocturnal blood pressure systolic and diastolic dipping when compared to youngsters. Aging produces a progressive reduction of day-night blood pressure difference. Higher cardiovascular risk in the elderly may be in part due to lower nocturnal dipping.

#### **PB6 140 CARDIOVASCULAR RISK FACTORS AND SUBCLINICAL ATHEROSCLEROSIS IN HIGH-FUNCTIONING OLDER ADULTS: THE ALBACETE STUDY**

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**INTRODUCTION:** We aimed to determine the prevalence of subclinical atherosclerosis in a high-functioning older adults cohort, its relation with cardiovascular risk factors and its rate of progresión. **METHODS AND MATERIALS:** Longitudinal cohort study comprising 246 community-dwelling high-functioning older adults aged 65 to 88, without clinical atherosclerotic disease. All underwent a carotid ultrasound study at entry and 176 had the study repeated 24 months later. **RESULTS:** 146 subjects (59.3%) had almost a plaque in the basal study. Mean value for the sum of all the plaques diameter was 3.82 mm. Right intima-media thickness was 0.89 mm and left 0.91 mm. 47.2% of subjects had maximal intima-media values greater than percentile 75. Cardiovascular risk factors presented a lineal association with plaques. Without risk factors, 32% had plaque, with one 54.2%, with two 61.6% and with three or more 69.3% ( $p=0.001$ ). Only hypertension was associated with plaques adjusted for the rest of cardiovascular risk factors (OR 2.0; CI95% 1.2-3.6;  $p=0.013$ ). 20 subjects (11.4%) presented a new plaque at 24 months. Intima-media thickness progressed 0.02 mm annually. Those with plaques had an adjusted greater risk of incrementing the sum of all the plaques diameter at 2 years (OR 58.0; CI95% 19.7-170.5;  $p<0.001$ ). **CONCLUSION:** Subclinical atherosclerosis is frequent in high functional elderly subjects and is associated with clasic cardiovascular risk factors. Controlling for these factors could reduce atherosclerosis in the elderly.

#### **PB6 141 SUBCLINICAL ATHEROSCLEROSIS, A PREDICTOR OF FUNCTIONAL DECLINE IN HIGH-FUNCTIONING OLDER ADULTS: THE ALBACETE STUDY**

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**INTRODUCTION:** Subclinical atherosclerosis is associated with frailty status in cross-sectional studies, but the relationship between subclinical atherosclerosis and functional limitation has not been determined in longitudinal studies. **METHODS AND MATERIALS:** Longitudinal cohort study.171 high-functioning community older adults without clinical atherosclerotic disease. All received a carotid ultrasound study. Subclinical atherosclerosis was determined by the presence or absence of atherosclerotic plaques and the sum of the diameters of all the plaques (SDP) in the carotid bilateral tree. Functional limitation was assessed with the Timed Up and Go (TUG) at entry and one year. We analyzed the relationship between subclinical atherosclerosis and slowdown in the performance of TUG from basal to one year, adjusted for demographic, functional and cognitive covariables. **RESULTS:** Mean age 73.7. 110 women (64.3%). Lawton 7.3. MMSE 25.7. 97 subjects had at least one plaque at entry (56.7%). Mean SDP was 2.18 mm. Mean TUG at entry was 9.8 secs, and at one year 10.1. 30 subjects (17.5%) performed the TUG more than 2 secs slower at one year from basal: 24 with plaque (24.7%) and 6 without plaque (8.1%) ( $p=0.005$ ). Those with plaque had an adjusted risk 3.9 higher of performing the TUG slower than those without plaque (CI95% 1.5-10.3;  $p=0.007$ ). Those that slowdown the TUG had a SDP 1.60 mm greater (3.49 vs 1.90; CI95% 0.56-2.63;  $p=0.003$ ). For each increment of 2 mm in the SDP, subjects had an adjusted risk 1.9 greater of performing the TUG slower at one year (CI95% 1.3-2.7;  $p=0.001$ ). **CONCLUSION:** Subclinical atherosclerosis is an independent predictor of functional limitation at one year in high-functioning older adults.

#### **PB6 142 FRAILTY AND SUBCLINICAL ATHEROSCLEROSIS IN HIGH-FUNCTIONING OLDER ADULTS: THE ALBACETE STUDY**

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**INTRODUCTION:** The relationship between frailty status and subclinical atherosclerosis using carotid ultrasound has only been assessed using stenosis>75% as a criteria, but its association with atherosclerotic plaque as a marker of prodromal atherosclerotic disease has not been determined. **METHODS AND MATERIALS:** Cross-sectional cohort study. 246 community-dwelling high-functioning older adults independent in basic ADLs, without clinical atherosclerotic disease. All received a carotid ultrasound study. Subclinical atherosclerosis was determined by the presence or absence of atherosclerotic plaques. We analyzed the relation between subclinical atherosclerosis and frailty criteria: unintentional weight loss >4.5 kg in the last year, exhaustion assessed with the CES-D, kilocalories of total physical activity in the last week (men <1729 kcal, women < 1435 kcal), slow gait measured with the Timed up and go (men >11.23 secs, women >11.29 secs), low hand grip strength (men <24 kg, women <15 kg). Prefrailty status was considered if subjects met 2 criteria and frailty if three or more. **RESULTADOS:** Mean age 74.2 years (range 65-88). 156 women (63.4%). Lawton 7.2. MMSE 25.5. Hypertension 125 (50.8%), diabetes 34 (13.8%), dislipemia 84 (34.1%), active smokers 7 (2.8%), BMI 28.9. 146 subjects had at least one plaque in the bilateral carotid tree (59.3%). Participants with plaque were more frequently prefrail (26.2% vs 15.2%;  $p=0.040$ ) and frail (9.2% vs 2.0%;  $p=0.023$ ). Subjects with plaque had an increased risk of being prefrail (OR 2.2; CI95% 1.1-4.6;  $p=0.035$ ) and frail (OR 5.0; CI95% 1.1-23.6;  $p=0.044$ ). **CONCLUSION:** The presence of plaques in the carotid tree as a marker of subclinical atherosclerosis is associated with the frailty status in high-functioning older adults.

#### **PB6 143 THE CORRELATION BETWEEN ANEMIA AND CLASS OF MYOCARDIAL FAILURE IN GERIATRIC PATIENTS**

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**Introduction:** Aging has an specific effect on blood production:the important procent of the bone marrow cells decreases and stimulation with erythropoietin results in less iron incorporation than in younger.The most important consequence is myocard failure and hypertrophy. **Method and material:** We analysed 142 patients which were hospitalized during 2007 year with diagnosis heart failure and anemia. There were 13 patients aged of 65 to 70 years, 22 patients aged 71 to 75 years,48 patients who were 76 to 80 years old,40 patients from 81 to 85 years old and 19 patients more than 85 years old. There were 62% female and 38% male. We graduated myocardial failure according to NYHA(New York Heart Association) and results were: first class-29 patients,second class-27 patients,third class-41 patients and fourth-45 patients.Patients in third and fourth NYHA class had longer than 10 years duration of anemia(50%normocytic,40%microcytic,5% megaloblastic,5%hemolytic).The other patients had shorter duration of anemia. **Results:**For data analyses we used following statistical methods:Spearman's test correlation,Kendall's test,Chi-Square test,Fisher's exact test.These tests proved that there is significant correlation between anemia and it's duration and class of myocardial failure(NYHA), $p$  less than 0,001. **Conclusion:** Myocardial failure and hypertrophy are consequences of abnormalities of mitochondrial structure- enlarged ,cristae are spare,broken,deformed and swollen.It is a reason of clinical changes in patients.

#### **PB6 144 LONG-TERM USE OF NON-STEROIDAL ANTI-INFLAMATORY DRUGS AND THE RISK OF MYOCARDIAL INFARCTION IN THE GERIATRIC POPULATION**

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**Introduction:**There are data which indicate that chronic use of NSAID leads to an increased occurrence of myocardial infarction. **Methods and materials:** We analysed two groups of patients with myocardial infarction:first group was with 50 patients which used NSAID (diclofenac,ibuprofen and naproxen),and the second,with 50 patients which did not use NSAID.In the first group there were 65% female and 35% male,aged 65 to 72 years.The most frequent used were diclofenac-70% of patients,ibuprofen 20% and naproxen 10% patients.Diclofenac was used longer,1;8years continually until the beginning of infarction.Typical risk factors were less represented in this group.High blood pressure was in 20% of patients,diabetes in 15% and nicotine in 14% of patients.The second group with 50% patients with diagnosis of acute myocardial infarction,NSAID were not used . The patients were older, 72 to 90 years old.The risk factors were more frequently found.High blood pressure 60%,diabetes in 30% and nicotine 40%. **Results:**Statistical analyses proved ( $p < 0,001$ ) that long term use of NSAID increase risk of myocardial infarction. They also show that the patients in the first group were younger and had less risk factors for acute myocardial infarction. **Conclusion:** This data support fact that NSAID ,which are more

used by female ,increase risk for myocardial infarction in younger patients with less other risk factors

**PB6 145 SYSTEMATIC REVIEW OF INFORMATION PROVISION FOR STROKE PATIENTS AND THEIR CAREGIVERS**

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Introduction Research shows that patients and their families lack understanding of stroke and feel ill-prepared for life after hospital discharge. The most effective way to educate stroke patients and their families has not been established. Methods We conducted a systematic review of randomised trials of information provision for stroke patients and/or carers using Cochrane methodology. Trials were identified by a search of relevant databases and other sources. Assessment of eligibility and methodological quality, and data extraction was carried out independently by two investigators. Studies were categorised by intervention as 'passive' information (provided on one occasion only with no subsequent follow-up or reinforcement procedure) or 'active' information (there was a purposeful attempt to allow assimilation and an agreed plan for clarification and consolidation). The primary outcomes were knowledge about stroke and impact on health, specifically mood. Meta-analyses were undertaken for the domains of knowledge, mood, satisfaction, and mortality. A narrative synthesis was carried out for other outcomes. Results Seventeen trials were identified and 11 contributed data to the meta-analyses. There were significant effects in favour of the intervention on patient knowledge (SMD 0.29, 95% CI 0.12 to 0.46), caregiver knowledge (SMD 0.74, 95% CI 0.06 to 1.43), patient depression scores (WMD -0.52, 95% CI -0.93 to -0.10), and one aspect of patient satisfaction (OR 2.07, 95% CI 1.33 to 3.23). Post-hoc subgroup analyses showed that strategies which actively involved patient and caregivers had a significantly greater effect on patient anxiety ( $P < 0.05$ ) and depression ( $P < 0.02$ ) than passive strategies. Conclusion Although the best way to provide information is still not clear, the results of this review suggest that strategies which actively involve patients and caregivers should be used in routine practice.

**PB6 146 SODIUM CONSUMPTION IN HYPERTENSIVE OLDER ASIANS**

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Introduction: The purpose of this paper is to review the data on the amount of sodium consumption in hypertensive older Asians. In Western counties such as Finland, England, and Germany research has demonstrated the success of reducing sodium intake among their older populations. In Asia, where there is wide diversity of ethnicity, cultural background and dietary habits, less is known about sodium consumption in hypertensive older adults. Methods and materials: A literature review was conducted using the databases Medline, CINAHL, Psycinfo, Science Direct, Journal archive, and Science Link Japan for the years 2003-2008. Key search words were sodium intake, salt intake, sodium consumption, dietary salt, salty diet, sodium restriction, and sodium reduction. Results: Six articles were found: four from in Japan, the other two from China and Hong Kong. Findings were that the amount of sodium consumption among hypertensive older Asian adults is still higher than 5 g/day to 6 g/day (100mmol) that is recommended by WHO and the National Heart, Lung and Blood Institute respectively. In Japan, only 2.3% of hypertensive older adults followed for 3.5 years had sodium, as measured by urinary sodium excretion (U-Na), less than 6 g/d. U-Na was higher in males than females. Treated hypertensive clients had less U-Na than in untreated for hypertension. Hypertensive older adults with metabolic syndrome (MS) had U-Na higher than those without MS. In Hong Kong, U-Na of hypertensive vegetarians was higher than those of normotensive vegetarian older adults. In China, Isolated Systolic Hypertensive older adults consumed more sodium than normotensive persons. Conclusion: The goal to decrease sodium consumption in hypertensive older Asian adults to less than 6 g/day has not been met yet. Sodium intake varies by gender, medical condition, and dietary habits.

**PB6 147 CONSUMPTION PREVALENCE OF FOOD RICH IN FIBERS IN THE ADULT POPULATION OF A CARDIOLOGY INSTITUTE FROM SÃO PAULO CITY**

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Introduction: Diets rich in fiber can reduce the incidence of not transmissible chronic diseases, such as hypertension, diabetes and some kind of cancer. The physiologic effect can be evidenced by the reduction of cholesterol and glucose absorption. Although many researches have been evidenced the benefits of the regular ingestion of fibers, least we know about the profile of consumption from the populations. Objective: To estimate the prevalence of consumption of food rich in fibers. Methodology: Transversal study with 2922 patients of both the sexes, realized in the period from June to July, 2007. The participants answered a pre-tested questionnaire for the study. A 95% confidence interval

was utilized. Results: It was demonstrated that 64% of the patients uses fruits diary, 66.2% uses it with the peel and 73.8 when eat orange they eat the white part. The poor ingestion of integral foods such as wheat bran and grains was detected in 57%. The consumption of leguminous as beans and peas was observed in 93.7% being 65.1% every day consumption. The vegetable as lettuce, kale and escarole, 95% admit to consume and 61.9% uses every day, in the case of the legumes as carrot, beetroot and chayote, are used by 95.6% and 60.1% use every day. Discussion: The food fibers are important elements into an adequate diet, helping the reduction of serum cholesterol and glucose levels and the insulin levels, important sign in the prevention and treatment of numerous chronic diseases as type 2 diabetes, obesity and dyslipidemia. Conclusion: The alimentary practice reveals that the study population's diet had an elevated prevalence of consumption of food rich in fiber with exception of the whole foods that remain not making.

**PB6 148 ADAPTATION, VALIDITY AND RELIABILITY OF THE ANGINA PECTORIS CHARACTERISTICS QUESTIONNAIRE**

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Introduction: Research aimed at evaluating Angina Pectoris (AP) symptoms in patients with Coronary Heart Disease (CHD) requires a comprehensive assessment tool applicable to this population. Because no single existing measure assessed the full range of symptom characteristics important to our study, we combined measures to examine specific aspects of AP symptoms. The purposes of this study are: 1) to describe the process of translating the questionnaires from English to the Farsi language; and 2) to evaluate substantial psychometric works (face, content and construct validity, internal consistency and test-retest reliability) for the entire instrument and each part of it. Methods and materials: For this study we combined the modified Rose Questionnaire (MRQ), and the Short Form-McGill Pain Questionnaire (SF-MPQ) and accompanying symptom checklist. A cross-cultural adaptation of the instruments was carried out before developing the final version of them. Two phases were involved: test and retest. To these ends, one hundred and ten CHD patients with AP were assessed by this hybrid measure. The test-retest reliability of the instrument was estimated for measurement after 15 days. Results: An analysis of the results indicated that a content valid instrument had been developed. There was a significantly high correlation between scores in the SF-MPQ and there were associations between items in the MRQ. Internal consistency was found adequate at both assessments (alpha Cronbach= 0.65) for test and retest. There was no significant difference between test and retest. The Intra-class Correlation Coefficient ranged from 0.76-0.98 with narrow confidence interval and small standard error of measurement. Conclusions: The Iranian version of AP characteristics questionnaire is valid and reliable; it is capable of describing characteristics of AP symptoms. It can be utilized with confidence in Iranian CHD patients for assessing AP symptom.

**PB6 149 SHORT-TERM PROGNOSIS IN ELDERLY PATIENTS WITH EARLY POST-INFARCTION ANGINA**

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Introduction: Previous studies have shown that early post-infarction angina (EPA) was a predictor of poor short-term prognosis among patients with acute myocardial infarction (AMI). However, there is a little evidence about prognostic significance of EPA in the elderly. The aim of our study was to determine if EPA has an influence on short-term prognosis in elderly patients with AMI. Methods and Materials: The study population consisted of 51 patients with AMI, aged 60 years or more. Early post-infarction angina occurred in 31 subjects (Group 1), while it was not present in 20 subjects (Group 2). Clinical characteristics of patients and in-hospital events (death and recurrent infarction) were recorded. Combined event was defined as an occurrence of recurrent infarction or death. Groups were compared by appropriate statistical tests (Student's t test and Chi square test). Results: There was no difference in in-hospital mortality (9.7 vs. 10.0%; p=NS), recurrent infarction rates (9.7 vs. 5.0%; p=NS), and combined event rates (19.4 vs. 15.0%; p=NS) between the Group 1 and the Group 2. Conclusion: Early post-infarction angina in elderly is not associated with adverse short-term prognosis.

**PB6 150 OPTIMIZATION OF HIGH INTENSITY INTERVAL TRAINING IN CORONARY HEART DISEASE**

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Purpose: High intensity interval training (HIT) has been shown to be more effective than moderate intensity continuous training (MCT) for improving peak VO<sub>2</sub> and endurance in

patients with coronary heart disease (CHD). However, no evidence supports the prescription of one specific protocol of interval training in this population. The purpose of this study was to compare the cardiopulmonary responses to four different HIT protocols in order to identify the most optimal one in CHD patients. Methods: Nineteen stable CHD patients (17 males, 2 females,  $65 \pm 8$  years) performed 4 different HIT protocols, all with exercise phases at 100% of maximal aerobic power (MAP), but with different durations of intervals (15 s for protocol A and B and 60 s for protocol C and D) and types of recovery (0% of MAP for protocols A and C and 50% of MAP for protocols B and D). Results: A passive recovery phase resulted in a longer total exercise time compared to an active recovery phase, irrespective of the duration of the exercise and recovery periods (15 or 60 seconds,  $p < 0.05$ ). Total exercise time also tended to be higher with mode A relative to mode C ( $p = 0.06$ ). Despite differences in total exercise time between protocols, time spent at a high percentage of VO<sub>2max</sub> was similar between HIT protocols except for less time spent above 90% and 95% of VO<sub>2max</sub> for mode C when compared to modes B and D. Conclusion: When considering perceived exertion, patient comfort and time spent above 80% of VO<sub>2max</sub>, mode A appeared to be the optimal HIT protocol for these coronary patients.

#### **PB6 151 MELATONIN EFFICACY IN OLD PATIENTS WITH POSTINFARCTIONAL CARDIOSCLEROSIS**

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Objectives of present work is an investigation of M influence on clinical symptoms, morphofunctional disturbances in myocard, system of peroxidal oxidation in lipides (POL) and antioxidant defence (AOD) on the background of traditional therapy (TT) of old patients with postinfarctional cardiosclerosis (PIC) and heart failure (HF). Material and methods. 42 pts IHD, PIC, HF, functional class (f.c.) II-IV (by NYHA), stenocardia f.c. II-III were investigated. All the pts were divided into 2 randomized groups depending on M doses. 21 pts of the 1-st group obtained M in a dose of 6 mg 21 pts of the 2-nd group received M in a dose of 3 mg. Before and 20 days after of therapy ECG-monitoring, doppler-EchoCG, level of malone dialdegid (MDA), antioxidant enzymes in red cells and tolerance to physical load were examined. Results. Number of nitroglycerin tablets reduced in pts of the 1-st group and had tendency to reduction in pts of the 2-nd group. In these two groups there were decreased numbers of episodes in ST-elevation. Number of episodes in ST-depression reduced in the 1-st group and had tendency to reduction in the 2-nd group. There were revealed reduction of end diastolic and end systolic sizes and volumes. Ejection fraction (EF) increased in the 1-st group (from 52,9 to 55,4%). MDA level reduced in two groups. An increase in activity of Cu, Zn-SOD was significant, especially in the 1-st group. Conclusion. M on the background of TT produced antianginal, antischismic effects in pts with IHD, PIC, HF, improved clinical symptoms and reduced the number of ST-depression and ST-elevation episodes by their disappearance.

#### **PB6 152 EVALUATING THE NEGATIVE PREDICTIVE VALUE OF SERUM B-NATRIURETIC PEPTIDE IN COMMUNITY-DWELLING OLDER PATIENTS**

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Introduction Community population studies suggest a role for B-natriuretic peptide (BNP) in diagnosing heart failure. Older patients present comorbidities that may confound interpretation of serum-BNP. We aimed to evaluate the diagnostic value of BNP in older people referred to outpatients. Methods Patients with dyspnoea were recruited from geriatric outpatient clinics. NYHA classification was recorded and serum BNP measured (Siemens ADVIA Centaur automated BNP assay, where  $>100$  pg/mL is abnormal). Echocardiography was performed in a standardised manner. Serum BNP and echocardiography reports were categorised as dichotomous variables based upon presence/absence of heart failure. These were cross-tabulated, using echocardiography as the "gold standard", to derive sensitivity, specificity, positive and negative predictive values (PPV, NPP) for serum BNP. Associations between BNP and echocardiographic measurements were sought using Fisher's exact test. Results 56 BNP results (34 females) were obtained. Mean age was 82.5 ( $SD \pm 10.85$ ). 32 patients had all echocardiographic parameters recorded. 24 had incomplete 2D measurements due to poor echocardiographic windows. Cross-tabulating BNP with fractional shortening demonstrated 77.8% sensitivity and 56.5% specificity for heart failure. PPV and NPP (95%CI) were 41.2 (17.8-64.6) and 86.7% (69.5%-100%) respectively. A non-significant trend association was apparent between fractional shortening and serum BNP ( $p=0.08$ ). Conclusion In this pilot study of older outpatients, a poor PPV suggests that serum BNP is not reliable for diagnosis of heart failure. However, a relatively high NPP suggests BNP could be potentially useful in excluding heart failure, and may be helpful where echocardiography is unavailable. This supports previous suggestions that BNP could be used to exclude cardiac failure in older

community-dwelling patients. Further larger studies, taking into account the effect of confounding co-morbidity variables, are now required.

#### **PB6 153 CURRENT CONCEPT ABOUT PREVENTION AND TREATMENT OF ATRIAL FIBRILLATION**

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One of the significant pathologies depending on the age is atrium fibrillation (AF). It is well known that AF is a sad "privilege" of the elderly age. If in people less than 60 prevalence of AF is 1%, in population over 80, this figure exceeds 6%. Therefore, among the aged population, such complications, as infarction, stroke, and thromboembolism are observed very often. Through there were conducted numerous researches, in geriatric cardiology the issue of AF, causes of AF development and treatment in the elderly patients require deep scientific researches. On the basis of epidemiological studies conducted by the staff of Georgian Association of Gerontologists (2000 - 2006), there was determined that AF prevalence among the subpopulation regarded by gerontology is 14.5%. There were determined specific causes of AF development. The aim of the given paper was to study the reasons of atrial fibrillation arising in old (60-74 years) and senile (75-89 years) patients and possibility of prevention paroxysms of atrial fibrillation and its complications with help of prolonged selective beta-blocker Corvitol (Berlin-chemi) pro daily doses 50-100 mg. The results which were received after the examination and treatment of 152 patients who were under stationary and dispensary treatment at the Research Institute of Experimental and Clinical Therapy for 12 months. As a result of treatment the AF paroxysms were eliminated in 89.8% of cases (139 patients), what allowed to avoid such heavy complications, as stroke, thromboembolism, and infarction. The use of "Corvitol" gives stable antiarrhythmic and hypotensive effect in old and senile patients, provides the regression of the left ventricular hypertrophy with improvement of its paramters and systolic and diastolic function, which is especially important for the studied contingent of the patients

#### **PB6 154 DEPRESSION AND ARTERIAL HYPERTENSION IN THE ELDERLY**

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Introduction. The association between depression and cardiovascular pathology was evaluated by several clinical studies, but the link between depression and hypertension has been less investigated. Hypertension and depression have increased prevalence especially in the elderly, so the relationship between them is crucial. Methods and materials. The studied group consisted of 145 elderly patients: 109 with hypertension and 36 with normal blood pressure (BP). BP was measured using ambulatory Holter BP monitoring, being followed: mean systolic BP (MSBP), mean diastolic BP (MDBP), the dipper or non-dipper pattern of BP. Depression (diagnostic and degree) was evaluate using the geriatric scale for evaluating depression. Results. Depression was found in 42 patients with hypertension and in only 6 with normal BP ( $p < 0.01$ ). The depression score was higher in hypertensive patients compared with non-hypertensive patients (17.2 vs. 14.25) ( $p < 0.01$ ). Depression was found in 25 women with hypertension and in 3 without hypertension ( $p < 0.05$ ). There was no statistical significance between prevalence of depression in elderly men with or without hypertension ( $p > 0.05$ ). No direct relation between increased MSBP or MSDP values and depression scores was found ( $r = -0.23$ ;  $r = -0.44$ ). Depression was registered in 30 patients with isolated systolic hypertension (ISH) and in 12 elderly with systolic-diastolic hypertension (SDH) ( $p < 0.01$ ). Depression occurred in most hypertensive subjects (76.74%) and in all non-hypertensive subjects that presented the non-dipper pattern of BP. Conclusion. Depression occurs more frequently in hypertensive elderly than in non-hypertensive elderly. Depression in hypertensive elderly does not correlate with MSBP or MDBP values. Depression has increased statistical prevalence in elderly with ISH as compared with elderly with SDH. Depression in hypertensive and non-hypertensive elderly is more frequently associated with the non-dipper pattern of BP.

#### **PB6 155 LONG-TERM USE OF PINEAL GLAND (PG) PREPARATION EPITHALAMIN REDUCES MORTALITY RATES AMONG ELDERLY CORONARY ARTERY DISEASE (CAD) PATIENTS**

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Experimental studies demonstrated favorable effects PG preparation Epithalamine (EP) on aging processes. Due to long-term use of EP, average and maximal lifespan of animals increased significantly. Purpose: Based on long-term observation, to compare mortality dynamics in groups of elderly patients on and without EP. Subjects and Methods: Total 79 CAD patients with stable angina of 2nd functional class participated in the study. At the beginning of study (1991-1992) the patients' age was 60 to 74 years. After baseline examination they were randomized in two groups: 39 patients on EP and 40 subjects on

placebo. EP and placebo were injected by courses (once in 6 months, altogether 6 courses) during 3 years (1992-1994). The follow-up clinical observation continued till the year 2005. All patients of both groups received aspirin, nitrates, beta-blockers and ACE inhibitors. Physical working capacity was evaluated by bicycle ergometry. Blood plasma melatonin (BPM) was measured by radio immune method at 9 am, 3 pm, and 9 pm. Results: Before EP use, 85% of elderly CAD patients had low nocturnal BPM level (lower 30 ng/l). After first and subsequent EP courses, BPM concentration increased more than 2-fold. Simultaneously the exercise performance increased by 16% and continued keeping the higher level. Conversely, a 3-year follow-up over the patients who did not receive EP revealed a further decrease of physical working capacity by 9%. In 2005 year, 12 years after the start of EP use, 30 of 39 persons (77%) survived, whereas in control group only 22 of 40 subjects (55%) survived,  $p<0.05$ . Long-term use of EP led to an almost 2-fold decrease of mortality from CAD. Conclusion: In elderly CAD patients with low nocturnal BPM level treatment with EP leads to increase PG function.

#### **PB6 156 ANALYSIS OF WARFARIN DRUG INTERACTIONS IN GERIATRIC PRESCRIBING**

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Introduction Warfarin-drug interactions are often encountered in the care of elderly potentially causing hospital admissions and death. Drug interactions may be categorized as either pharmacokinetic (changes in serum warfarin concentrations) or pharmacodynamic (changes in hemostasis or platelet function). The aim of the study was to investigate mechanisms of warfarin-drug interactions and identify possible warfarin interactions with other prescription medications for cardiology ward patients in a hospital setting. This study could facilitate medication prescription decisions and assist with appropriate monitoring to avoid serious adverse reactions. Methods and materials. This study included 100 patients from an inpatient cardiology unit, who received warfarin concomitantly with other drugs for the time period from May, 20008 to September, 2008. A questionnaire was used to gather data from patients' medical histories such as gender, age, clinical diagnosis, current medications, value of International Normalized Ratio (INR). Results. For patients who received combinations of warfarin with other drugs such as amiodarone (25%), anti-inflammatory drugs like aspirin (4%), statins (13%), proton pump inhibitor (omeprazole 4%), it is recommended that the daily warfarin dose be reduced to avoid increased bleeding risk. In this study, these drug combinations were found to be associated with a higher prevalence of hemorrhage compared with warfarin used alone. Patients' age, gender, other diseases such as diabetes, hypertension, liver disease, impairment of coagulation system, history of bleeding, thyroid disorders may affect warfarin sensitivity, resulting in increased or decreased warfarin requirements. Conclusion. Warfarin play a significant role in the prevention and treatment of thromboembolic disease among elderly. Collaboration of a clinical pharmacist and physician in management of drug interactions can enhance the efficacy and safety of warfarin therapy.

#### **PB6 157 EVALUATION OF ROSUVASTATIN TREATMENT IN THE CORRECTION OF ENDOTHELIAL DYSFUNCTION IN ELDERLY PATIENTS WITH ATHEROSCLEROSIS**

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Endothelial dysfunction and dislipidemia are one of the main reasons of coronary artery sclerosis in elderly patients. Changes of vascular diameter are depended on a fine balance between vasodilating and vasoconstricting substances. One of the important vasoconstrictor regulators of the vasculature is the peptide ET-1 which is synthesized in endothelial cells and might contribute to the exaggerated vasoconstriction associated with acute coronary syndromes. The aim of the study was to study endothelial dysfunction correcting effects of Rosuvastatin in elderly patients with stable angina pectoris. Materials and methods: We studied 48 patients (28 males/20 females, age range 63-81 years, with stable angina pectoris. Concentration of Endothelin-1 (ET-1) was measured in peripheral blood before and after 2 week Rosuvastatin treatment and flow-mediated vasodilatation of brachial artery was studied in relation to the changes of its diameter after 2-min occlusion, that was performed prior to and 24-h post Rosuvastatin administration. Mean indices of (ET-1) in peripheral blood was  $0.63 \pm 0.12$  and dilation degree of brachial artery was  $7.171 \pm 0.71$  % before intervention. Patients were treated with 10 mg Rosuvastatin once daily for 2 weeks. Results: Analyses of the data obtained revealed statistically evident difference between the results obtained pre-and post-treatment initiation (2 weeks treatment course): post-treatment level of ET-1 was  $0.55 \pm 0.05$  ( $P < 0.01$ ) and dilation degree of brachial artery was  $(10.20 \pm 0.96)$  %, ( $P = 0.18$ ). Conclusion: Hence, 2-week treatment with Rosuvastatin decreases levels of ET-1 in peripheral blood and significantly increases the degree of flow-mediated vasodilatation of brachial artery even after 24-h post

Rosuvastatin administration, which might play a great role in patients with stable angina pectoris especially in elderly population.

#### **PB6 158 TAKO-TSUBO STRESS CARDIOMYOPATHY: A MIMIC OF ACUTE CORONARY SYNDROME IN THREE ELDERLY WOMEN**

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Introduction: TakoTsubo syndrome or stress cardiomyopathy was first described in 1991 in Japanese patients. Tako Tsubo usually occurs in postmenopausal women after a severe physical or psychological stress. The mechanism seems to be linked to age and sex hormones. Its name refers to the typical left ventricular apical ballooning which looks like a traditional Japanese octopus-catching pot. Tako Tsubo cardiomyopathy is a transient left ventricular dysfunction characterized by an apical and midventricular hypokinesis or dyskinesia, and by a basal hyperkinesis. The clinical presentation mimics an acute coronary syndrome but the favourable prognosis and the treatment differ. Methods: We report three cases of Tako Tsubo in women older than 80 with typical imaging of ventriculography, and we also review diagnosis criteria, therapeutic management, and pathophysiological hypotheses.

#### **PB6 159 COMBINED USE OF COUMARIN AND TOPICAL AZOLES IN ELDERLY PATIENTS: BE AWARE OF OVERANTICOAGULATION!**

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Introduction: Overanticoagulation is a major concern in elderly patients receiving coumarin therapy. Potentiation of coumarin anticoagulants by systemic azole antifungal agents is well documented. However, few data are available about coumarin interactions with topical azole agents. We describe 6 cases of overanticoagulation with coumarin therapy in elderly patients treated with topical azole. Methods and materials: we conducted a 25-month prospective study in patients > 80 years presenting with an INR value > 5.0 and receiving both coumarin anticoagulant and topical antifungal azole. Demographic, therapeutic and clinical data were collected. CYP P450 2C9 polymorphism was performed. For each selected patient, the probability of the proposed potentiation was rated. Results: 6 patients (mean aged 89 years) were selected, receiving either econazole lotion, cream, powder, or bifonazole cream. Interestingly, we observed that econazole or bifonazole was consistently applied to large areas, under disposable diapers in half the cases. INR values were between 6.7 and > 20. In all cases, oral anticoagulant was withdrawn and vitamin K was administered. No bleeding complication occurred in any of the 6 patients. In 4 cases, confounding factors of overanticoagulation were noted, as drugs (including antibiotics or omeprazole) or uncontrolled inflammation, but topical azoles may have increased the potentiation of anticoagulant effect by these factors. According to causation criteria, the probability of coumarin potentiation by topical azole was rated as probable in 2 patients, and possible in the others. Conclusion: physicians should be aware of this probably underestimated potentiation of coumarin anticoagulant effect by topical antifungal azoles and should closely monitor INR variation during the treatment period.

#### **PB6 160 ACUTE CORONARY SYNDROME IN SENIORS ABOVE 75 YEARS OF AGE**

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Background: The aim of our retrospective study was to realize the actual situation in patients above 75 years of age having acute coronary syndrome under conditions of cooperation of two departments of Faculty Hospital Brno. Patients and methods: We evaluated retrospectively the group of 126 patients, 35 men and 91 women (average age 82.5±5.5 years) hospitalized at our department because of diagnosis „chest pain“ or „acute coronary syndrome“ within years 2005-2007. We traced risk factors, previous medications, solution of acute coronary syndrome, contraindications of intervention, treatment following acute coronary syndrome. Results: acute coronary syndrome was diagnosed in 92 patients of studied group and coronary intervention underwent 41 patients (44.6%). Two thirds achieved the optimal result, 3 of 41 (7.3%) were recommended to aortocoronary bypass surgery and in 4 patients of 41 (9.8%) partial recanalization was achieved and aortocoronary bypass surgery recommended. The number of complications and mortality of invasive coronary methods did not differ from younger patients – mortality achieved 4.3%. The conservative treatment was preferred in resting 51 patients (55.4%) and we analyzed reasons. The most frequent reason were serious cognitive disturbances – 9 of 51 (17.4%), other frequent reasons: polymorbidity, uncertain time relations and acute infection – 8 of 51 (15.7%) each, less frequent reasons: minimal coronary lesion, previous immobilization, sudden death, refusion from intervention by patient, unclear ECG,

recommendation of conservative approach from previous coronaryographies. The following treatment kept better guidelines of national and international cardiology societies. Conclusions: Patients of age above 75 years treated for acute coronary syndrom showed important interindividual differences, their symptoms were frequently influenced by underlying disease, especially by acute infective complications. Results of patients treated by coronary intervention were very satisfactory – 66% achieved optimal result.

**PB6 161 CARDIOVASCULAR DRUGS IN PATIENTS OF GERIATRIC DEPARTMENT (GD) AND IN NURSING HOME (NH)**

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The cardiovascular drugs were the most frequent used group (38,9% of all drugs used in GD) Only 1% of the GD patients did not have cardiovascular disease. ACEI were used by 46,6% of GP patients 28,9% patient in GD used furosemid and 18% of patients there used hydrochlorothiazid and 15,4% of GD patients were treated by spironolacton. Diuretics we used by 321% of patients in NH .28,9 % of GD patients used betablockers and 27,9% used calcium channel blockers. Nitrates were used by 18,5% patients in GD and 43% patients in NH . 3,5% of patients in GD were treated by digoxin (22,4% in NH). 1,4% of patients in GD (60% of patients with hyperlipidaemia) were on hypolipidaemic medication.

**PB6 162 ARE GERIATRIC CHARACTERISTICS TAKEN INTO ACCOUNT FOR AVK THERAPY DECISION OF PATIENTS WITH ATRIAL FIBRILLATION?**

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Introduction: Anticoagulation therapy with anti vitamin K (AVK) for the prevention of thromboembolism in patients with atrial fibrillation (AF) is based on information derived from numerous well-constructed randomized control trials. Despite this conclusive evidence of efficacy, several studies have shown that "realworld" use of AVK in patients with AF is suboptimal. Our hypothesis was that geriatric characteristics (functional impairment, cognitive disorders, malnutrition, risk for falls, depression) could be an explanation of the underprescription of AVK for old patients with AF. Objective: To analyze the patient-related barrier to underprescription of AVK therapy focusing special attention to their geriatric characteristics. Methodology: Retrospective study of 768 consecutive geriatric patients admitted in an acute geriatric unit of an academic hospital between April 2006 and November 2008. Data from comprehensive geriatric assessment were collected from computerized medical charts. Results: Among the 768 medical charts, 111 (14%) patients presented with AF. Forty nine percents of them did not receive any AVK treatment at admission. Functional dependence for activities of daily living did not differ between the groups. The proportions of geriatric problems (cognitive, malnutrition, depression and falls) did not differ between the groups. The proportions of high risk conditions to develop embolic events (congestive heart failure, hypertension, age older than 75 years, diabetes, and previous stroke) did not differ between the groups. Discussion: Almost the half of the patients presenting AF who were admitted in our unit did not receive any anticoagulation therapy. Our results did not confirm the hypothesis that geriatric characteristics could represent barriers to AVK use. Moreover, the classical high risk factors seemed not to influence the therapeutic decision before admission. More research is needed to identify and to clarify the relative importance of patient-, physician-, and health care system-related barriers.

**PB6 163 RELATION OF CBF, CSF MOBILITY AND SKULL MECHANICS WITH COGNITIVE BRAIN FUNCTION IN AGED PERSONS**

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Introduction. Recently it has been shown that the brain metabolic supply depends on, besides blood flow(BF), also on cerebrospinal fluid mobility(CSFm) and cranial compliance (CC) which change with age. So, brain cognitive dysfunction may be based on age-related CSFm and CC. Their role in the development of aging-related cognitive disorders was unclear until now. This report evaluates the significance of CSFm and CC in age-related cognitive dysfunction by new non-invasive methodology. Method. Measuring of BF in the middle cerebral artery (MCA) and calculations of CSFm and CC in comparative units were based on simultaneous recordings of transcranial dopplerogram (TCD), segment S1 MCA and rheoencephalogram (REG), fronto-mastoid electrode position, for evaluation of dynamics of pressure/volume relation in skull during a cardiac cycle by computer aid analysis with specially adapted software. Cognitive brain function

was determined by "Prognosis-1" method. 44 persons both sexes in age ranges 76-84 were investigated. Results. It was found that by age 77-80 BF in the MCA had already decreased by 24-28%, and further reductions in CBF are insignificant in this age group. Variations of CSFm and CC were considerably larger than CBF variations, and CSFm and CC values did correlate with the level of brain cognitive dysfunction. Values for initial onset of cognitive disorders were: CSFm=0.42±0.11 and CC=0.64±0.14(n=16), for moderate level: CSFm=0.31±0.09 and CC=0.48±0.11(n=14), for pronounced level: CSFm=0.20±0.08 and CC=0.32±0.09(n=14). Conclusion. The data obtained show that with aging decreases of CSF mobility and Cranial Compliance, while accompanied by diminished CBF, play a significant role in the development of age-related cognitive disorders including dementia.

**PB6 164 EFFECTS OF PERINDOPRIL ON CARDIAC EVENTS IN PATIENTS OLDER THAN 65.**

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Introduction EUROPA trial has demonstrated that perindopril 8mg once daily, an ACE inhibitor with high-tissue affinity, significantly decreased the risk of major cardiac events (cardio-vascular death, myocardial infarction (MI) and resuscitated cardiac arrest) by 20% in patients with stable coronary heart disease (CAD) without apparent heart failure. The objective of this subgroup analysis is to assess the effect on cardiac events adding perindopril 8mg to standard therapy in the subgroup of EUROPA patients above 65 years old. Methods We conducted a retrospective analysis of EUROPA study patients according to their age. Mean age in EUROPA is 60 years old. Among the 12218 patients of EUROPA, we identified 3831 (31%) patients who were older than 65. Among them 1696 patients (14%) were above 70. Results Out of the 3831 patients older than 65, 1944 received perindopril, 1887 placebo. Their baseline characteristics were similar to overall EUROPA population for demographics (apart from age), medical history and medications at screening. Mean age was 71 years, 62% of patients had an history of MI and 54% a previous revascularisation, 66% had hypertension. The relative risk reduction (RRR) with perindopril was of 18.2%, [95% CI: 2;32] p=0.034 for the composite endpoint of cardiovascular death, MI and resuscitated cardiac arrest, of 18.5%, [95% CI: -4;36] for fatal and non fatal MI and 41.7%, [95% CI: 9;63] for new onset of heart failure (respectively 10.7%, 6.3%, 1.6% of events in perindopril group and 12.9%, 7.6%, 2.7% in placebo group). Consistent results were obtained in patients with a previous MI or revascularisation and in the subgroup of patients above 70. Conclusion Perindopril 8mg daily is beneficial for prevention of cardiac events in all stable CAD patients including those above 65 years.

**PB6 165 THE BNP BLOOD LEVEL IN VERY ELDERLY PEOPLE IS INDEPENDENT OF THE CREATININE BLOOD LEVEL**

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The elevation of the Brain Natriuretic Peptide (BNP) has a diagnostic and prognostic significance in heart failure (HF). In the very elderly people, there is frequently a renal impairment with an elevation of BNP. To further determine if there is a correlation between creatininemia and BNP levels, we compared both values in a prospective study of 152 patients admitted in our Geriatric Department. We divided the patients into four groups, according to the level of hypertension (HTA) and HF, as per Fragmingham Criteria: G1 : HTA and HF patients (n=66); G2 HTA and non-HF patients (n=33); G3 non-HTA and HF (n=31), and G4 non-HTA and non-HF (n=22, control group). We compared the BNP value measured by BIOSITE assay to the creatininemia value in those groups. We found no statistically significant difference between the average creatinine blood level (ave±sd: 98±45µmol/l, n=148) in the four different groups using a variance analysis test (p=0.34, n=148). While we did not observe any significant elevation of the BNP level in the group with HTA and no HF (group 2, 172pg/ml, p=0.87), there was a significant increase of the average BNP level in the groups with HF (group 1: 411pg/ml, p<0.02 and group 3: 472pg/ml, p<0.001) compared to the control (group 4: 157pg/ml), as expected. However, we did not notice any significant correlation between the creatinine level and the BNP level in any group. This study clearly shows that the creatinine level is not correlated to the BNP level in very elderly people, unlike the NT-PRO BNP value which is dependant on the renal function, support the requirement of the BNP dosage in very elderly people to determine of HF.

**PB6 166 EFFICACY OF CV RISK REDUCING ANTIHYPERTENSIVE TREATMENT AMONG ELDERLIES IN HUNGARY**

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Introduction Antihypertensive treatment used to reduce the CV risk among hypertensive elderlies, is usually not satisfactory. Objective to survey the CV risk and the efficacy and

implementation of guidelines of the antihypertensive treatment used among hypertensive elderly. Methods 3578 elderly's records registered in 2007 were analyzed using the database of the Hypertension Registry of HSH. Evaluating viewpoints were the CV risk, the distribution of blood pressure levels resulted in therapeutically, the number as well as point of action of antihypertensive drugs used generally or in cases of hypertension with special organ damages. Results The incidence of high global CV risk was great among the elderly hypertensives: metabolic syndrome in males-M 29%, in females-F 39%, CRF (e.GFR<60ml/min) M22%, F36.2%, CHD: M20.6%, F18.5%, PAD M 22.2%, F16.9%. About half of the patients in each age-decade over 60 years with treated hypertension had blood pressure over 140/90 mmHg. The low combination rate of antihypertensives (as intensity of treatment) was unacceptably frequent in those cases when BP<sub>syst</sub> remained over 140 mmHg. Example: in case of patients with a BP<sub>syst</sub> of 160-179mmHg, the use of few, max. 2 drugs was surprisingly high (27.2% at age 60-70years; 26.2% at 70-80 years; 29.2% >80years). The quality (point of action) of the antihypertensive treatment was also not found to be optimal in those cases, when special target-organ damage occurred in the hypertensive elderly (for example: in CRF the preference rate of beta receptor blockers within the 2-3 drug combinations was relatively too high. Conclusion The relatively great proportion of hypertensive elderlys with high CV global risk and not sufficiently controlled BP levels must be reduced by improving both the intensity and the quality of their antihypertensive treatment.

**PB6 167 THE CAUSE OF OLD AGE DEGENERATIVE AORTIC VALVE DISEASE**  
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Introduction: In the modern era of aortic valve surgery the gold standard in both the understanding of aortic valve pathology and in the efforts to correct the same is "aortic root stress" rather than "aortic root hemodynamics". Our goal is to investigate how stress acts on the aortic valve and its consequences in the elderly. Methods: The authors present in vitro and in vivo experiments as well as clinical observations and computer modeling of the function of both tricuspid and the bicuspid aortic valves, and the effects the aging aortic wall may exert upon the leaflets. Results: The experimental and modeling observations indicate that old age degenerative disease of the tri-leaflet aortic valve is not a primary atherosclerotic condition as it is generally regarded, but a process initiated by fibrosis and loss of compliance of the aortic wall at the level of the sinuses due to aging of the individual. This leads to cessation of the physiological "pull-and-release" action of the commissures, induces a stress-overload on the leaflets and eventually causes degeneration of the aortic cusps. A similar process may also occur whenever the ascending aorta is replaced with a rigid, tubular prosthesis. Conclusion: Degenerative aortic valve stenosis and calcification is not a primary condition, but is induced by stiffening of the wall of the aortic sinuses as it occurs in the elderly population.

**PB6 168 PARAOXONASE 1 AND ANTI-INFLAMMATORY EFFECT OF HDL WITH AGING**  
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Aging is the dominant risk factor for atherosclerosis. Epidemiological and clinical studies have revealed that there is an inverse relationship between plasma HDL levels and cardiovascular disease .It has been shown that HDL posses antioxidative and anti-inflammatory properties in which the paraoxonase (PON1), one of its associated enzymes, has been suspected to play a crucial role, but the exact mechanism of action has yet to be identified. Objective: The aim of this study was to evaluate the capacity of purified PON1 to prevent inflammation in the presence of oxidised lipids and to investigate the effect of aging on the anti-inflammatory activity of PON1. Methods: PON1 was purified from plasma of young (20-25years) and elderly healthy subjects (65-85 years). LDL oxidation was initiated by incubation with copper ion, and monitored by the measurement of conjugated diene formation. The lysophosphatidylcholine formation was analysed by HPLC with an evaporative light scattering detector. The ICAM-1 expression by Eahy926 cells was determined by flow cytometry. The anti-inflammatory effect of PON1 was compared as a function of age of donors. This result was confirmed by using recombinant PON1 (re-PON1) produced in Escherichia coli system. Results: Purified PON1 reduced significantly lipid peroxidation, as measured by the conjugated diene level, for both LDL and HDL (35.5% and 77.7% reduction respectively compared to control). Moreover, our results show that PON1 decreased significantly the expression of ICAM-1 induced by oxidised phospholipids. This inhibitory effect was increased in the presence of lecithin cholesterol acyltransferase (LCAT) and apoA-1. Reconstituted HDL as well as LCAT and PAF-AH inhibitors were used to determine the interaction between PON1 and HDL proteins. Conclusion: The anti-inflammatory of HDL is due to the action of PON1 in combination with other HDL-associated proteins.

**PB6 169 THE EDUCATION OF SUBJECTS OVER 75 YEARS WITH ESSENTIAL HYPERTENSION. PROSPECTIVE STUDY OF 50 CASES IN A UNIT ACUTE GERIATRIC MEDICINE.**  
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Clinical studies have shown that reducing blood pressure decreased the incidence of cardiovascular events and dementia (4) in patients aged 60 to 80 years in systolic and systolo-diastolic hypertension (1 and 3).A more recent study has demonstrated that treated hypertension among people aged 80 or older is also beneficial (2). The HTA requires daily good adherence to treatments and monitoring to prevent the occurrence of complications, even at an advanced age. Methods: It is a prospective study analyzing 50 patients 75 years or more of age hospitalized Short Stay Unit Gériatrique with hypertension. The intermediate results relate to 25/50 patients. The questionnaire was based on 4 points of education: nutrition, physical activity, self-monitoring blood pressure and treatment adherence. A single (nurse) intervened in two education sessions during hospitalization, using an individualized education for each patient according to his knowledge, the cognitive status, the presence of caregivers and the comorbidities. Results: The mean age is 84.5 years, and 37 % of patients suffer from cognitive impairment (71% moderate and 14% severe dementia). Some educational reminders were necessary in 14% of patients, 26% have a good compliance and surveillance without real understanding of the pathology. Concerning the management of hypertension at home, 26% are totally dependent on another person against 42% partly. Forty-two percent of the caregivers participating in education sessions and 25% learns self-monitoring blood pressure. Conclusion: This study confirms the value of individualized education to inform and empower elderly patients about their hypertension. The role of caregiver is essential because it is a source of motivation and in case of cognitive disorders in evolution. The health professional at home seems unavoidable in the of default family. A follow-distance education will be necessary necessary to know the impact of such intervention in elderly

**PB6 170 EVALUATION OF CAROTID PLAQUE IN THE ELDERLY USING NEWLY-DEVELOPED THREE-DIMENSIONAL ULTRASONOGRAPHY**  
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Background and Purpose: Severe carotid artery stenosis (CS), seen frequently in the elderly, is an important cause of ischemic stroke. When CS is detected, morphological evaluation of carotid plaque is valuable for preventing vascular events. Therefore, we studied carotid plaque morphology using newly-developed three-dimensional ultrasonography(3D-US) to evaluate the usefulness of this method in comparison with MRI, angiographical, and histopathological findings. Methods: Twelve consecutive elderly patients with CS (aged, 73.7±6 years), who were scheduled to undergo carotid artery endarterectomy (CEA) or carotid artery stenting (CAS), were studied using 3D-US Volson 730 Expert, 3D4D probe, BB-MRI(black-blood method:1.5-T whole-body MRI unit), and digital subtraction angiography before revascularization. Results: The texture of each slice of tomographic ultrasound imaging of 3D-US was compatible with that of BB-MRI and histopathological findings of CEA cases respectively; hypo echogenic area of 3D-US corresponded with both hyper intensity area of BB-MRI and histopathological finding (lipid core). In addition, 3D-US demonstrated the whole volume and surface structure of carotid plaque similar to findings depicted by DSA. Conclusion: 3D-US considered to be useful for evaluating easily and noninvasively real-time carotid plaque morphology in the elderly.

**PB6 171 HEART RATE AND PROGNOSIS AFTER MYOCARDIAL INFARCTION**  
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Introduction:Heart rate(HR) is a commonly used parameter in clinical medicine. A special attention is payed to HR from the begin of clinical use of betablockers,discovering of If channels and a knowledge of their usefulness in patients (pts) with coronary artery disease. Method: We studied two groups of pts. A: 492pts(average age 62.9 yrs), hospitalized with acute myocardial infarction(AMI).We evaluated the cardiovascular risk profile,drug history before the admission,physical finding at the time of admission,type of AMI,ECG and echocardiographic findings. B group consisted of 302 pts discharged from hospital after suffering an AMI. Average follow-up time was 10 years.Cardiovascular risk profile,ECG,spiroergometry,heart rate and derived parameters,e.g.Robinson index(RI)-marker of myocardial oxygen consumption(resting HRxresting systolic blood pressure)-were evaluated. Test of binomic division,Mann-Whitney test,Kolmogorov-Smirnov test and Student parametric and nonparametric tests were used for statistic evaluation. Results:In-hospital mortality was higher in diabetics in comparison with nondiabetic pts(29% vs 17%, p<0.001).History of hypertension and dyslipidaemia before admission to hospital was a marker of worse prognosis.HR was higher in pts with diabetes in comparison with nondiabetics(p<0.001),and in both groups in those pts who died(p<0.005). In the group B there was a worse longterm prognosis in pts with lower physical capacity(p<0.005). The difference in resting HR of survivors and deceased was on the border of significance(p=0.05), high RI at rest and low RI at the peak of exercise were predictor of worse prognosis (p<0.05). Conclusion:Higher resting heart rate and derived

parameters are predictors of worse in-hospital as well as longterm prognosis after myocardial infarction in elderly pts.

**PB6 172 THE RELATIONSHIPS OF ALBUMINURIA AND GLOMERULAR FILTRATION RATE IN JAPANESE OLDER PEOPLE**

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Introduction: Albuminuria is used to screen chronic kidney disease, but evidence of the clinical impact of this test on developing of age is lacking. We examined the association between albuminuria and glomerular filtration rate in older people. Methods and materials: We studied 308 outpatients, aged 55 to 95 years. Subjects were divided into 3 groups by age; 55-64 yr (group A; n=47, 60.1yr), 65-74 yr (group B; n=104, 70.0yr), 75 yr or older (group C; n=157, 81.0yr). Estimated glomerular filtration rate (eGFR) was calculated according to the modified equation 7 MDRD formula. We also divided subjects into two groups by eGFR; less than 60 mL/min per 1.73m<sup>2</sup> (low-eGFR group) and high-eGFR group. The multiple regression analysis was used to eGFR as dependent variable and AER, uric acid, ARB/ACE-I use, hemoglobin as independent variables. Results: The association between eGFR and urinary albumin/creatinine ratio (ACR) was seen only in group A. The frequency of ARB/ACE-I use was significantly higher in high-GFR group than in low-GFR group in group A and B. The eGFR, ACR, and uric acid were significantly lower in high-GFR group than low-GFR group in group A and B. In group C, uric acid was significantly lower and hemoglobin was significantly higher in high-GFR group. ACR was not significantly different between high-GFR and low-GFR group in group C. On multiple regression analysis, ACR was significant predictor of eGFR in group C (OR=0.76, 95%CI 0.02 to 0.13). Conclusion: The clinical impact of albuminuria for chronic kidney disease (CKD) is relatively weak in 75 years and older. However, albuminuria is a significant predictor for CKD in the elderly.

**PB6 173 THE RELATIONSHIP BETWEEN HOSPITALIZATION OF ELDERLY PATIENTS WITH CARDIOVASCULAR DISEASES AND THEIR THERAPEUTIC COMPLIANCE**

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65 years admitted≥Methods: A retrospective study of 922 patients aged for cardiovascular diseases (CVD) was conducted. We aimed to examine the causes of non-compliance and the contribution of non-compliance in hospital admission. Data on compliance was collected through a questionnaire on compliance, beliefs, knowledge, and self-care behavior and compared with information from past medical records or from family members. Results: The mean age of the study group was 74.5 years, M:F ratio was 42:58. 9% were living alone and 59% completed[65-91] high school. The average number of different drugs prescribed was 4.3 and the average number of pills taken daily was 5.8. Ninety patients (9.76%) were hospitalized for aggravation of their CVD disease due exclusively to non-compliance and 148 (16.05%) had other factors that led to non-compliance (e.g. nausea and vomiting, dizziness, negative stress). The non-compliant population (n = 90 patients) lived equally in urban and rural area. Most of them were 70 to 80 years old (48.89%), did not complete high school (72.22%) and had a very low income (< 350 RON). Most of these patients had ischemic heart disease (46.67%), hypertension (18.89%), arrhythmias (17.77%) and dilatative cardiomyopathy (16.67%). The main self reported causes of drug non-compliance were inadequate income (34.2%), inadequate instruction (17.7%), too many drugs (17.7%) and physical barriers (visual disturbances or arthritis) (11.11%). Conclusions: The results of our study suggest that better education about the role of dietary recommendations and about the necessity of respecting medical regimen should help in decreasing non-compliance all along with decreasing hospitalization and medical costs.

**PB6 174 EFFECTIVENESS OF A MANAGEMENT PROGRAM AFTER HOSPITAL DISCHARGE IN OLDER PATIENTS WITH HEART FAILURE**

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Introduction: Disease management programs after hospital discharge in high-risk heart failure (HF) patients can reduce readmissions and mortality rates. We aimed to assess the effectiveness of a management program after hospital discharge in older patients with HF. Methods and materials: Randomized controlled clinical trial. Preliminary data of the study involved 40 HF patients: 21 patients were allocated to receive an intervention consisting of a comprehensive hospital discharge planning and close follow-up at a day-hospital, and 19 patients to usual care. Results: After 12 months of follow-up, intervention group patients were less likely to present events (readmission or death) as compared with the control group (8 vs. 16 patients), which represents 46% event reduction (IC 95%: 1.9 - 39.4; p: 0.008), mainly through mortality reduction (IC 95%: 0.03-0.68; p: 0.02). At 1 year,

the probability of remaining free of events was significantly higher in the intervention as compared with the control group (log rank 9.25; p: 0.002). Conclusion: Compared with the usual care group, patients exposed to disease management program were less likely to experience an event.

**PB6 175 DEEP VEIN THROMBOSIS OF LOWER LIMBS IN THE ELDERLY: A TUNISIAN RETROSPECTIVE STUDY**

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Introduction: Deep vein thrombosis (DVT) of lower limbs is frequent in elderly. The purpose of this work is to study the etiological and therapeutic features of DVT in elderly. Methods and materials: A retrospective analysis of 54 patients ≥ 65 years hospitalized in an Internal Medicine Department from 2000 to 2008 for DVT of the lower limbs (group 1) and comparison of results with a control group of 59 patients <65 years with DVT (group 2). All the DVT have been documented by venous doppler ultrasonography. Results: In the group 1: - The average age was 73.8 years ± 5.75; the sex ratio was 0.58. - Risk factors for DVT were represented by: immobilization (35%), diabetes (30%), cancer (28%), obesity (24%), venous insufficiency (20%), recent surgery (13%), personal history of DVT (7%), hyperhomocysteinemia (5.5 %), heart failure (5.5%) and nephrotic syndrome (4%). - At least 3 risk factors have been found in 26% of patients. The comparison with the control group showed that only two risk factors were significantly more frequent in group 1: cancer (p = 0.01) and immobilization (p = 0.05). In group 1, the total number of risk factors was higher (p = 0.0001), the length of hospital stay was longer (p = 0.0006) and the average dose of vitamin K antagonists was lower (p = 0.04). Conclusion: These results are consistent with those of the literature. Older people have more risk factors for DVT. A preventive anticoagulation is indicated in case of immobilization, especially in the presence of other risk factors. It is also advised to actively search for an underlying cancer in presence of any DVT in the elderly.

**PB6 176 HEALTH AND LIFE QUALITY OF HYPERTENSIVE AND NORMOTENSIVE ELDERLY THAT LIVES IN A TROPICAL REGION (MANAUS-AM)**

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Introduction: hypertension is an important cardiovascular risk factor associated with gene-environmental interactions. For this reason in this study the association among life style, health and life quality variables were analyzed between hypertensive and normotensive elderly that lives in a Tropical region (Manaus-AM) were analyzed. Methods and materials: a case-control study was performed from subjects previously included in the project named "Projeto Idoso da Floresta" (n=1509) that investigated the health conditions of elderly inserted in the Estratégia de Saúde da Família (ESF-SUS) de Manaus-A. Data were obtained from structured interview, anthropometric, blood pressure and biochemical (lipid and glycemia) evaluations. Results: from 1509 elderly 894 (59.8%) were identified with hypertension (HAS) and (601) 40.2% as normotensives. Men elderly presented 57.7% (400) HAS prevalence whereas in women this prevalence were 61.6% (494). From hypertensive elderly 461 (87.0%) and 298 (81.9%) normotensives reported higher alcoholic beverage consumption. Hypertensive elderly (men and women) presented higher prevalence of coronary arterial disease (CAD) and stroke. Additionally, hypertensive women present higher obesity prevalence. In 119 (20%) of elderly that self-reported to be normotensive the blood pressure level was elevated (>140mmHg). In the elderly that self-reported to be hypertensive the no control blood pressure occurred in 241 (27.1%). Conclusion: the hypertension on elderly evaluated here was associated to cardiovascular morbidities similar to results observed in other urbanized Brazilian'regions and must to be ESF-SUS permanent focus of attention to minimize its morbidity effect.

**PB6 177 FEATURES OF ELDERLY DIABETIC PATIENTS IN A MEDIUM-STAY STROKE REHABILITATION PROGRAMME**

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Introduction: To estimate the prevalence of diabetes mellitus (DM) in elderly included in a stroke rehabilitation programme and the prevalence of vascular risk factors (VRF), complications and outcomes in DM patients. To compare the principal features between diabetic and non-diabetic patients. Methods and materials: Transversal study, inpatients older than 64 in a medium stay stroke unit, 2003-2007. Variables studied: VRF, ischemic stroke (IS), lacunar stroke, affected territory in IS; neurological status at admission (NIH scale), complications (respiratory, urinary, recurrent stroke, confusion, depression) and

outcomes (mortality, Barthel index at discharge Bid, corrected Heinemann index Hic, functional gain FG). Comparison of means: t-Student test; of proportions: z test. Results: Patients included: 252. Prevalence of DM: 37.7%. In DM patients: mean age 76.3 (DT 6.74), men 54.3%; mean of VRF 3.5 (DT 1.36); HTA 78.8%, obesity 36.2%, dyslipemia 35.1%, AF 24.5%, previous stroke 34%; IS 89.4%; lacunar 21.7%; carotid territory 71.3%; NIH 7.8 (DT 5.26); mean of complications 0.81 (DT 1.05), recurrent stroke 6.4%, respiratory infection 9.6%, urinary infection 17%, confusion 24.5%, depression 33%; mortality zero, Bid 51.2 (DT 28.1), Hic 45.1 (DT 31.5), FG 27.7 (DT 19.8). Differences between DM and non-DM: VRF (3.5 vs. 1.4, p 0.0000), IS (89.4 vs. 75.9, p 0.01) and carotid territory affected (71.3 vs. 93 p 0.0000). Conclusion: DM is a frequent VRF, associated often to other VRF. There are differences in type of stroke and affected territory. The presence of DM hasn't shown as a bad prognosis factor in included in our rehabilitation programme.

#### PB6 178 SELF PERCEPTION OF HEALTH OF THE OLDEST OLD

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The main aim of the Study is evaluation of basic health, functional and social status of the elderly patients (N=645) admitted in Institute of Gerontology, Home Treatment and Care (IGHTC )Belgrade. Particular attention have been paid to health and social status of the "oldest old" (90+age) patients in comparing to the group of the "young old" (60-74age). The data presented in the paper has been collected by a questionnaire administered to Institute's patient's age 60 and more at their admission. The questionnaire is a modified version of the constructed by WHO . Analysis of data on self perception of health between the "oldest old" patients and "young old" has given us interesting results which generally show that "oldest old" have better self perception of health compared to the "young old". Namely, there is statistically significant difference between the two groups concerning the answers to the question "Do you feel pretty healthy now?" Percentage representing positive answer was higher in the study population of "oldest old", 90+age (SP-32.4%), than in the control group of "young old" persons of 60-74 years (CG-14.1%). There is also statistically high significant difference ( $p<0.001$ ) between the observed groups in relation to the question "How do you estimate your present health?". In the study population, i.e. in the group of "oldest old" it is significantly larger percentage of the questioned who estimated their health as average or pretty well (SP-54.1%), in relation to the control group of "young old" (CG-19.4%). At the same time there is statically higher percentage of "young old" who estimate their health as bad (CG-58.8%) than "oldest old" (SP-16.2%). Generally, the interviewed patients of 60-74 claim to have more complaints.

#### PB6 179 ADIPOSE ENDOCRINE FUNCTION, INSULIN-LIKE GROWTH FACTOR-1 AXIS, THYROID FUNCTION, AND EXCEPTIONAL SURVIVAL BEYOND 100 YEARS OF AGE

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**Introduction:** Observational studies have demonstrated similarities between the underpinning of frailty and biological features of centenarians, suggesting that adaptability to age-related multiple physiological decline may be a core component of successful aging. The aim of this study is to determine whether hormonal pathways potentially involved in energy homeostasis contributes to survival beyond 100 years of age. **Methods:** We assessed a total of 252 centenarians (range 100-108 years) using a complete set of biomarkers of adipose endocrine function, the insulin-like growth factor-1 (IGF-1) axis, and thyroid function. Conventional risk factors at baseline were also assessed. The subjects were followed up for all-cause mortality every 12 months by telephone contact. **Results:** During 2253 days of follow-up, 208 centenarians (82.5%) died. The lowest tertile of leptin and the highest tertile of tumor necrosis factor-alpha were associated with higher mortality risk among centenarians after adjusting for age (per 6 months increase), sex, education, smoking, activities of daily living (ADL), cognitive function, and comorbidities [the hazard ratio (HR), 1.6, 95% confidence interval (CI), 1.14-2.35; and HR 1.45, 95% CI, 1.00-2.08, respectively]. The lowest tertiles of both IGF-1 and IGF binding protein 3 (IGFBP3) were also associated with increased mortality. In contrast, thyroid function was not associated with mortality in centenarians. The adipose risk score, indicating cumulative effects of adipokine dysregulation, was strongly associated with increased mortality risk; ADL; cognitive function; and levels of albumin, cholinesterase, high-density lipoprotein-cholesterol, C-reactive protein, interleukin 6, and IGF-1 at baseline. **Conclusions:** The results suggested that preservation of adipose endocrine function and the IGF-1 axis may

be potentially important for maintaining health and function and promoting survival at an extremely old age.

#### PB6 180 SUCCESSFUL AGING AND RED WINE CONSUMPTION IN HEALTHY CENTENARIANS

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**Introduction.** Free radical damage is important in cell and whole organism senescence. The antioxidant activity of phenolic substances of red wine can protect against that damage. Successful Aging may be achieved by applying the guidelines against the disorders and diseases of the late age and by adopting a diet rich of antioxidant substances. Subjects and Methods. We studied serum total antioxidant capacity (TAC) in 26 healthy centenarians of both genders (9 men, 17 women) who had been moderate red wine consumers (< 500 ml/day of Chianti). All were cognitively intact and could give written informed consent to participate in the study. Their dietary habits including alcoholic beverage consumption were recorded and classified, into three groups: (i) Group A: moderate drinkers with dietary habits unchanged, (n = 3 males, 10 females); (ii) Group B: : moderate drinkers with reduced diet (n = 3 males, 4 females); and (iii) Group C: abstainers with reduced diet (n = 3 males, 3 females). Results. TAC was reduced in mol/l) and abstainers<sup>centenarians</sup>, both moderate drinkers (302.4±32.3 (142.0±24.1&micromol/l) in comparison to control subjects (439±127 &micromol/l). The "in vivo" studies in humans show the positive effect of red wine assumption on serum TAC, attributed to polyphenols. Conclusion. Concerning long-term red wine consumption in centenarians, we can conclude that the reduced antioxidant capacity present in centenarian moderate drinkers, and also in abstainers, can be explained by several metabolic deficiencies occurring in centenarians. Furthermore, the antioxidant substances may have had a protective role on some functions essential to prolonged survival but also genetic factors may have accounted for successful aging.

#### PB6 181 HOSPITAL ADMISSION IN CENTENARIANS: CHARACTERISTICS AND OUTCOMES

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**Introduction:** Despite the rapidly increasing numbers of centenarians little is known about characteristics and outcomes of those requiring hospital admission. **Methods:** A longitudinal study in centenarians consecutively admitted to our hospital from January 06 to December 08 was performed. We analysed reason for hospitalization, socio-demographic characteristics, Barthel Index (I) 15 days before admission, APACHEII, Charlson I, length of stay, survival and discharge destination. Vital status was assessed at 6 and 18 months from records and/or telephone contact. Two patients were lost to follow up. **Results:** Thirty patients were included (mean age 101.9±1.8; 86.7% female). Barthel I was 20.7±23.3, 70% of patients were community-dwelling and 4 lived alone. Reasons for admission were respiratory infection (12 patients), other infections(4), hip fracture(6) and heart failure(3). At admission: APACHEII was 12.6±4.5 and CharlsonI was 1.2±1. The most prevalent comorbidities were dementia(8) and heart disease(8). In-hospital mortality was 36.7%(11) and 57.9% of survivors(11) were institutionalised. Length of stay was 11.4±10 days. There were three survivors at 6 months and 1 at 18 months follow-up. Mortality was 64.3%(18) at 6 months and 85.7%(24) at 18 months. Age at death was 102.4±2 and occurred mainly in autumn and winter(75%). Deaths occurred 97.3±146.8 days after discharge and 2 groups were identified: A)death within 65 days(16 patients) and B)>=130 days (8 patients). Patients with worst outcomes were institutionalised and had lower albumin levels ( $p<0.03$ ). No other significant differences were seen. **CONCLUSION:** Although the reason for admission was treatable acute diseases, hospitalization was a terminal event for over half the group, particularly in institutionalised and malnourished centenarians.

#### PB6 182 OCULAR FINDINGS IN PATIENTS FROM 80 TO 108 YEARS OLD

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**Purpose:** Determine vision conditions and ocular findings in patients older than 80 years of age. **Methods:** 150 patients, divided in three groups: 70 between 80 and 89 years (Group 1); 50 between 90 and 99 years (Group 2) and 30 over 100 years old (Group 3) were

submitted to an ophthalmological exam. Results: The gender ratio was 61.4% females in Group 1, 70% in Group 2 and 83.3% in Group 3. Arterial hypertension was the most common systemic disease in all three groups. Cataract surgery had been performed in 23% in Group 1, 54% in Group 2 and 46.67% in Group 3. The initial Best Corrected Far Visual Acuity (BCFVA) was 20/40 or better at least in one eye in 47% patients from Group 1, 20% in Group 2 and none in Group 3. After refraction changed to: 64% in Group 1, 30% in Group 2 and none in Group 3. The percentage of blind patients considering the BCFVA (< 20/400) was: 5.8% in Group 1, 8% in Group 2 and 23.3% in Group 3. The initial Best Corrected Near Visual Acuity (BCNVA) was 20/40 or better at least in one eye in 75% of Group 1, 58% of Group 2 and 26.7% from Group 3. After refraction it changed to 76% (114): 88.6% Group 1, 72% Group 2 and 53.4% Group 3. Age related macular degeneration was found in 31% in Group 1, 66% in Group 2 and in 100% in group 3. Conclusions: Visual acuity improved with refraction allowing better quality of life. AMD and cataract were the main cause of visual impairment and blindness. Current findings indicate that we should concentrate efforts in accurate refractive prescriptions, cataract and AMD for patients that age.

#### **PB6 183 PREDISPOSING FACTORS ASSOCIATED WITH DELIRIUM AMONG DEMENTED LONG-TERM CARE RESIDENTS**

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Introduction: Delirium is a common and serious problem in long-term care settings. Identification of risk factors for delirium is important because it enables health care professionals to quickly recognize individuals at risk for delirium and implement preventive interventions to avoid its development. The purpose of this study was to investigate the predisposing factors for delirium among demented long-term care residents and to assess the cumulative effect of these factors on the likelihood of having delirium. Method and materials: One hundred and fifty five long-term care residents aged 65 and older with a diagnosis of dementia participated in this cross sectional study. Logistic regression analyses were performed to assess the association between the 21 predisposing factors considered and the presence of delirium. Delirium was defined as meeting the Confusion Assessment Method criteria for either definite or probable delirium. A risk score was also computed as the number of risk factors for which an individual was considered at risk and a logistic regression model was fitted using the risk score as the independent variable. Results: The prevalence of delirium in this sample was 70.3%. Age (OR: 1.07; 95% CI: 1.05-1.10) and severity of dementia (OR: 1.05; 95% CI: 1.03-1.07) were found to be the most important risk factors of delirium among those individuals. The likelihood to be in delirium increased with the number of risk factors present (OR: 1.67; 95% CI: 1.11-2.51). Modifiable risk factors identified were: level of functional autonomy, pain, depression, behavioural disturbances, number of medications, dehydration, fever and malnutrition. Conclusion: Our results suggest that in addition to advanced age and severity of dementia, delirium is associated with other modifiable risk factors.

#### **PB6 184 SUICIDE IN OLD AGE: ILLNESS OR AUTONOMOUS DECISION OF THE WILL?**

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Depression, often accompanied by suicidal behavior or recurring thoughts about suicide, is one of the most common psychic impairments in old age. Statistics in Austria tell us clearly: Suicidal candidates among the elderly are likely to succeed. Especially in men, suicide has become a significant cause of death. In an age where traditional family structures are beginning to fall apart, and where the elderly increasingly feel to be a "burden" to society, unable to find their place, we tend to look at suicide more and more as a voluntary and autonomous decision, thus rationalizing it as in: "This life I would not want to live either." But is it permissible for physicians to consider a patient, who has acted suicidal, to be "not ill," or to have acted "with good reason"? My discussion shall critically revisit the concept of "rational suicide." What I hope to illuminate is the tension between medical care for, and autonomy of the patient that physicians have to negotiate in their work.

#### **PB6 185 DELIRIUM IN ELDERLY: PREVALENCE IN HOSPITALIZED PATIENTS AT THE ORTHOPEDICS INFIRMARY**

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Introduction: delirium, despite being under-diagnosed, is a frequent condition in hospitalized elderly patients and it is also a marker of worse diagnosis during hospitalization and after discharge. Casuistry and Method: All patients who were 60 years old or older than 60 hospitalized at the orthopedics infirmary from Goiania Urgencies Hospital, Brazil, from February 2006 to March 2008 were analyzed. Information about number of hospitalized elderly patients, gender, age, presence or not of delirium was investigated. Then it was verified the presence of the following risk factors in patients who had delirium: age equal or over 70, ethilism history, polypharmacy, infections,

cardiopathies, presence of fluid and electrolyte disorders, histamine-2 receptor antagonists, use and presence of auditive and visual deficiency. Results: From an amount of 89 patients, 10 presented delirium (11.24%). Risk factors more frequent among patients were: age over 70 (80%) and presence of infection (80%). Other factors analyzed were: presence of fluid and electrolyte disorders (40%), presence of visual deficiency (40%), use of histamine-2 receptor antagonists (40%), auditive deficiency (30%), presence of cardiopathies (30%), polypharmacy (20%) and ethilism (10%). Discussion and Conclusion: Delirium prevalence in hospitalized elderly at the orthopedics infirmary from February 2006 to March 2008 was of 11.4%, not differing from the literature. All risk factors investigated can be related to delirium development, what have also been repeatedly showed in several papers. It is interesting that besides age over 70 and infection, there was a great prevalence of histamine-2 receptor antagonists use (40%). Association between histamine-2 receptor antagonists and delirium is probably due to its anticholinergic properties. Delirium increases the hospitalized patient mobimortality and knowing how to identify it and its risk factors is a decisive condition for good clinical evolution of hospitalized elderly.

#### **PB6 186 GERONTOTHERAPY IN WORKING AGING MALES AND FEMALES**

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J. ZALKALNS, Z. ROJA

Introduction. In Latvia nowadays in geriatric medicine is watching rapid growth number of working aging males and females suffering from age related psychological vulnerability with reduced capacity of the organism to withstand stress. Ageing working individuals in good general medical health are vulnerable to such types of stressors as psychotraumatic events at workplace and family life and suffer from anxiety, depressing mood, panic disorder. The management of the working aging males and females nowadays requires a comprehensive biopsychosocial approach: psychopharmacological treatment and psychotherapy - cognitive hypnotherapy (CH). Material and Methods. During last two years 38 patients were treated and observed: 20 working males and 18 females aged between 62 and 74 having anxiety and panic attacks, avoidant behaviour after psychotraumatic events at workplace and family life. Hamilton Anxiety Scale (HAM-A) and stress monitoring (SM) were used to asses the expression of anxiety and stress level. For 22 patients, males and females (A group) eight weeks treatment course included psychopharmacological treatment - selective serotonin reuptake inhibitor (SSRI) Paroxetine, combined with CH sessions and couple therapy - from the first therapy course day. 16 patients, males and females, representing control group (B group) received eight weeks only psychopharmacological treatment. Results. 19 patients from A group developed a positive feeling without depressing mood, anxiety and panic symptoms already after 4 weeks of combined treatment course. Catamnesis data show that all A group's patients after eight weeks treatment course use regularly self-relaxation. Only 5 patients of control group after therapy course had improvement of psychoemotional health. Conclusion. Psychopharmacological treatment, combined with cognitive hypnotherapy and couple therapy from the first therapy course day, is an effective modern short-term gerontotherapy for working aging males and females suffering from depressing mood , anxiety and panic attacks after psychotraumatic events at workplace and family life.

#### **PB6 187 REGENERATE: ASSESSING THE PHYSICAL AND MENTAL HEALTH OF CHRONIC STROKE SURVIVORS WITH DEPRESSION**

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Introduction: The rehabilitation of stroke survivors has traditionally focused on improving their functional health. However, without holistic management, survivors' overall health and wellbeing may be disadvantaged, limiting their social participation and impacting on future prognosis. The Regenerate study aimed to assess whether a 10 week progressive resistance training program (PRT) could reduce depressive symptoms in chronic stroke survivors with depression. An associated prospective study aimed to identify psychosocial predictors of health-related quality of life (HRQoL) in chronic stroke survivors, to examine differences between non-depressed and depressed participants, and explore changes over time for HRQoL and psychosocial variables. Methods: Participants with depression (45) were randomised to PRT or wait-list control group. One hundred and thirty five entered the observational study. HRQoL, depressive status, social support, optimism, self-esteem, and perceived control data were measured at baseline, 10 weeks and 6 months. Stroke severity, stroke type, comorbidity, exercise status, and demographic information were also obtained. Results: Twice as many PRT participants maintained a reduction in depressive symptoms at 6 month follow up, but the difference was not significant after adjusting for baseline scores. There were also modest improvements in physical health and recovery scores. In the observational study, psychosocial factors consistently and significantly predicted HRQoL at all time points, accounting for 27% to 61% of the variance. Key determinants of HRQoL were depressive status, self-esteem, and perceived control. Compared to non-depressed participants, depressed participants displayed significantly poorer scores for HRQoL, social support, optimism, self-esteem, perceived control, physical and emotional functioning. Participants' physical health, social participation, depressive status, and

optimism improved over the 6 month study period. Conclusions: To optimize stroke recovery, health professionals should target post-stroke depression and psychosocial adjustment to stroke: these interventions have the potential to improve HRQoL for chronic stroke survivors.

**PB6 188** HEALTH, ECONOMIC STRESS AND LIFE SATISFACTION AFFECTING DEPRESSION TENDENCY OF ELDERLY TAIWANESE:A LONGITUDINAL STUDY  
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Introduction The aging people have to face impacts from declining physical functions, worsening economic status and dimming prospect about life. This study aimed to explore whether the perceived health decline, economic stress and life satisfaction affect the changes of depression tendency Methods and materials We used the nation-wide longitudinal survey (the Survey of Health and Living Status of the Elderly in Taiwan) data in 1999 and 2003. A total of 2,373 subjects aged 65 or more who had completed the depression scale (CES-D10) both in 1999 and 2003 were the study subjects. Depression was dependent variable. Demography and changes in residency, occurrence of new diseases, social supports, perceived health and economic stresses, life satisfaction, ADL and IADL were the independent variables. Logistic regressions were used to analyze the affecting factors of depression in 2003 and the changes of the depression tendency from 1999 to 2003. Results There were 151(6.4%) subjects in 1999 and 191(8.05%) subjects in 2003 had depression. Among 151 subjects, 4.2% became better but 5.9% became worse. The factors affecting depression were age reached to 75-79, lower education level, increased perceived health and economic stresses, decreased emotional support, less life satisfaction, increased disability of IADL and had depression in 1999. The above factors also accounted for those who were getting worse from 1999 to 2003. However, the significant factors affecting subjects of depression in 1999 but not in 2003 were female, or married with living spouse, decreased health and economic stresses and increased emotional supports. Conclusion Our findings showed that the psychosocial care, in terms of the perception of aging and their psychological needs, is more important issues to be concerned. Mental health intervention and promotion will be the most important strategy for better elderly healthcare.

**PB6 189** LONELINESS, DEPRESSIVE SYMPTOMS AND RELATION TO DISABILITY RETIREMENT DUE TO DEPRESSION IN LATER LIFE  
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Introduction: Loneliness is a risk factor for depression. It is unknown if there is a common genetic component between loneliness and depressive symptoms. In the genetically controlled data, we explored the association between loneliness and depressive symptoms and how this association is related to depression related disability retirement. Material and methods: Among 12 504 respondents, aged 33 to 60 years, who participated in the Finnish Twin Cohort Study in years 1981 and 1990 there were 232 monozygotic (MZ) and 569 dizygotic (DZ) pairs discordant for depressiveness based on the Beck Depression Index. Information on retirement events due to depression was obtained from Finnish nationwide official pension registers for 9094 individuals. We assessed association between loneliness and depressiveness using generalized linear mixed models for binary matched pairs. The share of common phenotype variable-specific genetic effects was estimated by using quantitative trait modeling. Relative risk survival regression model using the Cox proportional hazard model was used to assess the association of depressive symptoms and loneliness with the time to disability pension. Twin pairs were treated as clustered observations to adjust for twin dependence. Results: MZ and DZ twins discordant with depressiveness had OR 4.89 and 5.99, respectively, for being lonely, suggesting that genetic influences do not contribute to relation between depressiveness and loneliness, which was supported by results from heritability models. Univariate models indicated significant genetic contribution to depressiveness, but no such contribution to loneliness. People having both depressive symptoms and loneliness had three times higher risk for depression-related disability retirement. Conclusion: Loneliness and depressiveness correlate highly independent of genetic and shared environmental factors. Loneliness further increases risk for disability retirement for those having depressive symptoms.

**PB6 190** COSTS AND YIELD OF 2 SCREENING METHODS FOR DEPRESSIVE SYMPTOMS IN PEOPLE ? 75 YEARS OF AGE IN GENERAL PRACTICE  
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Objective To examine costs and yield of two screening methods for clinically relevant depressive symptoms in subjects 75-79 years compared to subjects ≥80 years in general practice. Methods In 73 general practices 10,681 subjects ≥75 years, not currently treated

for depression, were invited for screening using the 15-item Geriatric Depression Scale (GDS-15). In direct screening subjects were invited by response card (+ reminder by telephone) followed by a home visit. In stepped screening subjects received the GDS by post (+ postal reminder) and visited only if the self-administered GDS-score was ≥4 points. During home visits the GDS was administered by an interviewer and considered as 'screen-positive' if the score was ≥5 points. Results Among subjects 75-79 years participation rates were 54% for both screening modes ( $p=0.57$ ), whereas direct screening yielded 6% screen-positives among participants and stepped screening 4% ( $p=0.04$ ). Among subjects ≥80 years 54% participated in direct screening and 46% in stepped screening ( $p<0.001$ ), yielding 6% and 5% screen-positives respectively ( $p=0.26$ ). Per GP practice with 160 elderly ≥75 years estimated costs for direct and stepped screening are €13 and €7 respectively per screened subject, €500 and €341 respectively per screen-positive subject. The more expensive direct screening has a somewhat higher yield; each additional screen-positive subject costs €819. Conclusion With both direct and stepped screening about 1 in 20 untreated elderly of ≥75 years in general practice was found screen-positive for clinically relevant depressive symptoms. Stepped screening diminishes screening costs per screen positive with 32%. Among subjects 75-79 years participation was equal for both methods, but the yield with direct screening was somewhat higher. Among subjects ≥80 years participation is higher with direct screening, however not resulting in a higher yield.

**PB6 191** GENERAL HEALTH STATUS AND VASCULAR DISORDERS AS CORRELATES OF LATE-LIFE DEPRESSION IN A NATIONAL SURVEY SAMPLE  
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Introduction Clinically significant depression is common in later life and associated with substantial distress, disability and is increased in people with worse physical health. However, it has been suggested that people with existing cerebrovascular disease or higher levels of vascular risk may have a greater than expected risk of depression. This suggests that there should be a stronger than expected co-occurrence of depressive symptoms and vascular risk factors in older populations which has important implications for the prevention of late-life depression. However, community surveys of older populations have frequently found no clear associations between depression and conventional cardiovascular risk factors, despite strong associations with reported previous stroke. We sought to investigate the associations of depressive symptoms with cardiovascular disorders and risk factors: in particular, the extent to which these were independent of general health status and/or accounted for the association between general health status and depression. Methods A secondary analysis of data from the Health Survey for England 2005: a nationally representative cross-sectional population survey comprising 4269 adults aged ≥65 living in private households. Measurements: Data collected included depressive symptoms (10-item Geriatric Depression Scale), self-reported general health and vascular disease / risk factors, resting blood pressure and lipid profile. Results: Case level depressive symptoms were associated with reported previous stroke, ischemic heart disease and diabetes. These associations were attenuated substantially when adjusted for general health status. On the other hand, the association between worse subjective health and depressive symptoms was not altered following adjustment for vascular disease / risk status. Conclusion: Depressive symptoms in this large national sample were more independently associated with worse general health than with cardiovascular disorders. They were not associated convincingly with vascular risk factors.

**PB6 192** FISH INTAKE AND THE RISK OF DEPRESSION IN THE ELDERLY. THE NUAGE STUDY OF NUTRITION AS A DETERMINANT OF SUCCESSFUL AGING.  
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Introduction: Conflicting results exist regarding a potentially protective association between fish intake and risk of depression. None of the studies, including only two prospective designs, have examined polychlorinated biphenyls (PCBs) contaminating fish as possible confounders. Objectives: 1) Describe the cross-sectional relationship between depression and usual fish intake; 2) Assess the effect of fish intake on depression incidence over two years; 3) Examine the potential of PCBs exposition to modulate this relationship. Methods: Secondary analyses of generally healthy community-dwelling elderly people from 6 equally distributed age/sex strata ( $70\pm2$ ;  $75\pm2$ ;  $80\pm2$ ) recruited in 2003 into the NuAge cohort for a 5-y longitudinal study on nutrition and aging. Those with complete nutritional data at baseline ( $n=1778$ ; 99.2%) were included. Fish intake was measured using three non-consecutive 24h dietary recalls at baseline. Affective symptoms were assessed at baseline, 1st and 2nd yr of follow-up using a cut-off score >10/30 on the Geriatric Depression Scale. PCBs exposition was assessed by matching consumption of fish with estimations of PCBs concentrations in fish according to the most recent Total Diet Study of Health Canada. Regression analyses for survey sample design with stratification were carried out. Results: At baseline, prevalence of depression was 10.3%,

and incidence was 4.4% at 1st yr of follow-up and 5.2% at 2nd yr. Cumulative two year incidence was 9.4 %. Prevalence of depression at baseline (12.5 % vs 7.8 %; p = 0.001) and two years cumulative incidence (11.3 % vs 7.3 %; p = 0.014) were higher in women than in men. Relationships between fish intake, and prevalence and incidence of depression will be presented while controlling for PCBs exposition. Supported by Canadian Institutes of Health Research

**PB6 193 THE WILL TO LIVE AS AN INDICATOR OF WELLBEING AND PREDICTOR OF SURVIVAL IN OLD AGE**  
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Introduction Conceptually, the will to live (WTL) is defined as the psychological expression of a natural instinct of human beings - the striving for life, which is comprised of rational and irrational components, and can be self-assessed. Considering that the WTL not only expresses a state of general wellbeing, but also one's commitment to life and desire to continue living, we hypothesized that it is a unique indicator of elderly persons' wellbeing and predictor of survival. Methods & Materials These hypotheses were put to test in four randomized studies conducted on Israeli elders: Two cross-sectional studies conducted between the years 2006-2008 (N= 1255, N=860), and three longitudinal studies conducted between the years 1994-1996, 2006-2008, one of them a large scale national study (N=1134). Results The findings from these studies systematically show that the will to live significantly correlates with well established indicators of wellbeing. It weakens with age, being weakest among the oldest-old. Furthermore, relatively weak social groups in the population, such as women and new immigrants, report a weaker WTL in comparison to their counterparts. The WTL was also found as a good predictor of long-term survival (7.5 years), especially among elderly women after controlling for age, health and psychosocial variables. Conclusions Based on the systematically repeated findings, we conclude that the will to live is an important indicator of general wellbeing due to its diagnostic and prognostic values. In addition, the tool to measure the WTL is short and simple, and well accepted by elderly persons. We, therefore, recommend using it in daily practice.

**PB6 194 THE NEW ISRAELI LAW "THE DYING PATIENT" AND RELIEF OF SUFFERING UNITS**  
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The new Israeli Law "The Dying Patient" provides avenues for possible medical, ethical and Halachic (Jewish religious law) solutions in view of the complexity of the treatment of an end-stage dementia (ESD) patient. The establishment of a hospice-like setting for dementia patients in Israel, based on palliative treatment only, similar to the Jewish hospices in the United States of America, is extremely important. This paper proposes a new, alternative approach and setting for patients with ESD that could pertain to the Israeli setting and could possibly also be acceptable in other countries. Key points: 1. Screening the suffering level of dying patients by means of the Mini Suffering State Examination (MSSE) scale developed by us for revealing which patients have a high level of suffering (MSSE = 7-10) 2 Patients with a high level of suffering (MSSE = 7-10) should be hospitalized in "Relief of Suffering Units" 3. Period of hospitalization in such a unit is estimated to be 1 month 4. Patients whose suffering level diminishes during hospitalization in these units could be discharged 5. The desirable approach to dying patients in "Relief of Suffering Units" will be to seek solutions for diminishing the high suffering level of the patients Treatment in the Relief of Suffering Units would be in accordance with the principles determined in the New Israeli Law. These units would be the source for integral medical, nursing, religious, ethical, psychological and sociological research, seeking methods to cope with the horrendous burden of suffering of dying patients, their families and the nursing staff. Our proposal was published in book – Measurement of Suffering in end-stage Alzheimer's Disease, Dyonon, Tel-Aviv, 2007.

**PB6 195 EXPERIENCES OF OLDER PEOPLE IN RESIDENTIAL CARE HOMES (THE EPOCH STUDY): MAPPING THE LIVING DYING TRANSITION.**  
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Background Many older people aged over 85 years live in a care home. Dying is part of care home life and an important aspect of the overall quality of care provided. Recent initiatives in England seek to improve access to palliative care services, and the quality of care for residents towards the end of life. How individuals experience and engage with this living and dying transition in a care home over time, has received little attention. Methods This prospective study documents the experiences, care received and services used by older people living in seven residential care homes in the East of England, over a one year period. Multiple methods of data collection used include care note reviews (n=200), interviews with

older people (n=70), care home staff (n=35) and NHS primary care staff (n=14), and documentary review. The purposively selected sample of older people will be interviewed three times during the year. To date 4 care homes have been visited and 44 older people, and 19 staff have been interviewed. It is 87 residents have consented to a review of their care notes in the home. Findings Present within older people's experiences and views of living in a care home are accounts of losses and to a lesser extent dying. Inherent in these accounts are seemingly contradictory threads of satisfaction and dissatisfaction with care. This mirrors the acceptance and denial of dying also presented by the same residents. Even residents with dementia were able to recount their experiences of living and loss in this setting. Conclusions Understanding the details of older people's experiences of living in a care home informs understandings of the dying faced by these people.

**PB6 196 END OF LIFE CARE FOR AGING VETERANS IN RESIDENTIAL CARE**  
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Introduction: Many people who live in residential care facilities die in these same facilities. While excellent practice models to guide the provision of end of life care exist (e.g., the Canadian Hospice and Palliative Care Association "Square of Care" model), it is a concern that there is limited research on how to implement recommended practices within distinct service environments or for population subgroups. Aging war veterans are one such subgroup. Methods: Focus groups were conducted with family members (spouses and daughters) of older men who lived and/or had died in a residential care facility for Canadian war veterans. Two data-generating sessions were facilitated by clinician volunteers who received training in qualitative interviewing. The sessions were audiotaped and transcribed, then analyzed thematically by the authors (a geropsychologist working in veterans care (MG), thanatology academic with nursing and social work background (EG), and a palliative care social worker (AF)). A member-checking session confirmed identified themes. Results: Recurrent themes included ambivalence about the institutionalization of a loved one, including where they should be when they die, relationship challenges including changing family and spousal dynamics and expectations of health care providers, comfort and dignity issues especially positioning the dying process within a larger framework of overall quality of care, tension between needs for privacy and community, and military service as a defining event for the veterans. Conclusions: The findings confirmed much that is consistent with the literature and clinical practice recommendations but also revealed nuances that reflect the distinct characteristics of the care environment, including gender (male residents, female family members and predominantly female health care providers) and cohort (veteran) issues. The findings support the importance of seeking stakeholder input and making adaptations to fit the local context when implementing clinical practice guidelines.

**PB6 197 WHEN DOCTORS AND DAUGHTERS DISAGREE: "YOU DON'T KNOW MY MOM; I KNOW MY MOM."**  
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When an elderly patient becomes acutely ill near the end of life, three features are commonly present: prognosis is poor but uncertain, treatments that might prolong life are burdensome, and the patient has become incapacitated. A choice between two general strategies is then forced. One strategy focuses on comfort and dignity with a higher likelihood of death. The other accepts burdensome treatment with the hope of meaningful benefit. Devoted and well-intentioned family members are often in attendance as this forced choice is considered by and on behalf of acutely ill patients whose decisional capacity is uncertain. The "Standard Paradigm" of American medical ethics generally considers advance directives to be direct expressions of an incapacitated individual's preferences, and thus morally preferable to decisions made by family. Family decision-making is generally inferential, and may be influenced by family members' preferences. We describe a case where two daughters overruled a patient's carefully constructed advance directives, leading to a hectic, burdensome illness. In the end, the mother understood her children's needs and was willing, at least in retrospect, to have met those needs. Advance directives depend on the idea that an individual has well-formed and immutable preferences that are specifiable in advance. This may be inaccurate. In many families, vital decisions are made in "council". For some patients, benefiting the family may be a compelling consideration, and the best way to benefit a family during future illness may not be known when a patient completes an advance directive. We offer suggestions for working through disagreements with well loved family members, acknowledging that their interests may be highly relevant to an accurate presumption about the patient's wishes

**PB6 198 HOSPICE IN 21ST CENTURY AMERICA: PASSION AND BUSINESS IN THE END OF LIFE CARE**  
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Advances in health science and medical technology made end of life care in developed countries a rather expensive endeavor, often resulting in futile care. Very pragmatic

approach, taken by Medicare in the US to curb rising cost, resulted in mushrooming of hospice agencies. However, they did not always achieve financial goal, especially in case of elderly patients with diagnosis other than terminal cancer. This paper assesses financial viability and quality of care in a for-profit business model of a small hospice agency in Southern California. Majority of the patients had end stage dementia and a variety of terminal cardio-pulmonary conditions with or without adult failure to thrive. We concluded that, although on the surface, desire for higher profit, and quality of patient care are mutually exclusive, in a competitive environment of medical industry they complement each other in more than one way. (1) Desire to eliminate inpatient care with high overhead, favored care in the patients home. (2) Competing ancillary providers (pharmacies, equipment suppliers, etc.) delivered higher quality of services to the patients. (3) Seemingly wasteful mandated multidisciplinary approach, involving physicians, nurses, social workers, etc., greatly increased productivity. (4) High patient and family satisfaction assured "word of mouth" referrals, expanding patients' base. (5) Drive for aggressive enrollment in the program was controlled by adherence to strictly defined evidence based qualifying criteria. Business oriented model of hospice is capable of delivering end of life care which is focused on the patient and family and provide the best emotional and physical comfort at the time when they are mostly needed. The same model should achieve maximum cost savings for the insurance through adherence to well established criteria for enrollment.

#### **PB6 199 END-OF-LIFE COSTS AND HEALTH STATUS IN COMMUNITY LIVING ELDERLY**

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Heavy utilization of health services is concentrated in the frailest segment of the population and those nearing the end of their life. Numerous studies have looked at chronic diseases, disability and their association with service utilization. Yet, relatively few looked of the associations between health status and end-of-life costs. Our objective is to study the relationship between health status and service utilization among decedent and surviving community-living elderly presenting with complex care needs. Methods. Data for this study is the randomized controlled trial of SIPA, a system of integrated care for frail older people (Montréal, Canada; 1999-2001). Health status was measured during home-based interviews using standardized instruments. Service utilization data measured over 22 consecutive months originate from administrative databases and patient charts. We used two-part econometric models to compare average daily costs of institution- and community-based services for decedents (n=242) and surviving (n=931) elderly, which we grouped into four homogenous categories of health status using latent class analysis. Results. Survivors' and decedents' costs of care trends according to health status go in opposite directions. Severely disabled survivors cost significantly more compared to their relatively healthy counterparts. In contrast, the highest end-of-life costs, driven by acute hospitalizations, belong to the relatively healthy, independent of age. Among survivors and among decedents, the oldest old (85+) cost significantly less compared to younger age groups. Combined, these results support the notion of a compression of costs due to morbidity in the oldest decedents. Conclusions. This is the first description of the relationship between health status and end-of-life care in frail community-living elderly. The implication of our findings for public policy is that the dual concern of health status and end-of-life practices is amenable to evidenced-based interventions.

#### **PB6 200 LIVING WITH ADVANCED CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): PATIENTS CONCERN REGARDING DEATH AND DYING.**

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Introduction: A palliative care approach, as used routinely in cancer, is also valid for other life ending conditions such as chronic obstructive pulmonary disease. Prognosis in COPD is poor and many patients perceive shortcomings in the education they receive about aspects of their condition. This study explores the experiences of patients with moderate and severe COPD, particularly with regard to fears surrounding death and dying. Method: Semi-structured interviews were conducted with 21 patients with moderate ( $FEV1 < 50\%$ ) or severe ( $FEV1 < 30\%$ ) COPD. Interviews were transcribed and analysed using the principles of thematic analysis. Results: Findings revealed that patient understanding of COPD was poor and approximately half of the patients were unable to provide a name for their condition. Most patients were unaware of the progressive nature of the condition, and few were aware they could die of COPD. Despite the poor understanding of COPD, patients often expressed concerns that their condition might deteriorate. Patients had particular concerns regarding the manner of their death; the overriding fear was dying of breathlessness or suffocation. Most patients expressed a preference to die peacefully. None of the patients had discussed their fears regarding the manner of their death with a health care professional. Conclusions: Although the majority of patients had a poor understanding of COPD and its prognosis, most had fears regarding deterioration of their condition and

particularly the way in which they might die. Improved patient education is needed in order to improve patients' understanding of their condition and their prognosis. Open communication regarding death, as advocated in a palliative care approach, is also needed to alleviate patients fears and to allow them to make decisions regarding the management of their care at the end of life.

#### **PB6 201 THE HEART RATE VARIABILITY ANALYSIS OF IRREVERSIBLE APNEIC COMA AND BRAIN DEATH VIA POINCARÉ PLOT**

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Introduction: The purpose of this research is to find the heart rate variability (HRV) of irreversible apneic coma (IAC) and brain death for the clinical correlation research. Sympathetic storm, a cardiovascular hyperdynamic state occurring in the process of brain stem failure, has been well studied in animal models. The phenomenon of sympathetic storm was also mentioned by researchers after introducing the HRV, suggesting its contributory potential to the diagnosis of IAC. Methods and materials: Based on the presence or absence of IAC as well as on GCS (Glasgow coma scale), subjects studied in this paper were divided into 3 groups. The first group consisted of 16 healthy subjects (normal) as control. The second group consisted of 26 ordinary patients (GCS between 4~15) without IAC in neurosurgical intensive care unit (NICU). The third group consisted of 16 patients with IAC and brain death in NICU. We calculate Poincaré plot index (SD1, SD2 and area), time domain index (SD, CV, SDSD, and RMSSD), and frequency index (HFP/LFP, HFP/TF) in order to obtain the relationship between HRV and Autonomic nervous system. Results: We find the shapes of IAC and brain death patients are fan and area are smaller, but shapes of normal people are comet and areas are bigger. Finally we use statistics by means of Kruskal-Wallis test and Dunns test to discuss the differences of these parameters with three groups. Conclusion: In this paper, it can be demonstrated that Poincaré plot index (SD1, SD2 and area) and time domain index (SD, CV, SDSD, and RMSSD) can discriminate the differences among normal healthy subjects, ordinary patients, and IAC and brain death patients. But, the frequency index (HFP/LFP, HFP/TF) can not discriminate the differences among normal healthy subjects and ordinary patients.

#### **PB6 202 AID IN DYING IN THE UNITED STATES: LAW AND POLITICS**

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The presentation will address legal and political developments affecting the practice of aid-in-dying in the United States. Aid-in-dying, sometimes called "physician assisted suicide", allows terminally ill persons to choose their time of death through self-administered lethal doses of prescribed medication. Aid-in-dying has been legal in the state of Oregon for more than ten years, and the state of Washington recently enacted aid in dying legislation via a state-wide referendum. In the state of Montana, a state trial court held in December that the right to make this end-of-life medical choice is protected by the Montana state constitution. Polls show that public support for aid-in-dying has reached all time highs, and four major US medical organizations have endorsed regulated aid-in-dying as a legitimate end-of-life treatment choice. This presentation will address these legal and political developments from the perspective of the elder law professional. It will review the descriptive and empirical literature pertaining to aid in dying, in particular the empirical data that have been collected in Oregon during its decade of experience with legal aid in dying. The presentation will conclude with a discussion of the role of medical and legal professionals in educating the public about the pros and cons of legal aid-in-dying.

#### **PB6 203 SPIRITUAL CARE FOR CANCER PATIENTS AND THEIR FAMILIES**

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Introduction: The spiritual needs of patients with life-threatening illness and their families are becoming increasingly recognized. The WHO included spiritual care in its definition of palliative care, describing it as a means to provide relief and improve quality of life. While professionals are developing the concept of spiritual care, little is known about how it is perceived by the patients themselves and their families. The study addresses this issue. Methods and materials: Open-ended in-depth interviews with cancer patients and family members who have received care from a spiritual care provider in Israel. Results: Spiritual care uses a variety of strategies that on the one hand "extricate" patients from their illness and suffering and on the other give them space to address difficult themes. Spiritual care providers establish a relationship of intimacy and trust, and discuss with the patients topics that are important to them but are not related to the medical treatment such as their family or job. It allows the patients to maintain their identity as complete human beings. Rather than focusing on struggles, pain, and loss, they recognize strengths and hopes. Conversely, the spiritual care provider provides the patients with an opportunity to talk about difficult subjects that they cannot discuss with others, such as the fears of future or death. Conclusion: The encounter with a spiritual care provider is perceived by patients and their families as a very positive experience. It allows them to talk about things rather than their illness, gives the opportunity to touch on fears and anxieties, and makes it easier for them

to cope. It is appropriate and necessary to expand spiritual care services beyond their currently limited scope.

**PB6 204 FACTORS INFLUENCING HOME DEATH AND CAREGIVER BEREAVEMENT OUTCOME: RELATIONSHIP BETWEEN REGRET AND SATISFACTION WITH HOME MEDICAL CARE**

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**Introduction:** The purpose of this study was to examine the factors influencing home death and caregiver bereavement outcome  
**Methods:** This study was an anonymous mailed survey of bereaved family members (caregivers) of patients who died in a home medical care setting provided by an institution specializing home medical care in Japan (home death rate: about 80%). We analyzed the relationship between regret and satisfaction with home medical care and the place of death and caregiver's present feelings about loss.  
**Results:** The significant determinant factors associated with home death was preference of death at home by both the patient and the caregiver; caregiver's satisfaction with home medical care, cohabitation with children and lower caregiver apprehension about home medical care. In multiple linear regression analysis of factors influencing satisfaction with home medical care, significant influential factors were: peaceful death, psychological well-being of the caregiver and a good relationship with one's physician. Also, the caregiver's regret during bereavement significantly influenced their present feelings about loss regardless of the length of time after bereavement and the strength of the caregiver's regret during bereavement was an important predictor of their present feelings about loss. In multiple linear regression analysis of factors influencing regret during bereavement, significant influential factors were: psychological well-being of the caregiver, peaceful death of the patient, fulfilled home medical care service system. Conclusion: These findings suggest that in order to enable home death, it is important to improve caregiver's satisfaction with home medical care and it is also important to minimize caregiver's regret during bereavement for better subsequent adaptation to loss of the patient.

**PB6 205 PREDICTORS OF HEALTH CARE UTILIZATION DURING THE LAST YEAR OF LIFE OF ELDERLY PERSONS**

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**Introduction:** The last year of life has frequently attracted the attention of health care planners, largely because it is assumed that elderly persons in the final phase of life impose a heavy burden on health care expenditures. However, the number of studies examining health care utilization in the last year of life is very scant. The aim of this study was to examine which factors contribute to health care utilization in the last year of life. **Method:** Participants were 139 next-of-kin of Jewish elderly individuals who had died during the course of the previous year in a major city in Israel. The data collected on the decedents included their use of health care services (i.e., doctor visits, nursing assistance); functional (ADL/IADL) and cognitive decline during the last year of life; social networks; socio-demographics; and cause of death. The data were analyzed using multiple regression techniques, with health care utilization defined as the outcome variable. **Results:** The majority of the decedents were female (79.5%), immigrants (90.5%), and married (98.9%). The mean age was 79.5, and the mean number of years lived in Israel was 49.1. Statistical analysis showed that, when controlling for cause of death and functional and cognitive decline, the number of children and grandchildren had a significant effect on the use of health care services (respectively  $B = .840$   $p=.006$  and  $B = .867$   $p=.009$ ). **Conclusions:** Functional and cognitive decline alone do not predict health care utilization in the last year of life. Indeed, the social network surrounding the older individual is instrumental in determining the use of health care services in the last year of life. Therefore, health care policy encouraging the involvement of persons in the social environment of older individuals during their last year of life might help.

**PB6 206 THE WAY PEOPLE WOULD LIKE THEIR LIVES TO END**

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**Introduction** The study explores the wishes people have for the final phase of their lives. **Methods and materials** By means of a questionnaire a survey was carried out in the canton of Zurich (Switzerland) with people working in nursing institutions and with participants of workshops preparing for retirement about the following questions: What age would they like to reach? In which way would they like their lives to end, choosing one of four dying trajectories? How much time of their lives would they forfeit in order to avoid dependence? **Results** 159 questionnaires were evaluated. The average lifetime women desired was 85.6 years, the one of men 83.8 years. 43% of the respondents preferred a sudden death, 50% a dying process of a few weeks or months. 3% would be ready to go through repeated serious health crises over several months and 4% to pass away after years of slowly increasing frailty. 34% of the respondents would forfeit at least six years, 61% at least two years of their lives in order to avoid dependence on others and the need for care.

14% would not trade off any time at all. Respondents working in nursing institutions would trade off significantly less time than respondents before retirement. Conclusion A vast majority of the respondents hoped for a dying process of a few months at most, a destiny which is only granted to a minority of (western) people. The desired lifetime, close to the actual life expectancy in Switzerland, is relatively modest. This may reflect the fear of losing autonomy, something the results of the time-trade-off question show clearly. Nurses may know the human capacity to deal with limited autonomy better than people without experience in care.

**PB6 207 OUTCOMES FOR OLDER ADULTS IN AN INPATIENT REHABILITATION FACILITY FOLLOWING HIP FRACTURE SURGERY**

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**Introduction:** The health care professionals on the rehabilitation unit in this retrospective study had never cared for frail patients with multiple co-morbidities including cognitive impairment (CI). After a Patient-Centred Rehabilitation Model targeting clients with CI (PCRM-CI) was developed, the staff were trained in the novel approach to care. There are five components to the PCRM-CI: rehabilitation management post surgery; dementia management; delirium management; staff education and support; family and patient education. Once the staff were trained the criteria for admission to the unit changed to include all clients living within the community who had fractured their hip, regardless of their cognitive impairment. This study evaluates patient outcomes regarding older community-residing adults who participated in rehabilitation program following hip fracture surgery. **Methods & Materials:** Motor subscale of the Functional Independence Measure (motor-FIM), length of stay (LOS), rehabilitation efficiency, discharge destination. **Results:** Eighteen out of 31 consecutively admitted patients were found to have CI postoperatively with a Mini-Mental State Examination score  $\leq 23$ . There were no differences in motor FIM gain scores, LOS, and discharge destination between the two groups of patients. Motor functional gain for subjects with CI was 57.2 versus 57.0 for those with intact cognition ( $p = .97$ ). The average LOS on the unit for patients with CI was 28 days, and 31 days for those without CI. Rehabilitation efficiency for patients with intact cognition was 2.1, vs. 2.6 for patients with CI. Discharge location for both groups was predominantly to the community, as 80% returned home. **Conclusions:** Staff can learn how to care for patients with CI in rehabilitation settings. Patients with CI can achieve outcomes comparable to those without CI in a setting dedicated to targeting interventions for patients who have dementia, delirium, and sustained a hip fracture.

**PB6 208 THE INFLUENCE OF SARCOPENIC OBESITY ON THE FUNCTIONAL FITNESS IN SEDENTARY OLDER ADULTS IN KOREA**

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1) **Introduction:** Despite the growing importance of physical function and Sarcopenic obesity in older persons, there is still a lack of information explaining whether they are related with each other. To examine the influence of sarcopenic obesity on functional fitness level in sedentary older adults, 673 community-dwelling sedentary Korean older women were recruited and examined. 2) **Methods and materials:** 673 sedentary older women were recruited from 16 different districts in Seoul. Rikli and Jones' five tests (chair stand, arm curl, one leg stand, 2-min steps, shoulder flexibility) were conducted to measure participants' functional fitness, and bioimpedance measured body composition. Participants were classified into 4 groups using the Cogswell and Dietz's classification of sarcopenic obesity; based on the level of their lean body mass and fat mass they were classified either one of followings: Normal muscle+normal fat(Group-A), normal muscle +high fat (Group-B), low muscle+normal fat(Group-C), and low muscle+high fat (Group-D:sarcopenic obese). GLM and LSD-test were conducted for the analyses with SPSS 13.0. 3) **Results:** For 673 older women, mean age of 75, chair stand ( $p<.05$ ), arm curl ( $p<.001$ ), one leg stand( $p<.01$ ), 2-min steps( $p<.001$ ) were associated with the level of muscle mass and fat mass. For chair stand, sarcopenic obese group has much lower score than that of Group-A and Group-B ( $p<.05$ ). For arm curl, sarcopenic obese group has lower score than that of Group- A ( $p<.05$ ). For One leg stand and 2-min steps show same results that sarcopenic obese group has lower score than that of Group A(normal muscle + normal fat) ( $p<.05$ ). 4) **Conclusion:** We conclude that conclude that sarcopenic obese were associated with functional fitness level of sedentary older adults.

**PB6 209 THERAPEUTIC GARDEN WITH REHABILITATION PATH: AN ORIGINAL EXPERIENCE IN A GERIATRIC HOSPITAL**

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For the elderly, hospitalization is often an important stress factor. The idea of creating a therapeutic garden including a rehabilitation path resulted from concept of strengthening an stimulating the residual abilities for mobility and to fight against autonomy loss in a surrounding close to nature. From 2004 to 2006 a therapeutic garden was designed and

realized in our hospital comprising over 600 beds in acute, rehabilitation and long stay wards. This garden was implemented with 5 physical rehabilitation modules (a slalom course, an obstacle-scattered path, a tactile board, a Japanese bridge and a hoop game) meant to stimulate walking, equilibrium, proprioception and stereognosis. Furthermore, this garden was adorned with 2 botanical spaces where fruit trees and aromatic plants were grown in order to offer a variety of sensorial stimulations. Thus patients with cognitive disorders were able to perform rehabilitation and fall prevention exercises in a natural entertaining environment whereas they had always refused to go to the physical therapy room. The botanical spaces allowed to strengthen sociability and conviviality, and hospitalized patients were able to make friendship ties and avoid self withdrawal and lonesomeness. This experience shows the importance of the environment and its impact upon the care of hospitalized elderly patients and the progress they may accomplish.

#### **PB6 210 POLYPHARMACY AND FRAIL PATIENTS**

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**Background.** Older people consume an increasing amount of medication. Polypharmacy is associated with an elevated risk of adverse health outcomes resulting in hospitalizations and sometimes death. **Objectives:** To evaluate drug consumption in the elderly aged 85 years or more. Patients and Methods. We study a cohort of 100 patients aged 85 years or more, admitted in the Internal Medicine Department of Goiherri county. Data were collected by a structured questionnaire during the admittance exploring sociodemographic variables, drug use, disability and cognitive functions. Results. We present 100 patients, 64 women and 36 men ( $88.9 \pm 3.48$  years-old) a 13 % were nursing-home residents. Barthel Index with normal activities of daily living 62%, cognitive impairment 35%. Comorbidities: Hypertension 68%, heart failure 44%, diabetes mellitus 25%, ischemic heart disease 23%, renal failure 22%, COPD 21%, neoplasm 18%, stroke 12%, smoker 4%. A 53% present 3 or more comorbidities. The mean number of drugs was of 6.3 (5.77 for men and 6.62 for women with a statistically significant difference ( $p<0.01$ ). The main drugs used were of cardiovascular area. None of the patients had doses-adjusted to their MDRD. Inappropriate drugs prescribing(drugs,doses and contraindications )30 %. Possibility of pharmacologic associations 38%(90% ECAI/ARAB + diuretics). Discussion It is well known that multiple medication use entails health risks. According to several studies, inappropriate drug prescribing occurs in approximately 20% of older patients. Older people exposed to potential drug interactions rise from 25% in the age group of between 60 and 80 years to 36% in the 80+ age. Conclusion. At the moment the polypharmacy is inevitable due to increase in life expectancy and quality of life. We must adjust the drugs to comorbidities and MDRD. The use of pharmaceutical associations improve the adherence.

#### **PB6 211 A MULTIFACTORIAL AND INTERDISCIPLINARY TEAM APPROACH TO FALLS PREVENTION FOR OLDER HOME CARE CLIENTS**

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**Introduction:** Falls and fall-related injuries are common, potentially preventable causes of mortality, morbidity and increased health care use and cost among older people receiving home care services. The objective of this study was to determine the effects and costs of a multifactorial, interdisciplinary team approach to falls prevention compared to usual home care for older home care clients "at risk" of falling. **Methods:** The design was a randomized controlled trial of 109 older adults ( $> 75$  years) using home support services who are at risk for falls. Subjects were randomized to intervention ( $n=54$ ) or control ( $n=55$ ) groups. A total of 92 subjects completed the six month follow-up. The intervention was a 6-month multifactorial and evidence-based prevention strategy involving an interdisciplinary team. The primary outcome was number of falls during the 6-month follow-up. Secondary outcomes were changes in fall risk factors and costs of use of health services from baseline to 6 months. **Results:** At 6 months, there was no difference in the mean number of falls between groups. However, subgroup analyses showed that the intervention was effective in reducing falls in men, 75-84 years of age, with a fear of falling, or a negative history of falls. There was a greater reduction in number of slips and trips, and a greater improvement in role functioning related to emotional health in the intervention group. These improvements were achieved at no additional cost from a societal perspective. **Conclusion:** A multifactorial, interdisciplinary team approach was more effective and no more expensive than usual home care in improving quality of life, reducing the incidence of slips and trips, and reducing falls among males ( $>75$ -84 years), with a fear of falling or a negative history of falls.

#### **PB6 212 PREVALENCE, CORRELATES, AND COSTS OF FALLS IN OLDER HOME CARE CLIENTS "AT-RISK" FOR FALLING**

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**Introduction:** Many older people receiving home support services are "at risk" for falling, but the rates of falls and fall risk factors have not been previously investigated in this population. Using baseline data from an efficacy trial on falls prevention, the objective of this study was to determine the 6-month prevalence, risk factors, and costs of falls in older people using home support services who are at risk of falls. **Methods:** The analysis includes 109 older adults ( $>75$  years) using home support services who are at risk for falls from two home care programs in Ontario, Canada. Data pertaining to known risk factors for falls and the cost of use of all types of health services in the previous 6 months were collected through a structured in-home interview. The frequency of falls in the previous 6 months was ascertained by telephone and by a monthly postcard follow-up. **Results:** Of the 109 participants, 70.6% reported  $>1$  fall in the previous 6 months, and 27.5% experienced multiple falls. Falls resulted in fractures (40%), emergency room visits (22%), and hospital admissions (54%). Seniors who fell had lower levels of physical, social, and psychological functioning and higher cost of use of health services compared with non-fallers. Cognitive impairment, Parkinson's disease, age  $>85$  years, environmental hazards, slip or trip, and visual impairment explained 22% of the variation in number of falls. **Conclusion:** Falls and fall-related injuries are highly prevalent among older people receiving home support services who are at risk of falling. Falls were associated with lower levels of health-related quality of life and function and higher cost of use of health services. Home care providers can help prevent falls by identifying individuals who are at greatest risk and could benefit most from targeted interventions.

#### **PB6 213 FRAILTY AND OXIDATIVE STRESS IN THE ELDERLY**

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**Background:** Frail elders have high morbidity and mortality, and are characterized by loss of skeletal muscle mass, increased and redistributed fat mass as well as systemic inflammation. Oxidative stress is closely related to muscle mass loss, obesity and systemic inflammation. We hypothesized that frail elders had higher oxidative stress as compared with non-frail elders. **Method:** A cross-sectional study of community-dwelling adults and geriatric clinic patients at the age of 65 or older without malignancy, stroke and Parkinson's disease was performed. Frailty status was classified as frail, prefrail and robust, and was determined by a validated tool. Blood was drawn to measure serum 8-OHdG level. Body mass index, waist-hip ratio, blood lipid, glucose, albumin and hs-CRP were also measured. Differences between groups were analyzed with the one-way ANOVA and chi-square test for trend. Multivariate associations were assessed with ordinal regression. **Results:** A total of 90 subjects with mean age of 77 years were recruited, among which 21 subjects (23.3%) were frail, while 56 subjects (62.2%) were prefrail and 13 subjects (14.4%) were robust. Frail vs. prefrail and robust subjects had higher serum 8-OHdG levels ( $3.0 \pm 1.5$  vs.  $2.8 \pm 1.9$  and  $1.4 \pm 1.1$  ng/mL), higher serum hs-CRP ( $6.5 \pm 8.7$  vs.  $4.9 \pm 9.1$  and  $1.7 \pm 1.0$  mg/L), lower serum albumin ( $4.1 \pm 0.4$  vs.  $4.4 \pm 0.4$  and  $4.6 \pm 0.2$  g/dL) and higher waist-hip ratio ( $0.96 \pm 0.11$  vs.  $0.91 \pm 0.07$  and  $0.89 \pm 0.05$ ) ( $p < 0.05$  for all). After adjusting for other factors, high serum 8-OHdG levels were significantly associated with frailty. **Conclusion:** Increased oxidative stress was independently associated with frailty.

#### **PB6 214 ANEMIA AND FUNCTIONAL CAPACITY IN THE ELDERLY.**

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**Introduction:** Anemia is considered one of the factors responsible for the loss of functional capacity (FC) in the elderly. The objective of this study was to evaluate the association between FC and anemia in the elderly, both anemic and non-anemic. **Methods and Materials:** Cross-sectional study with 709 elderly individuals (male=343, aged  $71.8 \pm 7.9$ ; female=366, aged  $74.5 \pm 8.3$ ). Patients with severe disabilities, bleedings, poor cognitive status and visual and auditory limiting impairments were excluded. Anemia was diagnosed according to the WHO ( $Hb < 120.0$  g/L, for women;  $Hb < 130.0$  g/L, for men, sampled during the first 48 hours of hospitalization). FC was evaluated by self appraisal, related to the 30 days prior to hospitalization, by Katz's and Lawton's indexes. Correlation between variables was assessed by the Spearman test ( $\rho = 0.05$ ). **Results:** Prevalence of anemia was 30%, without differences between sexes. It was observed that the anemic individuals were the elderliest (anemic, aged  $75.9 \pm 8.5$ ; non-anemic, aged  $72.0 \pm 7.84$ ,  $p=0$ ). Average  $Hb$  values were: anemic =  $113.0 \pm 10.6$  g/L; non-anemic =  $138.5 \pm 10.5$  g/L,  $p=0$ . Decrease in FC was found in ADL (anemic =  $0.69 \pm 1.51$ ; non-anemic  $0.04 \pm 0.40$ ,  $p=0$ ) and in AIDL (anemic =  $23.1 \pm 3.48$ ; non-anemic  $26.4 \pm 1.94$ ,  $p=0$ ). Most compromised activities in ADL were bathing (22.5%) and dressing (18.4%); in AIDL, housework (56.8%), laundry/ironing (54.5%), shopping (55.4%) and transportation (49.1%). **Conclusion:** FC in the anemic

decreased if compared to the non-anemic. Activities most compromised demand significant muscular strength and flow of oxygen in the tissues, a scenario in which anemia has a very important negative impact.

**PB6 215 MOVEMENT SPECIFIC REINVESTMENT, FALLS AND WALKING IN COMMUNITY-DWELLING OLDER ADULTS**

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**Introduction:** Elder falls can result in detrimental consequences. Elder fallers(EF) may consciously monitor and control movements during walking to prevent repeated falls. Paradoxically, this may disrupt movements further. Conscious movement control with internal-focus on mechanics of moving is called 'reinvestment'. It is unclear whether reinvestment is related to falling history or whether EF have higher internal-focus on the mechanics of walking. This study aimed to (1)explore the relationship between elder falls and reinvestment, (2)examine whether the Movement Specific Reinvestment Scale(MSRS) can discriminate EF from elder non-fallers(ENF), and (3)investigate focus of attention of elder repeated-fallers(ERF) and ENF during walking. Methods and materials: Fifty-two elders(mean age=74.60±5.80) completed the MSRS, Mini-Mental State Examination, Timed 'Up & Go' and Four-Word Short-Term Memory tests. Demographics and falling history were collected. Thirty ERF and ENF(mean age=76.30±5.95) finished various walking trials(3-meters). Participants either carried no-cup(control), a cup(pressure) or a spillable-cup(high-pressure). Accuracy at answering questions relevant to internal-focus(mechanics of the limbs), external-focus(environmental) and control condition after walks was assessed. Results: Logistic regression revealed significant association between the MSRS(conscious motor-processing) and 'faller or non-faller' status. EF scored higher than ENF on movement self-consciousness( $p=0.001$ ) and conscious motor-processing( $p<0.001$ ) components of the MSRS. ERF showed higher internal-focus than ENF under pressure(main effect of Group,  $p=0.001$ ;Group x Pressure interaction,  $p=0.03$ ). Conclusion: EF have higher propensity for reinvestment during walking than ENF, especially under pressure. The MSRS is a potential clinical tool to predict elder falls. Strategies to prevent predisposition for movement-specific reinvestment may be useful during gait rehabilitation.

**PB6 216 THE PASSAGE OF TIME: SOCIAL RELATIONSHIP AND PHYSICAL ACTIVITY AMONG OLDER AFRICAN AMERICAN WOMEN**

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**Introduction:** Optimizing health is critical to delay chronic illness in later life. Physical activity participation has been related to improve physical and psychological health, although many older Americans remain sedentary. It is reported that almost half of those 65 years and older do not engage in leisure time physical activity. Studies documented that social support provide a way to encourage older women to engage in physical activity. Although research has established a positive outcome of social support and physical activity, not enough research has been conducted to compare the relationship between social support and health-promoting behaviors among older diverse populations. Method: This study used three waves of data from the Americans' Changing Lives (ACL) survey, a stratified, multistage area probability sample of non-institutionalized individuals' aged 25 years and older living in the 48 coterminous states of the United States. Responses were based on a subset of 340 African American women aged 60 and older. Data from all three waves of the ACL were used to determine whether interpersonal relationships had an impact on health behavior by using repeated measures analysis of covariance. Results: The tests of significance of the fixed effects indicate that the main determinants of physical activity were wave ( $p < 0.0001$ ), ethnicity ( $p = 0.0002$ ), informal social integration ( $p < 0.0001$ ), and formal social integration ( $p < 0.0001$ ). In other words, increased formal and informal integration resulted in higher physical activity. Conclusion: The implication of these results is that social support from friends and organizations (i.e., religious) is an important motivational factor in engaging older African American women in physical activity. It may be more effective to combine neighborhood resources (e.g., churches and senior centers) to support health promotion programs.

**PB6 217 NONAGENARIAN ACUTE GENERAL SURGICAL ADMISSION: ARE WE ACHIEVING ANYTHING USEFUL?**

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**AIMS:** To determine the duration, interventions and outcome of general surgical admission for patients aged more than 90 years admitted through the Emergency General Surgical Take. **METHODS:** Prospectively recorded database of Teaching Hospital emergency general surgical admissions for the nine month period – 1st January 2007 to 30th September 2007. Details of patient age, gender and pre-admission domicile recorded. On admission details of investigations, surgical interventions and discharge destination were

collected. **RESULTS:** During the 9 month period 49 patients aged 90 or older were admitted (median 92; range 90-99). Laboratory biochemical (90%) and haematological (92%) investigations were commonly used; cross sectional imaging (USS –18%; CT-14%) was rarely employed in patient assessment. Overall 43 nonagenarians (88%) had no invasive investigation or procedure, 4(8%) underwent endoscopy and 2 had a surgical procedure one of whom died. The median hospital stay for this cohort of nonagenarians was 4 days (range 0.1-72 days). A total of 8 (16%) patients died in hospital. All 17 survivors admitted from a nursing home were discharged back to that care; of the 24 survivors admitted from their own home – 22 went back to their own home and only 2 required nursing home care. **CONCLUSIONS:** Nonagenarian emergency admission is an increasing feature of the emergency surgical take. The large majority spend a relatively short time in hospital, have relatively little imaging and/or intervention before returning to their normal place of abode. This suggests that nonagenarian acute surgical admission has little to offer and alternative models of assessment with home support should be considered for this patient group.

**PB6 218 MUSCLE STRENGTH, MUSCLE BALANCE, QUALITY OF LIFE AND PLASMA IL-6 LEVELS IN OLDER INDIVIDUALS WITH KNEE OSTEOARTHRITIS**

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**Objective:** Determine associations and correlations of muscle strength and balance to quality of life and plasma IL-6 levels in older women with knee osteoarthritis (OA). **Methods:** An exploratory cross-sectional study was performed on 80 older women ( $71.2 \pm 5.3$  years) with knee OA. Muscle strength (torque/body mass) and hamstrings/Quadriceps muscle balance (H/Q) were assessed using a isokinetic dynamometer at angle velocities of 60°/s and 180°/s. Quality of life was measured by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Body mass index (BMI) was expressed as  $\text{Kg}/\text{m}^2$ . Radiographic severity (Kellgren-Lawrence) was assessed. Plasma IL-6 levels were determined (ELISA). Spearman's correlation coefficient and the Mann-Whitney test (associations) were used, at a 0.05 level of significance. **Results:** A significant inverse correlation was found between BMI, muscle strength and muscle balance in all WOMAC subscale. Strongest correlations were between the hamstrings muscle at 60°/s ( $r=-0.437$ ;  $p=0.000$ ) and BMI ( $r=0.348$ ;  $p=0.002$ ) with the self-reported function subscale; and the Quadriceps at 60°/s with the pain subscale. IL-6 was significantly correlated to BMI ( $r=0.215$ ;  $p=0.056$ ); inversely correlated to muscle strength of the hamstring muscles ( $r=-0.232$ ;  $p=0.03$ ) and muscle balance on the right side at 180°/s ( $r=-0.254$ ;  $p=0.023$ ). Radiographic severity of OA was not significantly correlated with either the WOMAC or plasma IL-6 levels ( $p=0.351$ ). **Conclusion:** Reduced H/Q muscle strength and muscle balance, obesity and increased IL-6 were associated to a reduction in quality of life in the sample studied.

**PB6 219 SUBJECTIVE VISUAL PERCEPTUAL ABILITY RELATES TO FUNCTIONAL BALANCE PERFORMANCE IN PEOPLE WITH CHRONIC STROKE**

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**Introduction:** Impaired subjective visual perceptual ability is common in people following stroke which may relate to balance deficits. While visual input and perception is important to balance control in healthy adults, the relationship between the visual perceptual ability and balance performance is not clearly identified in people with stroke. The purpose of this study is to identify the relationship between visual perceptual ability and balance performance in elderly with stroke. **Methods and Materials:** A convenient sample of 21 elderly subjects (14 males and 7 females), who suffered from a single stroke at least 6 months ago, participated in this study. The visual spatial perception was assessed by the Motor-Free Visual Perception Test-3 (MVPT-3). Laboratory balance performance was assessed by the sensory organization test of computerized dynamic posturography. Functional balance performance was assessed by the Berg Balance Scale and five-time-sit-to-stand test, functional mobility was measured by timed Up & Go test. **Results:** The MVPT-3 had a significant positive correlation with Berg Balance Scale ( $r = 0.509$ ,  $p = 0.019$ ), and a negative correlation with five-time-sit-to-stand test ( $r = -0.736$ ,  $p < 0.001$ ) and timed Up & Go test ( $r = -0.457$ ,  $p = 0.037$ ). However, there were no significant correlation found between MVPT-3 and visual ratio ( $r = -0.05$ ,  $p = 0.984$ ), somatosensory ratio ( $r = -0.209$ ,  $p = 0.363$ ) and vestibular ratio ( $r = -0.270$ ,  $p = 0.908$ ) of sensory organization test. **Conclusion:** Subjective visual perception was significantly related to functional balance performance in people with stroke. Future studies should be directed to quantify the effect of subjective visual perceptual ability on balance performance. Such

knowledge would be important in designing an effective rehabilitation program to optimize balance performance in people with stroke.

**PB6 220 BOTH PHYSICAL AND PSYCHOLOGICAL IMPAIRMENTS ARE RELATED TO COMMUNITY REINTEGRATION IN OLDER PEOPLE WITH STROKE**

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**Introduction:** Many older people who survive a stroke experience restrictions in reintegration into community activities after they are discharged from the hospital. Few studies have addressed the influence of different stroke impairments on community reintegration. The purpose of this study is to determine the factors related to the satisfaction with community reintegration for older people with stroke. **Methods and Materials:** A sample of 26 people with stroke (aged 41-66) participated in the study. The primary outcome was satisfaction with community reintegration, as measured by the Reintegration to Normal Living (RNL) Index. Each subject was evaluated for: (1) Functional mobility (Timed Up & Go Test), (2) balance ability (Berg Balance Scale), (3) lower extremity muscle strength (Five-sit-to-stand test), (4) motor recovery of lower and upper limbs (Fugl-Meyer Motor Assessment), (5) upper limb function (Wolf Motor Function Test), (6) balance confidence (Activities-specific Balance ), and (7) Depression (Geriatric Depression Scale). **Results:** RNL Index score had a significant, positive correlation with balance ability ( $r=0.537$ ,  $p=0.005$ ), lower limb motor recovery ( $r=0.496$ ,  $p=0.010$ ), and balance confidence ( $r=0.587$ ,  $p=0.002$ ). RNL Index score was also negatively correlated with the time taken to complete the Timed Up & Go Test ( $r=-0.704$ ,  $p<0.001$ ) and five-sit-to-stand test ( $r=-0.646$ ,  $p<0.001$ ). In contrast, depression, upper limb motor recovery and upper limb functional ability were not significantly correlated with RNL Index score. **Discussion and Conclusion:** Both physical impairments and psychological impairment were significantly related to the satisfaction with community reintegration in older adults with stroke. Rehabilitation strategies targeting these specific impairments may be effective in enhancing community reintegration among older people with stroke, but will require further study.

**PB6 221 POOR VISION ACCOMPANIED WITH OTHER SENSORY IMPAIRMENTS IS ASSOCIATED WITH FEAR OF FALLING IN OLDER WOMEN**

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**INTRODUCTION:** Relatively little is known about the effects of visual loss and co-existing vision, hearing and balance impairments on fear of falling (FF) in older people. The purpose of this study was to investigate the cross-sectional association between decreased visual acuity and FF and the impact of co-existing sensory impairments on FF among community-dwelling older women. **METHODS AND MATERIALS:** 428 women aged 63-75 participated in visual acuity (VA), hearing ability and standing balance measurements in the research laboratory. FF was assessed by questionnaires. The Odds Ratios (OR) for FF was computed using the logistic regression. **RESULTS:** Altogether 75 (18%) participants had only vision impairment, 40 (9%) had coexisting vision and hearing impairment, 42 (10%) had coexisting vision and balance impairment and 34 (8%) participants had all three sensory impairments. Altogether 25 (6%) participants reported having FF at least sometimes. Vision impairment alone (VA of < 1.0), was not associated with FF compared to persons with normal vision (OR 1.1, 95% CI 0.3-4.2). Coexisting vision and balance impairment was strongly associated with FF (OR 4.4, 95% CI 1.5-12.5), compared to those with normal vision. Among persons with all three impairments the OR for FF was 3.8 (95% CI 1.0-13.8) compared to participants with good vision. Also coexisting vision impairment and impaired hearing increased the risk, although the OR was not statistically significant (OR 2.3, 95% CI 0.6-9.5). **CONCLUSIONS:** Poor vision increased the odds for FF when it was accompanied with loss of hearing or balance. Our study suggested that a multifactorial approach, including regular ophthalmic examination, audiometric screening and balance assessment followed by appropriate treatment and rehabilitation is likely an effective method in reducing FF in older people.

**PB6 222 HEALTH RELATED QUALITY OF LIFE (HRQOL) IN OSTEOPOROSIS: GENDER DIFFERENCES AND CORRELATES.**

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**Introduction:** Osteoporosis and osteoporosis related fractures are usually considered conditions of postmenopausal women, but these also occur in men. Despite the large number of men affected, osteoporosis in men remains inadequately researched. The aim of the present study was to assess gender based differences in Health Related Quality of Life (HRQoL) and its correlates among osteoporotic men and women. **Methods & Materials:**

Participants were 102 women and 100 men recruited from four medical centers in Israel. Participants were interviewed face to face by using a structured questionnaire. Information was collected regarding participants perceived HRQoL, health beliefs, coping mechanisms, level of anxiety/depression, demographic and health characteristics. **Results:** Although no significant differences were found between men and women regarding most of their health characteristics, women reported worse scores at most of the HRQoL dimensions. Men perceived their disease as having fewer consequences, as being less chronic and more controllable. Compared to men, women reported higher levels of anxiety and depression and used more emotionally focused strategies and fewer problem focused strategies to cope with the disease. Regarding health behaviors, although men participated in more physical activities than women, no differences were found between the genders in daily calcium intake. Among the women, better HRQoL was associated with higher scores of the bone density scan of the femoral neck and with less engagement in emotion-focused strategies. In men, better HRQoL was associated with fewer number of fractures, greater sense of control, fewer perceived symptoms, higher participation in physical activities and fewer depression symptoms. **Conclusions:** The current study results suggest that osteoporotic men and women perceive their disease and HRQoL differently. These findings stress the importance of osteoporosis as a disease that affects both genders although differently. Consequently, interventions and educational programs should be geared to the specific needs of men and women.

**PB6 223 ASSOCIATION BETWEEN COGNITIVE DISABILITY AND FALLS AND ROLE OF LIFESTYLE IN THE ELDERLY**

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**Introduction:** Falls and cognitive disability represent important problems of public health, yet their relationships and the roles as mediators of lifestyle factors have not been well documented. This study assessed the association between falls and cognitive disability and lifestyle factors among elderly people. **Methods and materials:** In total 1,697 subjects (776 men and 921 women), 60 years, randomly selected from the Lorraine population ( $2.3 \geq$  aged million inhabitants) completed a postal questionnaire including socio-demographic characteristics, height, weight, socio-occupational category, diseases diagnosed by a physician, smoking habit, alcohol abuse (Deta questionnaire), cognitive disability (defined as difficulties for concentration, attention, orienteering, problem-solving or memory), and falls which resulted in physical injuries with difficulties for daily living activities observed at the time of the survey (at home, work, public places, during sports or leisure activities). Data were analyzed using the logistic model. **Results:** Falls were common (3.5%) and cognitive disability affected 46.6% of subjects. Falls related to cognitive disability (odds ratio 2.09, 95% CI 1.04-2.96). The OR decreased to 1.48 (95% CI 0.86-2.55) when controlling for gender, age, educational level, obesity, smoking, alcohol abuse, musculoskeletal disorders, other diseases, and perceived income. Among these factors those with significant adjusted OR (ORa), and thus mediated the association between falls and cognitive disability, were: aged 70-79 (ORa 1.73, 0.96-3.09) and aged 80+ (2.20, 1.01-4.83) vs. aged 60-69, obesity (1.88, 1.09-3.23), alcohol abuse (3.07, 1.30-7.24), and musculoskeletal disorders (4.43, 1.74-11.31). **Conclusion:** We found high prevalences of cognitive disability and falls with physical injuries and their strong associations in the general elderly population. This relationship was partly mediated by increasing age, obesity,

**PB6 224 CULTURE-BOUND INERTIA: IDENTIFYING BARRIERS TO EXERCISE FACED BY OLDER INDIGENOUS POPULATIONS.**

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**Introduction:** Older indigenous populations have poorer health and lower rates of beneficial exercise adoption than non-indigenous counterparts. In response the World Health Organisations Active Ageing policy framework advocates the development of culturally appropriate physical activity guidelines for older adults. Key to developing such guidelines is identifying whether indigenous populations encounter significantly different barriers to exercise adoption than non-indigenous populations. This study investigates barriers to exercise that differ between older Maori and non-Maori New Zealanders in the first data collection wave of the Health, Work and Retirement Longitudinal Study. **Methods and Introduction:** Postal survey data were collected from a representative sample of Maori (n=3117) and non-Maori (n=3545) New Zealanders aged 55-70 years. These data included stage of exercise adoption, self-reported physical activity levels, physical and mental health, healthcare utilisation, and key psychosocial factors such as social support, work/family commitments and economic living standards. **Results:** Analysis shows that while Maori have lower activity levels and are more sedentary than non-Maori, physical activity levels increased across exercise adoption stages for both groups. Key barriers to exercise adoption for both groups were poor physical and mental health and a lack of general social support. However, poor levels of social attachment, domestic overcrowding, and low income were significant barriers for Maori only. **Conclusions:** Findings indicate that there are specific barriers to exercise adoption faced by Maori which are not evident for non-Maori. While some of these differential barriers are linked to poorer socio-economic status other barriers are linked specifically to a lack of social integration and

social attachment for indigenous groups which are vital for supporting the adoption of new behaviours. These findings have direct implication for the development of culturally appropriate guidelines for physical activity adoption in older indigenous populations.

**PB6 225 THE DEVELOPMENT AND IMPLEMENTATION OF A STATE-WIDE FALLS PREVENTION POLICY IN AUSTRALIA - A CASE STUDY.**

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Introduction New South Wales was the first Australian state to have a comprehensive management policy to reduce fall injury among older people. It was developed following extensive consultation, and takes a long-term public health approach. This research sought to determine the significant influences on falls policy development, identify strategies to assist researchers/practitioners increase their impact on policy, and explores barriers and enablers to policy implementation. Methods and Materials An analysis of the development and implementation of the policy was undertaken through interviews with key stakeholders (researchers, practitioners, policymakers and health service managers) and a review of policy documentation. Results The predicted increase in burden to the health system posed by population ageing and the associated anticipated costs of care were major factors in putting the issue of falls in older people on the government agenda. A growing body of research evidence identifying risk factors for falls and effective and promising interventions provided the background necessary for policy formulation. Motivated individuals were responsible for championing the issue, and leading policy development. Networks that brought researchers, practitioners and policy makers together promoted research dissemination, uptake and influence on policy formulation. Policy implementation has been enhanced through dedicated recurrent government funding, and partnerships with other sectors; but the dominance of the acute care sector, competing demands, limited workforce capacity and geographic distance have impeded implementation. Conclusions In line with the policy research literature, this study indicates the importance of ensuring the intersection of three issue streams (problem, policy and politics) for getting aged care needs onto the policy agenda. It highlights opportunities for, and methods by which stakeholders may influence the making of policy. Health agency leadership has been a key driver in falls prevention. The involvement of other sectors is vital for policy success and improved outcomes for older people.

**PB6 226 REHABILITATION OF PEOPLE WITH HIP FRACTURE AND DEMENTIA: RESULTS FROM THE FRANZ- STUDY**

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Background: Hip fractures are one of the most important risk factors causing permanent immobility and functional dependence in old age. Individuals with dementia are not only at high risk of falls, but in cases of a hip fracture they have difficulties to cope with conventional rehabilitation. Therefore, the research group on geriatrics, Charité Berlin, has developed a specific therapeutic method to address the demands of these patients. The project was granted by the Robert Bosch Stiftung. Method: The data for this evaluation study was ascertained using a control group design which included 114 individuals with dementia in an inpatient-setting. The study was started on 01.10.2005 and ended on 29.02.2008. The follow-up review ended on 31.05.2008. While the control group received conventional physiotherapy and occupational therapy, the treatment group received additional therapy which consisted essentially of two components: 1. Extra exercise provided by a trained geriatric nurse, and supervised by a physiotherapist. 2. The patients participated in a group program, which was based on reminiscence therapy. The intent was to enhance self-confidence and well-being. Results: Both groups improved their mobility considerably, but the improvement was significantly higher in the treatment group. Psychiatric disorders declined in the treatment group, but not in the control group. These results were statistically highly significant. The follow-up review, three months after discharge, showed no longer an advantage for the treatment group compared with the control group. However, the treatment with physiotherapy and anti-dementia drugs has not been sufficient for most patients during this follow-up period. Conclusion: This data shows the effectiveness of the new therapeutic method. Patients with dementia can be treated successfully, if their specific needs are addressed adequately. However, a stability of the treatment effect is not achievable without subsequent physiotherapy.

**PB6 227 FALLS AND FALL-RELATED INJURIES AND ASSOCIATED RISK FACTORS AMONG OLDER U.S. ADULTS**

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W. STUHLDREHER

Introduction: Unintentional falls are the common cause of injuries and related medical and disability costs are significant. The current study evaluated the occurrence of falls and fall-related injuries and their associated risk factors among the population aged 65+ years in the

U.S. Methods and Materials: The data from the 2006 Behavioral Risk Factor Surveillance System (BRFSS) were analyzed. BRFSS is an ongoing data collection program that monitors risk factors for chronic diseases in the adult U.S. population. The 2006 BRFSS included two questions about falls and fall-related injuries occurred in the past three months. The data were analyzed using the statistical program SUDAAN that can account for the complex survey design and sample weight. Results: A total of 90,279 individuals, who were aged 65+ years and provided valid data on falls, were included in this study. Over 16% (n=14,909) of the study population reported at least one fall in the past three months. The rate of falls increased as age increasing, ranged from 14% for aged 65-69 years to 25% for aged 85+ years. Females were more likely to fall than males. The following factors increased the risk of falls: minority race other than black, living alone, low income and education level, rural dwelling, obesity, and poor health (all p-values<0.01). Of those who fell in the past three months, 32.9% sustained injuries and were characterized as females, aged 85+ years, minorities, low income, and poor health (all p-values<0.01). Conclusions: Falls and fall-related injuries are relatively common among older U.S. adults. To prevent falls and injuries from falls, certain risk factors could be modified, such as regular exercise to manage weight, to improve muscle strength, gait and balance, and to enhance overall health condition.

**PB6 228 VALIDATION OF THE CHINESE CANADIAN STUDY OF HEALTH AND AGING CLINICAL FRAILTY SCALE (CSHA-CFS) TELEPHONE VERSION**

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OBJECTIVE: To validate the Chinese CSHA-CFS Telephone Version. DESIGN: Cross-sectional validation study SETTING: Outpatient clinics at a tertiary medical center in Taipei, Taiwan. SUBJECTS: Sixty-seven patients enrolled in the "Comprehensive Geriatric Assessment and the Frailty Study of Elderly Patients". METHODS: The CSHA-CFS Physician Version is a 7-point scale assigned after comprehensive geriatric assessments. Higher score indicates frailer status. The Chinese CSHA-CFS Telephone Version included 17 questions adapted from the Physician Version. Two trained research assistants conducted the telephone interviews. Administration time was " 3 minutes. Standard reliability and validity measures were applied. RESULTS: Three-fifths of the subjects were older than 75 years of age and half were female. Inter-rater reliability was achieved with weighted kappa of 0.684, (p=0.002) between first 20 ratings from 2 interviewers. Criterion validity was achieved with weighted kappa of 0.689 (p<0.0001) and Kendall's tau of 0.612 (p<0.0001) between the Telephone Version and the Physician Version scores. Divergent validity was demonstrated with significant correlations but only fair agreements comparing both Telephone Version and Physician Version scores with the Cardiovascular Health Survey phenotypic definition of frailty. CONCLUSION: The Chinese CSHA-CFS Telephone Version appears to be a quick, reliable, and valid frailty screening instrument for community-dwelling elderly.

**PB6 229 STUDY OF ELDERLY PATIENTS WITH FEMUR FRACTURE IN WALTER FERRARI MUNICIPAL HOSPITAL, JAGUARIUNA, SÃO PAULO, BRAZIL**

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The incidence of hip fracture increases with ageing, with 350000 fractures per year in the United States and is related to and increased number of falls. This is a disease related to females, with a mortality rate of 4.9 to 25%. This paper is about the characterization of the elderly people admitted in the Walter Ferrari Municipal Hospital, in Jaguariúna/SP, Brazil, with hip fractures and describes the risk factors and clinical and surgical management of these patients, relating these data to the ones reviewed in literature. It was observed an increased number of female patients, with up to 60 years old and even people over 90 years old. There were 14% of deaths and the first cause of fracture was falls. The risk factors associated were osteoporosis, neurological diseases, smoke and arthrosis of the knees. The major complications were infections and delirium. In conclusion the study population had the same behavioral of patients with hip fractures described in literature, with a need to prevention projects to decrease the incidence of this disease among the elderly.

**PB6 230 TO FALL OR NOT TO FALL THAT IS THE ISSUE.**

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Introduction to the Counties Manukau District Health Board: Their population(race, ethnicity, cultural context) the service provided in relation to Older Persons health requirements and the various services that are in place within this DHB at present. In-depth investigation into falls within the inpatient setting, what is in place and carried out to prevent falls and the strategies adopted to reduce falls, as investigated by the interdisciplinary team. In order to reduce falls the first step is to identify why they are occurring so looking at multiple factors; as to why and when they are happening, their frequency and severity. Hopefully through identification of "Risky times" and "places"-

the stigma which is associated with the fall is taken away from 1) the patient or 2) the carer and the emphasis is transferred onto the time and place factors to address those issues also. Thereby completely changing the focus of the fall from the patient to the factor-causing the fall; and hopefully changing the culture of falling within the environment. The presentation will look at the factors present around falls and the interpretation of those factors to hopefully bring about a reduction in falls.

**PB6 231 COMORBIDITY OF ELDERS: WHAT MEASURE IN PRACTICE ?**

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**Background:** The elderly often have concomitant chronic diseases, the number of which increases with age. They interact upon their health status, functional autonomy and life expectancy. The evaluation and quantification of comorbidity in the elderly is thus important in clinical research and for the clinician's diagnostic and therapeutic decisions. **Objective:** To quantify the weight of comorbidities in clinical practice and to give prognostic value of some important specific diseases. **Methods:** A systematic literature search was performed to bring out recent data concerning elderly's comorbidity such as prevalence and prognostic value of elders associated diseases. **Results:** All studies show that the prevalence of cardiovascular pathologies and their complications increases with age. Dementia makes the second most prevalent class of polypathologies but it often seems to be under diagnosed. The evaluation of polyopathy in the elderly is of interest as far as prognosis is concerned in terms of dependence and mortality and allows to anticipate complications leading to costly repeated hospitalizations. Several evaluation scales were validated, but only the Charlson index and the Cumulative Illness Rating Scale (CIRS) are used to quantify the weight of comorbidity. These indices are not convenient to use in every day clinical practice. It seems that moderate to severe dementia, severe cardiopathy or chronic renal insufficiency are the most prognostic factors. **Conclusion:** Comorbidity indices are of no interest in every day clinical practice. Clinician has to identify specific diseases such as dementia, severe cardiopathy or the association of diseases which have a synergistic effect on mortality and functional decline especially when an invasive therapeutic or diagnostic procedure is discussed. Further studies are needed to confirm these results.

**PB6 232 GAIT PERFORMANCE OF OLDER HOSPITALIZED ADULTS**

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**Introduction.** Research on community dwelling older adults has shown important relations between gait speed and various health outcomes. These associations have not been evaluated in a hospital setting. The purpose of the study was to examine gait speed of older men and women during hospitalization for acute illness. **Methods and Materials.** A cross sectional design was used and included a convenience sample of 149 ambulatory adults aged 65 years or older admitted to an Acute Care for Elders (ACE) unit. Patient information was collected within 48 hours of hospitalization. **Results.** Mean age was 75.3 (SD 7.1) years, 55% were women, 35% were married, and 67% had at least a high school education. Most of the sample was non-Hispanic white (66%), followed by non-Hispanic black (22%) and Hispanic (11%). Mean gait speed was 0.40 m/s (SD 0.20); 0.46 m/s (SD 0.21) for men and 0.36 m/s (SD 19) for women. In multivariate regression analyses gait speed was significantly associated with increasing age ( $b = -0.006$ , SE 0.002,  $p=0.02$ ), female gender ( $b = 0.07$ , SE 0.03,  $p=0.03$ ), and longer length of hospital stay ( $b = -0.01$ , SE 0.01,  $p=0.04$ ). **Conclusion.** Hospitalized older adults have gait speeds about one third that of community dwelling older adults of comparable ages. Our results indicate that a measure of gait speed can be quickly and easily administered to an acutely ill older patient population. Results also suggest that this measure be included in a standard assessment of older patients.

**PB6 233 HIP FRACTURE IN ELDERLY : USE OF LINKAGE OF ADMINISTRATIVE DATABASES TO ANALYSE PATIENTS PATHWAY AND OUTCOME.**

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**Introduction :** Hip fracture of elderly patients constitutes an increasing critical problem with a high incidence of post-operative complications. The prognosis remains poor. In France, record linkage of hospital records has been introduced with the creation of an unique identifier for each hospitalized patient. We tested the use of linkage for the follow-up of elderly patients surgically treated for hip fracture. **Methods and materials :** We analyzed all discharge records collected from the 247 hospitals of Paris area in 2005. We extracted those corresponding to first admission of elderly patients with hip fracture surgically treated. We defined readmissions as the first admission (classified as likely related or unrelated to the index hospital stay) within 12 months of the discharge. We tabulated first readmission but also subsequent readmissions. We analyzed the association between a set of characteristics at index stay and first readmission. **Results :** 5709 patients

constitute our analysis population (mean age : 86 years, 77% women), both surgical techniques were equally used. 32% of patients (1842) had at least one readmission (with 53% classified as related). A total of 2870 readmissions were identified. The multivariate model included type of hospital, gender, comorbidities, type of surgery. Male were at increased risk of related readmission, especially in patients with cancer (OR : 3.38,  $p < 0.02$ ). The in-hospital mortality rate was 4.6 %, and the in-hospital one-year mortality rate in acute care was 8.6%. **Conclusion :** In-hospital mortality rate was ranging at the lower limit of those reported in the literature. A third of survivor patients were readmitted within one year, in which 50 % had related readmissions. Overall one-year mortality was 8.7%. Use of DRG-based administrative database may be relevant for monitoring outcome. However, the link with national mortality databases is required.

**PB6 234 DIZZY - WHY NOT TAKE A WALK? LOW LEVEL PHYSICAL ACTIVITY IMPROVES QUALITY OF LIFE AMONG ELDERLY WITH DIZZINESS.**

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**Background:** Dizziness increases with age. It affects quality of life negatively for older persons in several ways. This study intended to investigate what variables (physical activity, loneliness, health complaints, need of help for daily living and falls) differed between those with and without dizziness and also to investigate what factors affected quality of life among older persons with dizziness. **Method:** An age stratified, randomised sample of senior citizens, aged +75 (n=4360) answered a questionnaire concerning demographic data, social network, health complaints and diseases, feelings of loneliness, quality of life (Short Form 12), frequency of falls and activities. **Results:** Dizziness was associated with an increased risk of falling. Falls in the last three months were reported in 31% of the subjects with dizziness compared to 15% among those without ( $p < 0.001$ ). Dizziness also correlated with depression, with 42.5% feeling depressed among the elderly reporting dizziness, to compare with 13.2%. Exercise, both light (i.e. go for a walk) or heavy (i.e. work in the garden) correlated with reduced risk of low quality of life among older, dizzy persons, both mental and physical. The proportion of dizzy persons doing light exercise was 75.6% versus 87.4% among the not dizzy ( $p < 0.001$ ). Exercise reduces the risk of falling, the risk of being depressed and increases quality of life. **Conclusion:** Even light exercise seems beneficial for improving quality of life and decrease the risk of falling, which in turn will lower mortality rate. Older persons reporting dizziness should be encouraged and helped to exercise. If one could increase physical activity among elderly and this would reduce the number of falls, it would diminish medical costs, suffering for the individual and be of paramount medico-social importance for the society

**PB6 235 FALLS AND HOUSE SAFETY IN OLD-AGE**

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**ABSTRACT** Introduction: Due to increased life expectancy, countries all over the world are experiencing ageing populations, with a growing number and proportion of elderly people within the overall population. Turkey currently has 3.5 million people over the age of 65. This number is predicted to reach 5 million by the year 2010 and 10 million by 2030. Reduced auditory and visual perception associated with ageing, together with balance disorders and loss of coordination, can present an increased risk of accidents for older people. Falls are the most common form of accident amongst older groups and subsequent trauma following a fall is one of the most serious problems of old age. The safety of individuals' homes is therefore of paramount importance in reducing the risk of falls. Particular importance should be attached to establishing and maintaining a safe home environment for elderly people. Conclusions: Housing safety checklists can be used when conducting risk assessments. Periodic safety checks may help to identify the risk factors and thus eliminate the causes of many home accidents.

**PB6 236 ANALYSIS OF FATIGUE AND CADENCE IN HEALTHY YOUNG AND OLDER INDIVIDUALS WITH BODY WEIGHT SUPPORT ASSOCIATED TO TREADMILL**

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**Background:** Aging leads to increases in gait variability which may explain the large incidence of falls in the elderly. To increase walking performance of older people, it may be necessary to adopt specific training programs with special attention to the improvement of gait. The purpose of this study was to compare gait of healthy young and older subjects using BWS associated to treadmill. **Methods:** The study protocol was done in Universidade Federal do Rio de Janeiro - Brazil and all subjects completed a health history questionnaire before testing. Eighty four healthy participants were recruited from community of Rio de Janeiro city. Participants were divided into three groups according to age (group 1: <40 years; group 2: 40-60 years; group 3: >60 years). All subjects performed walking training on the treadmill with 20% BWS and 10% BWS starting at 1.0 km/h with 5 min of interval between each set. Speed was increased each 2 min and Borg Modified Scale applied to determine fatigue perceived from subjects until 10 minutes reaching maximal speed at 3.0

km/h. Besides that, the cadence was measured each 2 min using a video camera. Results and Conclusions: Statistical analysis showed that there were significant differences between older and young subjects when compared cadence or fatigue with 20% and 10% BWS at 1.0 and 3.0 km/h. This study suggest that gait variability due to aging can be observed using treadmill associated to BWS. Besides that, scores of Borg scale increase according to age and time in treadmill and BWS. This procedure could be used to promote gait training in healthy older individuals to prevent falls and impairments from aging process.

**PB6 237 EFFECT OF TURNING DIRECTION ON TIMED "UP & GO" TEST IN HEALTHY ELDERLY AND ELDERLY WITH STROKE**

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Introduction: The Timed "Up & Go" Test (TUG) is a simple and quick functional mobility test used in geriatric and stroke rehabilitation. It requires a subject to stand up, walk 3 meters, turn, walk back, and sit down and the time taken to complete the test is recorded as time scores. However, the effect of turning direction on TUG scores has not yet been examined. The purpose of our study was to examine effect of turning direction on TUG scores in healthy elderly and in elderly with stroke. Methods and Materials: Twenty-one healthy elderly and 25 elderly with hemiplegia underwent TUG tests under 2 situations: (1) turning to left and right sides in healthy elderly; (2) turning to affected and unaffected sides in subjects with stroke. The time scores in completing the TUG test were recorded. Results: In subjects with stroke, the TUG scores when turning to affected side ( $28.9 \pm 12.56$  s) was significantly lower ( $p < .001$ ) when compared with turning to unaffected side ( $30.6 \pm 12.70$  s). In healthy elderly, there are no differences in TUG scores when turning to left side and right side. After taking gender, age and height as covariates, the TUG scores when turning to affected and unaffected side in elderly with stroke were both significantly higher ( $p = .001$ ) when compared with that when turning to left and right side in healthy elderly. Conclusion: The TUG scores were capable of detecting differences in functional mobility between healthy elderly and elderly with stroke. Of special interest are the novel findings that the turning direction has significant influence on TUG scores in stroke patients. This finding suggests that the turning direction of TUG test would need to be standardized in order to monitor the patients' progress in stroke rehabilitation.

**PB6 238 EFFECTS OF AGING AND TAI CHI ON A FINGER-POINTING TASK IN A CHOICE PARADIGM**

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Introduction: A finger-pointing task demands temporal and spatial control of the hand and eye movement relative to a visual target in space. The task will be more difficult when different visual targets signal different pointing movements. Using a finger-pointing task with a choice paradigm, our cross-sectional study examined 1) the effect of aging on performance, and 2) whether experienced elderly Tai Chi (TC) practitioners performed better than healthy elderly controls in such tasks. Methods: Thirty students and 30 healthy elderly controls were compared with 31 experienced TC practitioners. All subjects performed a rapid index finger-pointing task using their dominant hand, from a fixed starting position on a desk to a visual signal appearing on a display unit. The visual signal was a 1.2cm diameter ball appearing randomly: 1) A black ball required the subjects to touch it as quickly and as accurately as possible. 2) A white ball required the subjects not to touch it. 3) Both a black and a white ball required the subjects to touch only the white but not the black ball. Reaction time, movement time, accuracy and number of wrong movements were recorded. Results: Students displayed significantly faster reaction and movement times, with significantly greater accuracy and fewer wrong movements than the elderly controls. The TC practitioners had significantly faster movement times than elderly controls. They also attained significantly better accuracy when the target appeared contralateral to their pointing hand, and made fewer wrong movements. Their accuracy measures were similar to younger controls. Conclusion: Performance of a finger-pointing task in a choice paradigm declined with age. However, elderly TC practitioners were able to perform the task with significantly faster movement times, and with better accuracy and fewer wrong movements than elderly control subjects similar in physical activity level.

**PB6 239 EXPLORING OLDER ADULTS BELIEFS ABOUT STRENGTH TRAINING**

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Progressive strength training in older adulthood is endorsed for improving muscular strength and preventing functional decline. However, rates of strength training participation among Canadian older adults are low. The factors affecting strength training participation in older adulthood are not well understood. The purpose of this study is to explore older adult's beliefs about strength training, using the Theory of Planned Behaviour as a framework. Separate focus groups were held with those who participated in

strength training and those who did not. Separate focus groups were also held with men and women. Participants were recruited through senior centres and fitness facilities using posters, newsletters, direct recruitment from program leaders and snowball sampling. All participants lived independently in the community and were physically able to participate in strength training. Results revealed differences in the behavioural beliefs, normative beliefs and control beliefs between the groups. The results of this study may be used in the design of strength training intervention programs that promote participation among older adults.

**PB6 240 ANEMIA IN ELDERLY: ASSOCIATION WITH WALKING IMPAIRMENT AND FUNCTIONAL CAPACITY**

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Introduction: Anemia is a common problem in old age and has been associated with many negative consequences. Early identification of functional decline in the elderly is very important for prevention, treatment and rehabilitation. The objective of this study was to evaluate the association between walking impairment (WI), functional capacity (FC) and anemia in the elderly. Methods and Materials: Cross-sectional study with 709 hospitalized elderly participants (male n=343, aged  $71.8 \pm 7.9$ ; female n=366, aged  $74.5 \pm 8.3$ ). Anemia was defined according to WHO criteria. FC and WI were evaluated by self appraisal. FC was assessed by Katz's (ADL) and Lawton's (AIDL) indexes. WI was present if one or more of these symptoms occurred during walking (imbalance, fear of falling, tiredness, pain). Associations were assessed by the Spearman test ( $=0.05$ ). Results: Anemia was identified in 30% of participants. Higher age was significantly associated to anemia ( $75.9 \pm 8.5$  vs  $72.0 \pm 7.8$  years), no gender difference was found. Hb mean values were  $113.0 \pm 10.6$  and  $138.5 \pm 10.5$  g/L,  $p < .001$ . Concerning FC, anemic participants showed significant lower scores in both ADL ( $0.69 \pm 1.5$  vs  $0.04 \pm 0.4$ ) and AIDL ( $23.1 \pm 3.5$  vs  $26.4 \pm 1.9$ ). Concerning WI, anemia was significantly associated to imbalance (39.4 vs 26.0%), fear of falling (51.6 vs 29.6%) and tiredness (30.1 vs 21.6%); pain did not show statistically significant difference (43.2 vs 35.7%). Conclusion: WI symptoms are easily evaluated and were associated to FC and anemia. These results suggest that WI can be used as a sign of anemia. Therefore, early diagnosis of anemia is important to prevent worsening of FC and improve quality of life in elderly.

**PB6 241 EFFECTS OF A MULTIFACTORIAL FALL PREVENTION PROGRAM WITH CLIENT-CENTERED APPROACH ON RISKS OF FALLING IN THE ELDERLY**

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Introduction: Falls are health hazard for the elderly and need multifactorial considerations for its prevention. In Thailand, no study on the effects of a multiple-risk factor intervention focusing on individual elderly is yet available. This study aimed to evaluate changes in risks of falling, that is functional balance (Berg Balance Scale; BBS), fear of falling, and home hazards, of the community-dwelling elderly after participating in a multifactorial fall prevention program with client-centered approach. Methods and materials: A 12-week study was conducted on 9 elderly with fall risks (2 men and 7 women, mean age  $77.4 \pm 5.8$  years) of a community in Thailand. During the first 4 weeks, specific fall risk factors of each subject were evaluated and discussed between the subjects and the investigator, after which a multifactorial fall prevention program was cooperatively designed and individually tailored to each elderly. The subjects were then instructed to perform their programs for 8 weeks. The subject's outcome measures were assessed at baseline and at every 4 weeks until the end of the study, and analysed by the paired t-test. Results: The multifactorial fall prevention program with client-centered approach significantly improved the BBS and home hazards of the subjects ( $P=0.0001$  and  $0.02$ , respectively). But such improvement in the BBS did not reflect a clinical significance in their functional balance. However, the elderly expressed high satisfaction of the program. Conclusion: The multifactorial fall prevention program designed with the participation of clients could reduce risks of falling in the elderly with high satisfaction. Future studies with a greater number of subjects should consider ways to obtain a greater benefit of such fall prevention scheme such as paying more attention on the issue of pain and participation of the elderly's family member.

**PB6 242 EFFECT OF RESISTANCE TRAINING AND ANTIOXIDANT VITAMIN SUPPLEMENTATION ON MUSCLE STRENGTH IN OLDER MEN AND WOMEN**

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Aging is associated with sarcopenia, which is a decrease in muscle mass and strength. Resistance exercise is thought to increase fat-free mass and strength, although this remains controversial. Antioxidant vitamin supplementation may reduce exercise-induced oxidative stress and maximize the gains following exercise. The combined effect of resistance training and antioxidant vitamin supplementation on strength in the elderly remains unclear. Hence, the aim of this study was to evaluate this combination effect in elderly men and women. Thirty-five healthy elderly ( $65.6 \pm 3.7$  yrs) were divided into 2 groups: resistance training + placebo (3x8 repetitions at 80% of 1RM; 3 days/week), and resistance training + antioxidant vitamin supplementation (vitC: 1000mg/d; vitE: 600mg/d). The 1RM of 8 exercises and body composition (DXA) were performed at baseline and after 6 months of intervention. An independent sample t-test was performed to determine differences among groups at baseline. We also used a repeated measure-ANOVA using gender as covariate to evaluate the treatment effect after intervention and a pair t-test to examine difference between baseline and post-intervention measurements in each group. At baseline, no difference was observed between groups for any variables. No treatment effect was observed on muscle strength, even if fat-free mass was tendency more increased in the antioxidant group as compared to the placebo group ( $P=0.063$ ). Hence, muscle strength changes were similar in both groups. A 6 month resistance program combined with antioxidant vitamin supplementation in healthy elderly individuals did not seem to maximize muscle strength increases, although it appeared to be beneficial for fat-free mass gains. Nevertheless, high intensity resistance training was well-tolerated and should be recommended for others purposes. We suggest that a similar study to verify the impact of these interventions in frail subjects would be of great interest.

**PB6 243 PROLONGED FUNCTIONAL PERFORMANCE IN OLDER ADULTS FOLLOWING TRAINING CESSATION**  
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Introduction: Training cessation among older adults has been shown to have negative consequences for muscle functional. Exercise programs undertaken prior to activity cessation may offer physiological protection. In this study the residual effects of varied resistance training were investigated following extended detraining and subsequent retraining. Methods: Thirty-eight healthy independent living older adults (65 - 84 years) entered a 24-week detraining period subsequent to 24 weeks of training. Following detraining, subjects' recommenced training (retraining) using either the high-velocity muscle power (HV) or muscle strength (ST) protocol undertaken during the initial training period, twice weekly for 12 weeks. Isometric and dynamic muscle strength, muscle power, movement velocity and a battery of functional performance tasks were assessed. As were body composition, balance confidence and quality of life. Results: Significant increase in muscle function and functional performance followed the initial training period. However, no differences between groups emerged. Detraining resulted in similar declines in muscle power and muscle strength for both groups ( $p < 0.05$ ) (power, HV  $17.8 \pm 1.8\%$ , ST  $15.5 \pm 2.2\%$ ; and strength, HV  $17.1 \pm 2.2\%$ , ST  $16.5 \pm 1.8\%$ ), which were accrued following the abbreviated retraining. No significant changes in functional ability were observed following detraining (average change; HV  $3.1 \pm 3.5\%$  and ST  $2.1 \pm 3.5\%$ ) or retraining. No group differences emerged following detraining or retraining in this study. Conclusion: Cessation of training resulted in only a modest loss of muscle power and strength that was recouped following 12 weeks retraining. Importantly, training-induced gains in functional performance were preserved during detraining. The residual effects of power or strength training appear comparable, and both may be suitable exercise modes prior to a period of activity cessation to promote physical independence.

**PB6 244 ARE ELDERLY PEOPLE RECEIVING CALCIUM AND VITAMIN D APPROPRIATELY FOR OSTEOPOROSIS IF RENAL FUNCTION IS CONSIDERED?**  
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Introduction Many elderly patients are prescribed combination tablets for osteoporosis. Some prescriptions may be inappropriate as conversion of vitamin D to its active form is ineffective when Glomerular Filtration Rate(GFR) is  $< 30\text{ml/min}$ . We investigated the prescription of these drugs within inpatients & greater than or equal to 80 years; how many of these had a GFR  $< 30\text{ml/min}$  and whether they were assessed for renal bone disease. Method We reviewed 240 inpatients' drug charts, and notes for those taking calcium and vitamin D, and noted their weight and their best creatinine over the past year. We calculated estimated GFR(eGFR) using the Cockcroft-Gault equation. In those with an eGFR  $< 30\text{ml/min}$  we noted: Prescription of other calcium or vitamin D preparations and osteoporosis drugs; Calcium, Vitamin D, Phosphate and Parathyroid Hormone (PTH) levels and whether they had follow up in renal outpatients. We excluded those with oedema as dry weight would be difficult to assess. Results A total of 240 drug charts were reviewed, of these 52 patients were on calcium and vitamin D. 9 patients were excluded: 7 had no weight recorded, 1 had ascites, and one was taking plain calcium carbonate. 13/43 patients taking calcium and vitamin D supplements had an eGFR  $< 30\text{ml/min}$ . 1/13 patients were on calcitriol, 2/13 on a bisphosphonate, 10/13 had calcium and phosphate levels checked in the past year and 0/13 had vitamin D or parathyroid hormone levels checked. Only 2/13 had renal outpatient follow up. Conclusion Our audit raises several issues: There is inappropriate/ineffective prescribing of osteoporosis prevention medication in elderly patients with eGFR  $< 30\text{ml/min}$ ; and more elderly

patients could be followed up for the management of renal bone disease as per UK Chronic Kidney Disease guidelines.

**PB6 245 FRAILTY AND DEPENDENCY IN IADL AT 2 YEARS IN HIGH-FUNCTIONING OLDER ADULTS: THE ALBACETE STUDY**

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INTRODUCTION: Frailty is a predictor of death, institutionalization and dependency. The association with dependency in IADLs and the role of cognitive status has not been analyzed in high-functioning older adults. METHODS AND MATERIALS: Longitudinal cohort study. 286 high-functioning community older adults. Frailty criteria: unintentional weight loss  $>4.5$  kg in the last year, exhaustion assessed with CES-D, kilocalories of total physical activity in the last week (men  $<1729$  kcal, women  $<1435$  kcal), slow gait measured with the Timed up and go (men  $>11.23$  secs, women  $>11.29$ ), low hand grip strength (men  $<24$  kg, women  $<15$  kg). Prefrailty status 2 criteria and frailty three or more. After, we added a MMSE<24 points as a sixth criteria. Loss of any IADL on the Lawton scale at 2 years was considered the main result variable, adjusted for age and sex. RESULTS: Mean age 74.3, 181 women (63.3%). Lawton 7.1, MMSE 25.3. Frailty criteria: slow gait 72 (25.2%), grip strength 52 (18.2%), physical activity 55 (19.2%), weight loss 27 (9.4%), exhaustion 39 (13.6%). 207 were non frail (77.2%), 44 prefrail (16.4%), and 17 frail (6.3%). In 16 cases data were not complete. 27.6% of subjects lost any IADL at 2 years (non frail 25.1%, prefrail 29.5% and frail 52.9%). Frail elderly people had an adjusted risk of losing IADLs at 2 years HR=3.35 (CI95% 1.18-9.51; p=0.023) compared with non frail. When MMSE criteria was added, the HR decreased but the CI was narrower: HR=2.97 (CI95% 1.34-6.59; p=0.008). CONCLUSION: Frailty status is associated with dependency in IADLs at 2 years in high-functioning older adults without clinical atherosclerotic disease.

**PB6 246 DOES THE CLINICAL CONTEXT AFFECT THE VALIDITY OF BATHROOM RECOMMENDATIONS MADE BY HOME HEALTH AIDS?**  
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INTRODUCTION: When there is a shortage of occupational therapists, an organizational model that involves home health aides in the process of recommending bathroom equipment could have a positive impact on the physical and psychological health of these workers. Currently, the involvement of home health aides is often limited to clients already receiving their services. The PURPOSE of this study was to compare the criterion validity of recommendations made by home health aides using an algorithm regarding bathroom equipment for community-living adults presenting bathing difficulties under two clinical contexts: new referrals (group 1) and clients already receiving bathing assistance from home health aides (group 2). METHODS: Community-living adults with bathing difficulties (n=96) were visited by an occupational therapist (gold standard) and by one of four home health aides using an algorithm. Both evaluations took place within 10 days and evaluators were blind to the recommendations made by the other. Three parameters, sensitivity, specificity and kappa (agreement corrected for chance), allow to quantify the criterion validity for aspects such as most appropriate place for bathing or type of grab bars. RESULTS: Participants in the two groups differed on residential status, medical diagnosis and functional autonomy level. However, there was no significant difference between the groups in the criterion validity of the recommendations made by the home health aides ( $p>0.10$  on all three parameters for each aspect compared). CONCLUSION: Involvement of home health aides could be considered with a broader group of clients to increase the likelihood of bathrooms being properly adapted to the needs of both client and worker.

**PB6 247 CRITERIA OF THE TIMED TEST OF "STANDING UP FROM A LONG SITTING POSITION ON THE FLOOR" BASED ON PREDICTIVE VALIDITY FOR CARE NEED CERTIFICATION IN THE JAPANESE COMMUNITY-DWELLING ELDERLY.**

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We evaluated the criteria for determining care need certification of the elderly in terms of the timed test of "Standing Up from a Long Sitting Position on the Floor" (SULSPF),

previously proposed as a parameter for the simple measurement of decreased physical function. At the time of the baseline survey, there were 3,109 elderly residents (excluding those receiving some type of support or care) aged 70-84 years in Miyagi Prefecture. Of the 3,109 elderly residents, 2,772 (males, 41.3%; females, 58.7%) cooperated in the baseline, and data on SULSPF could be collected from 2,711 (effective percentage, 97.8%). Subsequently, in 1,233 elderly residents (males, 41.6%; females, 58.4%) in whom detailed observation of the situation for determining care need certification was possible, the predictive validity of SULSPF for the certification was analyzed by calculating the odds ratio adjusted for the influences of sex and age (continuous variables) by a multiple logistic regression model using the presence or absence of care need certification during the period of 2 years and 5 months (29 months) from the baseline survey as a dependent variable, and 5 grades (every 20 percentiles) of SULSPF as an independent variable. Compared with grade 1 (< 2.26 seconds), grades 3 (2.99-3.62 seconds), 4 (3.62-4.86 seconds) and 5 (> 4.86 seconds) showed significant odds ratios. This suggested that the risk for care need in the near future increases when SULSPF is more than about 3 seconds. As the evaluation criteria for screening as early as possible in the elderly at high risk for requiring care need, we propose the following classification of SULSPF: normal range, < 3 seconds; borderline range, 3-5 seconds; and impairment range, > 5 seconds, or standing up is impossible.

**PB6 248 THE -174G/C PROMOTER POLYMORPHISM OF THE INTERLEUKIN-6 GENE, PLASMATIC LEVELS OF IL-6 AND MUSCULAR STRENGTH IN OLDER WOMEN**

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Introduction: Polymorphism in the interleukin-6 (IL-6) gene regulates the rate of IL-6 production and this has been implicated in age-related disturbances. The present study investigates the effect of -174G/C promoter polymorphism of the IL-6 gene on the plasmatic levels of IL-6 and muscular strength of elderly women. Methods and materials: The sample consisted of 199 institutionalized and community-living elderly patients ( $73 \pm 8$  years). Genotyping was done by direct sequencing of PCR products. The plasmatic concentrations of IL-6 were quantified by high-sensitivity assays. The muscular strength of the articulation of the knee was assessed using the Biodex System 3 Pro® isokinetic dynamometer. The ANCOVA was applied to investigate the effect of the polymorphism on the IL-6 levels and muscular strength. Results: The -174G/C promoter polymorphism affected the plasmatic levels of IL-6 in elderly women ( $p<0.01$ ). Interestingly, we found that the homozygotes for the G allele presented higher levels of IL-6 (GG 3.85pg/ml; GC+CC 2.13pg/ml). An interaction of polymorphism -174G/C and the place where they are living (institutionalized and community) was identified. Result show that the genotype has an effect over IL-6 levels and that IL-6 levels were higher in institutionalized ones. This polymorphism did not directly influence the muscular strength ( $p>0.05$ ). Conclusion: The results of this study support previous reports which defend that the -174G/C promoter polymorphism contributed to the individual variability of the IL-6 plasmatic levels in elderly women. An interaction between the place where they are living and polymorphism suggests that environment factors can to influence the genotype effects over IL-6 production. This polymorphism did not influence the muscular strength of the elderly patients.

**PB6 249 EFFECTS OF A MULTICOMPONENT EXERCISE PROGRAM ON LIFE SATISFACTION AMONG INSTITUTIONALIZED ELDERLY**

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**BACKGROUND:** Information is lacking about the effects of exercise on life satisfaction among institutionalized elderly. **OBJECTIVE:** To determine the effects of a 12-week group-based, multicomponent exercise program on life satisfaction in a public funded institute for the elderly. **METHODS:** A quasi-experimental pretest-posttest design was used in the study. Participants involved in the study were residents of a shelter home located in Seremban, Negeri Sembilan, Malaysia. The intervention group consisted of 27 volunteers over the age of 60 who participated in a 60-min group-based exercise program conducted 3 times a week, for 12 weeks. The exercise consisted of 5-10 mins warming up and cooling down, 20-30 mins aerobic phase, 10-20 mins balance training and stretching exercises for major muscle groups. Strength training was incorporated two times a week emphasizing major muscle group. All exercise movements were designed based on functional-task elements. The control group consisted of 25 volunteers who continued with their current level of activity but received social visit once a week. **MAIN OUTCOME MEASURE:** Life satisfaction was measured using the Cantril's self-anchored scale. **RESULTS:** The intervention group and the control group were not significantly different at baseline. At the end of 12 weeks, the intervention group shows increase in life satisfaction by 10.7% ( $t=1.22$ ,  $p > .05$ ), while the control group decrease by 11.3% ( $t = -1.945$ ,

$p > .05$ ). **CONCLUSIONS:** This study suggests that a multicomponent exercise program may improve life satisfaction among institutionalized elderly, and it may be prescribed as a suitable exercise program for the elderly. Future study is warranted on similar study but need to be randomized, larger sample size and longer duration. **Key Terms:** Institutionalized older persons, life satisfaction, multicomponent exercise, Malaysia.

**PB6 250 ACTIVITY RESTRICTION INDUCED BY FEAR OF FALLING IN COMMUNITY-DWELLING ELDERLY**

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Introduction: Fear of falling is a common health condition among elderly and it can leads to an activity restriction which reduces social interaction and compromises physical and mental well-being. The aim of this study was to determine the social-demographic, clinical, functional and psychological factors associated to activity restriction induced by fear of falling in community-dwelling elderly and identify which variables best discriminate the individuals in relation to activity restriction induced by fear of falling. Methods and Material: One hundred and thirteen community-dwelling elderly ( $74.5 \pm 7$  years old) participated in the study. Activity restriction induced by fear of falling, previous falls, fall-related self-efficacy, frailty phenotype, functional capacity, depressive symptoms, health self-perception, socio-demographic and clinical factors were assessed. Descriptive statistics, ANOVA and Kruskal Wallis tests were used to analyze the correlations between activity restriction induced by fear of falling and all other variables. Path analysis (CHAID) method was used to verify which variable better discriminate individuals in relation to activity restriction ( $=0.05$ ). Results: The participants who reported fear of falling and activity restriction showed higher depression and lower fall related self-efficacy ( $p<0.05$ ). In comparison with participants with no fear of falling, those with fear of falling and activity restriction demonstrated lower gait velocity and independence level for instrumental daily living activities, higher number of diseases, worse health self-perception, more depressive symptoms and lower fall-related self-efficacy ( $p<0.05$ ). The variables which best discriminate groups were depression, exhaustion (frailty phenotype) and social participation activities. Conclusion: Activity restriction induced by fear of falling can have negative effects in functional capacity, psychological aspects and fall-related self-efficacy in community-dwelling elderly. Psychosocial factors seem to better discriminate the elderly who avoid activities due to fear of falling.

**PB6 251 IMPACT OF AN AQUATIC PHYSICAL THERAPY PROTOCOL IN ELDERLY WOMEN WITH OSTEOARTHRITIS OF THE KNEE**

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Introduction: Knee osteoarthritis (OA) is one of the most prevalent diseases among elderly individuals which leads to a number of adverse health events markedly impaired physical function and pain. Aquatic Physical Therapy is frequently prescribed for the treatment of rheumatic diseases, especially for OA. The aim of this study was to investigate the impact of an aquatic exercise protocol in a group of elderly women with knee OA. Methods and Material: Seventy-three 5.1) were randomly assigned to community-dwelling elderly women (70.8 an experimental group ( $n=37$ ) which received a treatment regimen in a warm pool (twice/weekly, 6 weeks, 50 minutes/session) or to the control group ( $n=36$ ). Muscular performance (strength, power and endurance) of the quadriceps and hamstrings muscles were assessed in an isokinetic dynamometer. The Western of Ontario and McMaster Universities Knee Osteoarthritis Index assessed pain, joint stiffness and physical function. Descriptive statistical analysis was conducted for all variables. For within-group comparison, the Wilcoxon test was used and for between-group comparisons, the Mann-Whitney U and the Qui-square tests were carried out. Treatment size effect was also calculated ( $=0.05$ ). Results: After six weeks, the experimental group presented a statistically significant improvement in pain ( $p=0.008$ ), physical function ( $p=0.004$ ), strength and power of the hamstrings ( $p=0.005$  and  $p=0.001$ ). The treatment size effect was moderate for pain ( $SE=0.50$ ) and physical function ( $SE=0.56$ ); and small for strength ( $SE=0.26$ ) and power ( $SE=0.27$ ) of the hamstrings. Conclusions: This study demonstrated that an aquatic Physical Therapy exercise protocol yielded improvement of pain and physical function, and in strength and power of the hamstrings of the elderly women with knee OA who participated of the experimental protocol.

**PB6 252 FRAILTY PROFILE OF BRAZILIAN COMMUNITY-DWELLING ELDERLY**

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**Introduction:** Frailty is a common elderly condition which leads to adverse health outcomes. This study was conducted to identify the associated characteristics and the risk to be frail, according the frailty phenotype (Fried et al 2001) in community-dwelling elderly individuals in Brazil. **Material and Methods:** One hundred thirteen 7.0 years) were assessed with regard to the elderly individuals (74.5 five frailty criteria, socio-demographic and clinical variables, functional capacity, symptoms of depression and self-perception health were also collected. Descriptive statistics, the chi-square test, logistic regression and ANOVA were employed to assess correlations between the phenotype of frailty and the remaining variables. **Results:** Among the elderly individuals assessed, 13.27% were frail; 43.4% pre-frail. Frails were older (OR = 1.16; 95%CI 1.04-1.30); had lower income ( $r = -0.32$ ;  $p=0.048$ ) and schooling levels (OR = 0.31 95% CI 0.11-0.85); were widowed (OR = 4.89 95% CI 1.30-13.38); had greater number of diseases (OR = 1.61 95% CI 1.13 - 2.26); were dependent in basic (OR= 4.12 95% CI 1.68 - 10.10) and instrumental activities of daily living (OR = 0.56 95% CI 0.39 - 0.82); and had a worse health self-perception (Spearman's  $r = -0.23$ ;  $p=0.022$ ). Performing a sensitivity analysis of the five frailty characteristics, a high classification power was found when the number of frailty factors (exhaustion, physical inactivity and gait speed) was  $\geq 2$  (86.7% sensitivity and 97.0% specificity). Thus, at this cutoff point, these criteria are highly sensitive to classify an elderly as being frail. **Conclusion:** The phenotype of Fried et al. is a simple and reliable to detect frailty allowing a unified language for healthcare professionals regarding its definition.

#### PB6 253 SARCOPENIA AND FUNCTIONAL MOBILITY IN COMMUNITY-DWELLING ELDERLY

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**Introduction:** sarcopenia is one of the most significant physiological changes related to aging and seems to be the main cause of functional mobility loss in the elderly. The objectives of this study were to compare muscle function of lower extremities, calf circumference, handgrip strength and functional mobility among age groups of older people and to explore the possible correlations between these measurements. **Methods and Material:** eighty-one community-dwelling 1.4); 70-79±elderly were stratified by age groups of 65-69 (67.4 3.2) years old. Walking speed (photoelectric $\pm 2.9$ ) and  $\geq 80$  (83.6 $\pm$ (73.9 cells), handgrip (Jamar dynamometer), muscle function of hip, knee and ankle (isokinetic dynamometer) and calf circumference were evaluated. Variance analysis, Pearson's correlation and Receiver Operating Characteristic (ROC) curves were used for statistical analysis ( $\alpha=0.005$ ). **Results:** The elderly group of  $\geq 80$  years showed lower values than the 65-69 age group for calf circumference, habitual and fast walking speed, hand grip, average peak torque and average power of hip, knee and ankle ( $p<0.05$ ). In all the correlation analysis of muscle function parameters with walking speed and handgrip, moderate significant correlations were found ( $p<0.05$ ). The ROC curve analysis suggested a cutoff point of 14.51 Kgf for screening muscle function loss in the sample, as an indication for possible sarcopenia. **Conclusion:** This study showed an association between muscle function, handgrip and fast walking speed as well as the decreasing of these parameters with aging and suggested a possible cutoff point to screening for muscle function of lower extremities through handgrip levels. The results indicated that muscle strength and power optimization are key elements on prevention protocols to maintain functional mobility and to establish rehabilitation programs for community-dwelling elderly individuals.

#### PB6 254 POLYPHARMACY AND FALLS: IS ORTHOSTATIC HYPOTENSION A MEDIATOR?

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**Introduction** Polypharmacy is a known risk factor for falling. A recent systematic review identified psychotropics as the main culprits, whilst cardiovascular medications were weakly associated with falls (Hartikainen et al. 2007). To some, the clinical detection of orthostatic hypotension (OH) is unlikely to be useful in predicting falls (Liu et al. 1995). We tested whether OH interacts with use of psychotropics/cardiovascular medications in predicting current faller status in a sample of Irish community-dwelling older people. **Methods and materials** 338 participants aged $>60$  attending the TRIL Clinic between Aug 2007 and Sep 2008 (mean age 72.4, 66.6% females). Participants with MMSE $<23$  and Berg Balance Score $<36$  were excluded. OH was defined as symptoms of dizziness/light-headedness during active stand. Number of psychotropics (from ATC codes N06A, N05CD, N05CF) and cardiovascular medications (from codes C07A, C03, C09, C08, C02CA, C01DA) were recorded for each subject. Those who had two or more falls in the last year were classified as fallers. Results 15.4% of subjects were fallers, and 30.5% had OH. There was no association between number of cardiovascular medications and faller status, but there was an association between number of psychotropics and faller status (Chi-squared for trend,  $p=0.027$ ). A logistic regression model was computed with two

interaction terms as predictors of faller status: number of cardiovascular medications\*OH and number of psychotropics\*OH. Whilst the former interaction was not significant (95% CI for OR 0.79-1.58,  $p=0.516$ ), the latter had a trend towards significance (95% CI for OR 0.97-3.18,  $p=0.062$ ). **Conclusions** Despite the cross-sectional limitations, results support that cardiovascular medications may not have an association with OH and falls. OH may be relevant in mediating the relationship between psychotropics and falls.

#### PB6 255 OUR EXPERIENCES WITH ANEMIA IN THE OLD AGE – IS IT A SIGN OR ADDITIONAL DISEASE ?

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**Background:** With increasing age occurrence of anemias grows. Anemia especially in the elderly is a sign, not a diagnosis, an evaluation is almost warranted to identify the underlying cause. **Purpose:** An analysis of occurrence and characteristics of anemia in the elderly 65+ y. admitted during the last two years. The authors demonstrate an importance of the problems through clinical observations of 246 cases with hemoglobin < 110 g/l. **Patients and Methods:** During the considered period of two years the authors treated 2614 elderly patients aged 65+ y. A subgroup of 246 old anemic patients (aged 81 $\pm$ 7.2 y.) during the whole of the two-year period was affected by pathologically decreased hemoglobin and clinical signs of anemia were the main cause of hospitalization and further diagnostic and therapeutic proceedings. All the presented patients underwent a complete intern examination (iron, ferritin, transferin, B12, folat, zinc inclusive) and complex geriatric assessment, too. **Results:** Hemoglobin by hospital admission in average was 93.4 g/l and below 80 g/l in 58 cases. MCV was normal in 66% of patients; below 80 fentoliter in 24% and above 95 fl in 10% of all anemic patients. The patients received transfusion 58-times and in all the cases anemia was managed according to its origin. During hospitalization the status was as follows: worsened 18-times; stationary 160-times and significantly improved 68-times. **Conclusions:** Anemia in the elderly is often caused by a benign disease and, in fact, may simply be a marker of a chronic illness. It may be, however, a presenting sign of a serious disease, including cancer. The authors point out some aspects, risks and pitfalls of anemia in the elderly following their own experiences. Anemia in old patients often means the one in chronic disease.

#### PB6 256 PROVIDING SINGLE LENS DISTANCE GLASSES PREVENTS FALLS IN ACTIVE OLDER MULTIFOCAL GLASSES WEARERS: AN RCT

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**Introduction:** Recent research has shown that wearing multifocal (bi, tri- and progressive lens) glasses may significantly increase the risk of falls in older people. We aimed to determine whether the provision of single-lens distance glasses to older multifocal glasses wearers, with recommendations for wearing them for walking and outdoor activities, can reduce falls. **Methods:** 606 regular wearers of multifocal glasses (mean age=80 $\pm$ 7) were randomly allocated to either an intervention group (provision of single lens glasses, with advice about appropriate use) or a control group (usual care). Inclusion criteria included increased risk of falls (a fall in past year or a timed up and go time > 15s) and use of multifocal glasses 3+ times / week. Participants were followed-up for falls for 12 months. **Results:** At baseline, the two groups were well matched for a range of demographic, physical and health measures. Single lens glasses were provided to 90% of participants in the intervention group within 2 months; median = 28 days, IQR = 19-43 days. 54% of the intervention group complied with the recommendations for using single lens distance glasses for walking and outdoor activities for 7+ months of the follow-up year. Overall, the intervention resulted in an 8% reduction in all falls – IRR=0.92(0.73-1.16). A pre-planned sub-group analysis revealed the intervention was effective in preventing falls in people who regularly undertook outside activities as determined from the Adelaide Activities Profile. In this group (n=264) there was a 40% falls rate reduction - IRR=0.60(0.42-0.87). **Conclusions:** These findings suggest that with appropriate counselling, compliance with the intervention was acceptable and that the provision of single lens glasses for older people who take part in regular outdoor activities is a simple and effective falls prevention strategy.

#### PB6 257 EFFECTS OF RADIAL SHOCK WAVE THERAPY ON AGES WITH PERIARTICULAR SOFT TISSUE CALCIFICATION KNEE OSTEOARTHRITIS

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**Introduction:** To investigate the effects of radial shockwave therapy (rESWT) on old age knee osteoarthritis with periarticular soft tissue calcification, and compare with ultrasound. **Methods and Materials:** 120 old patients (more than 65 years old) with bilateral moderate

knee osteoarthritis (Altman III) and calcification of periarticular tendon were selected and randomly assigned to four groups (GI-GIV). Patients in all groups received 20 minutes of hot packs and underwent passive range motion exercises on an electric stationary bike (20 cycles per minute) for 5 minutes to both knees before undergoing muscle strengthening exercises. Patients in Group I-III received isokinetic muscular strengthening exercises three times weekly for eight weeks. Besides, those Group II received pulse ultrasound treatment for calcified popliteal soft tissue three times weekly for eight weeks, in Group III received weekly radial shockwave for calcified popliteal soft tissue for first five weeks, and Group IV acted as controls. The therapeutic effects were evaluated by changes in the arthritic knees range of motion (ROM), visual analogue pain scale, Lequesne's index, and muscle peak torques of knee flexion and extension after treatment and at follow-up 6 months later. Compliance in each group was also recorded. Results: Each treated group exhibited increased muscle peak torques and significantly reduced pain and disability after treatment and at follow-up. However, only patients in Groups II and III showed significant improvements in ROM after treatment, and only participants in Group III showed immediate improvement in ROM after rESWT. Patients in Group III also showed the greatest increase in muscular strength, and the most decrease in disability after treatment and at follow-up. Conclusion: rESWT is better than pulse ultrasound as an adjuvant treatment in management of knee osteoarthritis with popliteal calcification and results in more functional improvements.

**PB6 258 A 24 WEEK HOME EXERCISE AND TELEPHONE FOLLOW-UP INTERVENTION DELAYS HOSPITAL READMISSION FOR OLDER ADULTS.**

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Introduction: Older adults with chronic disease have higher rates of hospital admissions, readmissions and longer hospital stays than the general population. Many older people experience functional decline during hospitalisation which impacts on their future independence and quality of life. This study aimed to determine the effect of an exercise-based home follow-up intervention on time to readmission and length of stay for older adults. Methods: 128 patients aged over 65 years admitted with a medical diagnosis and at least one risk factor for readmission were randomised to either usual care, or a 24 week home exercise and telephone follow-up intervention. Data were collected from medical records, clinical assessment and surveys at baseline (on admission), then 4, 12 and 24 weeks following discharge. Results: Kaplan-Meier survival curves indicated the intervention group had a longer time to first readmission than the control group (log-rank  $\chi^2=6.4$ ,  $p=0.011$ ). Median time to readmission was 56 days (95% CI 44–82) in the intervention group, and 34 days (95% CI 24–68) for the control group. After adjustment for potentially confounding factors in a Cox proportional hazards regression model, time to readmission remained significantly delayed for the intervention group (hazard ratio 0.31, 95% CI 0.15–0.65,  $p=0.002$ ); and the presence of vascular disease and functional impairment were significant risk factors for readmission (vascular disease: hazard ratio 2.59, 95% CI 1.33–5.05,  $p=0.005$ ; functional impairment: hazard ratio 2.65, 95% CI 1.25–5.63,  $p=0.011$ ). Shorter length of stay was significantly associated with increased numbers of emergency readmissions ( $p=0.001$ ) and visits to Emergency Departments ( $p=0.029$ ). Conclusion: An exercise and home follow-up intervention may delay time to readmission for older adults.

**PB6 259 RECOVERY IN ACTIVITIES OF DAILY LIVING AMONG DISABLED OLDER PEOPLE IN THE COMMUNITY**

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Introduction: A better understanding of the mechanisms underlying recovery in activities of daily living (ADLs) could facilitate the development of cost-effective prevention programmes. We conducted a systematic literature review and found that relatively little is known about factors predicting recovery among disabled older people in the community. The objective of our study was therefore to provide evidence for predictors of ADL recovery. Methods and Materials: The Medical Research Council Cognitive Function and Ageing Study recruited a sample of 13,004 individuals aged 65 years and over from five communities in the United Kingdom. Participants underwent a baseline interview during 1990–1994 and were re-assessed two years later. Those who reported they were unable to perform at least one ADL task without difficulty or help at baseline ('disabled') were included in the analysis. Logistic regression was used to calculate odds ratios (OR) and 95% confidence intervals (CI) for predictors of recovery from disabled to non-disabled state at follow-up. Results: At baseline, 50 per cent reported disability, eight per cent of whom recovered independent function at follow-up. Participants aged 75 years and over (OR = 0.4, 95% CI: 0.2–0.9) and with poor self-rated health (OR = 0.5, 95% CI: 0.4–0.6) were least likely to recover, followed by women (OR = 0.6, 95% CI: 0.5–0.8), those taking one or more medications (OR = 0.7, 95% CI: 0.5–0.8) as well as having two or more comorbidities (OR = 0.7, 95% CI: 0.5–0.9). Ten and more years of education was associated with an improved likelihood of recovery (OR = 1.3, 95% CI: 1.1–1.6). Conclusion: A

minority of participants reporting disability at baseline then reported independent function at two years. It may be important to focus on those who seem least likely to recover once they have become disabled. Factors that have been shown to be associated with greater risk of disability were inversely associated with recovery, suggesting that intervention programmes could target the same factors.

**PB6 260 INAPPROPRIATE MEDICATION USE AND RISK OF FALLS: A PROSPECTIVE STUDY IN LARGE COMMUNITY-DWELLING ELDERLY COHORT S. BERDOT\*** (INSERM UNIT 708, Paris, France)

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Introduction Explicit criteria for determining potentially inappropriate medication (IM) consumption in elderly have been elaborated. IM lists are used worldwide to evaluate medical prescriptions but there is little epidemiologic evidence demonstrating negative consequences of IM use. It has been reported that some drugs could increase the risk of falls, a frequent and serious problem in elderly population. We aimed to evaluate the association between IM use and fall risk. Methods and Materials The study population consisted of 6343 subjects included in a 4-year prospective cohort of community-dwelling elderly, the 3C study. Data collected at baseline, 2 and 4-year follow-up included sociodemographic characteristics, medical history, medication use (self-reports and from the national healthcare insurance) and falls' occurrence. We used logistic regressions to evaluate association between IM use and falls. Results 32% of subjects used IM at baseline and 22% had fallen 2 times or more during follow-up. Baseline IM users had a significantly increased risk of fall over 4-year follow-up which was mainly due to the use of long-acting benzodiazepine (OR=1.40,  $p<.01$ ), other inappropriate psychotropics (adjusted OR=1.74,  $p<.05$ , in regular users), or medication with anticholinergic properties (adjusted OR=1.57,  $p<.01$ , in regular users). Neither occasional, nor regular use of short- or intermediate-acting benzodiazepines was associated with an increased fall risk. Further analysis in long-acting benzodiazepine users did not show any dose-effect relation between the number of boxes bought over a 3-year period and fall risk. Conclusion Our study showed that use of IM, particularly of long-acting benzodiazepines, was associated with an increased risk of falling. Short- or intermediate- acting benzodiazepines, which did not increase falls' risk, should be preferred to long-acting benzodiazepines in elderly patients.

**PB6 261 INTERACTIVE GAIT AND THE RISK OF FUTURE FALLS AMONG INDEPENDENT OLDER PEOPLE**

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Background: Identifying individuals at risk of falling remains an important issue in fall prevention. Methods: 230 physically independent people, 75 years or older, underwent a 1-year follow-up of falls following baseline assessments of: Gait-pattern changes between single and dual-task walking, i.e. dual-task cost (DTC); Timed Up&Go; Short Physical Performance Battery; Activity Specific Balance Confidence Scale; Modified Survey of Activities and Fear of Falling in the Elderly; SF-36; self-perceived balance in walking; fall history; Mobility disability status. Results: Forty-eight percent of the participants fell during follow-up. A small prognostic guidance for ruling in a high fall risk was found for DTC in mean step width of " 3.7 mm with a manual task (Likelihood Ratio, LR+ 2.3), and a small guidance for ruling out a high fall risk with DTC in mean step width of " 3.6 mm with a cognitive task (LR- 0.5). In cross-sectional evaluations DTC related to an increased fall risk were associated with: sub-maximal physical performance stance scores (Odds Ratio, OR, 3.2 to 3.8), lower self-reported balance confidence (OR 2.6), higher activity avoidance (OR 2.1), mobility disability (OR 4.0), and cautious walking out-door (OR 3.0). However, none of these other measures provided any guidance to fall risk at an individual level. Conclusion: DTC of gait can, depending on the type of secondary task, indicate a functional limitation related to an increased fall risk or a flexible capacity related to a decreased fall risk. DTC in mean step width seems to be a valid measure of balance control in seemingly able older people and may be a valuable part of the physical examination of balance and gait when screening for fall risk in this population.

**PB6 262 INTEGRATIVE HEALTH FOR OLDER ADULTS: AN OBSERVATIONAL STUDY**

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Introduction: Integrative health, also known as complementary and alternative medicine, is increasingly popular, and has a growing body of scientific knowledge to support its use. The objective of this observational study was to establish the feasibility of offering integrative health options as integral components of a model academic geriatric medicine

practice. Methods: From 2004-2008, classes in tai chi, yoga, meditation, Pilates, and strength training were established under the guidance of a senior medical faculty person, with the support of the practice administration. From 10/07-11/08, number of participant episodes/weeks offered were: 1) tai chi 180/60; 2) yoga 420/60; 3) meditation 224/32; 4) Pilates 108/12; 5) strength training 68/17. Factors contributing to growth of programs included: 1) advertising in quarterly practice newsletter; 2) increasing knowledge of referring practitioners of the benefits of integrative health options by didactic and experiential seminars; 3) providing administrative support for organizational work via a small grant. Factors inhibiting the growth of programs included: 1) (initially) lack of knowledge in referring providers of benefits; 2) lack of space for physical movement-based programs; 3) lack of monetary support. Preliminary surveys demonstrate high satisfaction rates among patients and reports by providers of improvements in physical strength and mobility, and in mood and stress level. Research goals for all programs have been established, and implementation phases for research projects are underway. Conclusion: Older adults have demonstrated the same enthusiasm as younger adults for opportunities to engage in their own health plans via integrative health options. The feasibility of establishing integrative health programs within an academic medical center model program for geriatric care has been shown. Research concerning the benefits of integrative health interventions for older adults is needed.

**PB6 263 IMPROVING ORAL HEALTH OF THE GERIATRIC PATIENTS: EFFECTS OF AN EVIDENCE-BASED ORAL CARE INTERVENTION PROTOCOL**  
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Introduction: Geriatric patients are susceptible to have poor oral health. Yet, health care professionals has placed least attention to improve oral care practice in geriatric setting. This study examined the effects of an evidence-based oral care intervention protocol on oral health and oral health-related quality of life of geriatric patients. Methods and Materials: This non-equivalent control group pre-test post-test study was conducted in a regional hospital in Hong Kong. Upon hospital admission, 120 geriatric patients (experimental group) received the evidence-based oral care interventions whereas the other 92 (control group) received the usual oral care. Baseline assessment of oral health and oral health-related quality of life was assessed by using the Oral Health Assessment Tool (OHAT) and the Geriatric Oral Health Assessment Index (GOHAI), respectively. Repeated assessment was done at 3-day and 6-day thereafter. Two-way repeated measure analysis of variance was used to detect the group difference in the oral health outcomes. Results: The geriatric patients had poor baseline oral health status, particularly cracked lip (73.2%), dental caries (63.5%), tongue problems (83.1) and poor oral hygiene (87.8%). By comparing the changes in the OHAT and GOHAI scores between the control and experimental groups, the evidence-based oral care intervention protocol significantly improved the lip condition ( $p<0.001$ ), gum tissue ( $p=0.035$ ), oral dryness ( $p=0.024$ ) and cleanliness ( $p=0.003$ ) of the geriatric patients. The protocol also significantly improved their oral health-related quality of life ( $p=0.022$ ), particularly in the pain and discomfort dimension. Conclusion: This study showed that geriatric patients had high demand for good oral care. The evidence-based oral care intervention protocol would be an effective practice to improve the oral health of geriatric patients.

**PB6 264 COMPARISON AND CORRELATES OF PARTICIPATION IN OLDER ADULTS WITHOUT DISABILITIES**  
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Introduction: Few are known about the impact of aging by itself on participation in daily activities and social roles. This study aimed to compare, by age group and gender, the level of participation of older adults who had no disabilities, and to determine which characteristics are most associated with participation. Methods and materials: This cross-sectional study involved 350 randomly-recruited community-dwelling older adults ( $\geq 65$  years) living in four regions of the province of Québec (metropolitan, urban or semi-urban and rural areas). Participation in daily activities and social roles were measured with the Assessment of Life Habits which comprises 12 life domains. Six of these domains relate to daily activities: nutrition, fitness, personal care, communication, housing and mobility, and the other six to social roles: responsibilities, interpersonal relationships, community life, employment, education and leisure. Demographic, health-related and environmental data were also collected. Results: A decline with age was observed in four of the six daily activities domains and two of the four social roles domains of participation. However, these lower scores are mainly explained by the 85+ group, which consistently scored lower than the 65-69 group. No differences were found between the 65-69, 70-74 and 75-79 groups. Some participation domains differed according to gender. Satisfaction with participation was high and did not differ between age groups. Characteristics most associated with participation vary according to the domains; generally, age and marital status are the best determinants of participation. Conclusion: This study found that most of older adults have an unrestricted level of participation which decreases only late in the

aging process. This reduction in participation in very older adults was not accompanied by a decrease in satisfaction, supporting the hypothesis that they can participate satisfactorily in valued activities.

**PB6 265 NEW COACHING MODEL FOR OLDER PEOPLE WITH HEALTH LIMITATIONS. RESULTS FROM A RANDOMIZED CONTROLLED TRIAL REGARDING FALL PREVENTION.**

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Introduction Better Balance Coaching is an integrative health coaching model, developed to engage older people in health promoting activities. The model is a 6 month programme combining face-to-face and telephone coaching. The key approach in the model is to collaborate with people from the assumption that they are naturally creative and resourceful, despite their health limitations. Calling forth people's values and strengths, when designing actions and inquiries are methods recognized for building people's positive self-identities and capabilities. This first study of the model has been taken place in the field of fall prevention among older people. Current research suggests that older people can be engaged with fall preventive health care by promoting the benefits fitting to a positive self-identity, tailoring interventions to individuals and encouraging self-management. The developed model is believed to support these recommendations. Methods and materials Community-dwelling people aged  $\geq 65$  years, involved in fall accidents without hospitalization, were randomly assigned to health coaching or to a control group. Both groups received conventional care. The tailored health coaching programme contained elements from coaching, positive psychology, cognitive coaching, health psychology, fall prevention research, and gerontology. Results Thirty-four people were included in the intervention group and 40 people were included in the control group. In total, 356 coaching sessions were carried out. Statistical analysis of fall rates (12 months follow-up's) and outcomes in relation to physical functionality, fear of falling, quality of life, use of home care, etc. will be presented. Further, qualitative analyses of potential mechanisms at play, when health coaching older people with health limitations, will be presented. Conclusion The results from the analyses are expected to contain explanations and relevant practice guidelines, which may complement current ways to engage older people in health-promoting activities.

**PB6 266 FALLS PREVENTION AND THE TAI CHI INTERVENTION PARADOX**  
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Introduction: A brief look into statistical data pertaining to falls in the elderly provides ample evidence displaying the seriousness of this risk to health. Falls in Canada for example, result in 84% of injury-related hospitalizations in the sixty-five and over population. One rather novel approach to preventing falls at the individual level, involves promoting the use of Tai Chi in our senior population, and a modest literature has begun to accumulate to examine the efficacy of these interventions. Methods and materials: A conceptual framework was developed to assist in evaluating and understanding the many different fall prevention intervention options. Ageline and Medline searches were conducted using the key words "Tai Chi" and 10 articles were selected for review. Results: Falls intervention studies measure the actual number of falls during the study period and/or changes occurring in risk factors associated with falling. All 10 articles reviewed reported on risk factors, and 9 of 10 found a significant reduction in risk factors post intervention. Only 7 articles reported on the actual number of falls that occurred over the course of the intervention. Interestingly, only 1 of these 7 studies reported a significant difference in the number of falls between Tai Chi practitioners and controls. Conclusion: The review suggests that a Tai Chi intervention paradox exists. Simply, that Tai Chi is successful in reducing falls risk, but not in reducing the actual number of falls in elderly participants. This finding suggests that future research must be directed towards improving the psychometric properties of the instruments used to assess falls risk factors.

**PB6 267 STOPS WALKING WHEN TALKING: A PREDICTOR OF FALLS IN OLDER ADULTS?**

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Objective. The objective of this study was to systematically review all published articles examining the relationship between the occurrence of falls and changes in gait and attention-demanding task performance while dual tasking among older adults. Methods and material. An English and French Medline and Cochrane library search ranging from 1997 to 2008 indexed under "accidental falls", "aged OR aged, 80 and over", "dual-task", "dual-tasking", "gait", "walking", "fall" and "falling" was performed. Results. Of 121 selected studies, fifteen met the selection criteria and were included in the final analysis. The fall rate ranged from 11.1% to 50.0% in retrospective studies, and from 21.3% to 42.3% in prospective ones. Among the 3 retrospective and 8 prospective studies, 2 and respectively 6 studies showed a significant relationship between changes in gait performance under dual task and history of falls. The predictive value for falling was particularly efficient among

frail older adults compared to healthy subjects. Two prospective studies challenged the usefulness of the dual task paradigm as an efficient fall predictor compared to single task performance and 3 studies even reported that gait changes while dual tasking did not predict falls. The pooled odds ratio for falling was 5.3 (95% CI, 3.1-9.1) when subjects had changes in gait or attention-demanding task performance while dual tasking. Conclusions. Dual task-related changes in gait performance seem to be good predictors of falls among older adults and frail older adults in particular. Better identification of confounding factors, standardization of test methodology, increase of sample size and longer follow-up intervals will certainly improve the predictive value of dual task-based fall risk assessment tests.

**PB6 268 RISK FACTORS FOR RECURRENT FALLS IN THE ELDERLY POPULATION: RESULTS FROM THE PCR4 STUDY**

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Background. Few studies have examined the risk factors for recurrent falls. The aim of the study was to determine which risk factors of falls were associated with their recurrence among community-dwelling older adults. Method and material. 1066 subjects aged 65 and older were prospectively recruited. Use of psychoactive drugs, the number of drugs taken per day, basic mobility assessed with the Timed Up & Go test (TUG), maximal isometric voluntary contraction (MVC) force of hand, lower limb proprioception, distance binocular vision, fear of falling and history of falls during the past year were recorded. Subjects were separated into 4 groups based on the numbers of falls: 0, 1, 2 and > 3 falls. Results. Among the 395 (37.1%) fallers, 104 (9.8%) were recurrent fallers (i.e., > 2 falls). The numbers of falls increased with age (P-trend<0.001, ordered OR=1.05), female (P-trend<0.001, ordered OR=2.50), institutionalisation (P-trend=0.004, ordered OR= 2.40), the number of drugs taken per day (P-trend<0.001, ordered OR=1.08), taking sedative drugs (P-trend=0.017, ordered OR=1.59), score at Timed Up & Go Test (P-trend<0.001, ordered OR=1.04), use of walking aid (P-trend=0.004, ordered OR=2.05) and fear of falling (P-trend<0.001, ordered OR=5.06). After adjustment, only female (P<0.001), poor vision (P=0.006), lower limb proprioception (P=0.046) and fear of falling (P<0.001) were still significantly related to the number of incident falls. Conclusions. Several intrinsic factors are related to falls but few are specifically associated with their recurrence. The current study shows that sex female, poor vision, lower limb proprioception and fear of falling are related to the recurrence of falls.

**PB6 269 THE OCCURRENCE OF FALLS, FEAR OF FALLING AND FALL-RELATED EFFICACY AMONG INSTITUTIONALIZED ELDERLY.**

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Introduction: The fall event in elderly population is considered a public health problem because of its frequency and physical, psychological and social consequences. Objective: To verify the occurrence of falls, fear of falling and fall-related efficacy among older people living in long-stay institution. Methods and materials: This is a prospective exploratory study and we evaluated 33 institutionalized elderly aged 60 years or more, of both genders, residents in Juiz de Fora city, state of Minas Gerais, Brazil. Three instruments were used: the Mini-Mental State Examination (MMSE), used to identify cognitive impairment; Falls Efficacy Scale-International (FES-I) to assess fear of falling in older persons and a structured questionnaire containing data and identification of aspects related to falls. Results: The mean age of the sample was 79 years and 63.6% were women. Falls were reported by 33% of subjects, the mean length of institutionalization was 6.8 years. The majority of the elderly (59,38%) used more than 4 drugs. Fifty-four percent of the falls occurred during the afternoon, 63% of the falls occurred inside the housing and 45% of the elderly were recurrent fallers. Comparison between groups (fallers and non-fallers) showed that older subjects with recurrent falls have a significant fear of falling ( $p=0.00$ ) and a low fall-related efficacy ( $p=0.031$ ). The assessment of fear of falling, identified in 63% of the elderly a fear classified as very big and of the elderly that felt, 81% marked more than 30 points in the FES-I. Conclusion: The frequency of falls was smaller than expected for institutionalized elderly. The elderly that felt reported fear of falling and the falls occurrence affected negatively the fall-related efficacy.

**PB6 270 HEALTH PROFESSIONAL'S ROLES ACCORDING TO THE STROKE CAREGIVER'S TESTIMONY WHILE PROVIDING INFORMAL REHABILITATION AT HOME IN THAILAND**

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Objective: Our aim was to identify the roles of health professional according to the perception of caregivers during providing informal rehabilitation activities at home to stroke relatives. Methods: The participants consisted of 20 primary informal caregivers of stroke survivors living in four districts of Chonburi province, Thailand. Data were collected from January – June , 2005, through the in-depth interview, non participant observation, field notes, memos and photographs until data saturation was reached. All interviews were tape-recorded and transcribed verbatim. All data accumulated from the interviews, observations, and notes were treated with content analysis. Results: Thai caregivers listed three groups of healthcare professionals - medical doctors, nurses, and physiotherapists - as providing useful health information to the stroke survivors and to themselves, both while caring for their stroke relatives in the hospital and, later while their relatives were recovering at home. "Advice" and "clarification" were the two categories that emerged from the content analysis. Three subcategories of "advice" were related to advice about (I) the disease (stroke), (II) rehabilitation, and (III) prevention from stroke-related complications. Two subcategories of "clarification" emerged from the content analysis related to (I) the disease (stroke) and (II) the future condition of the patients. Each group of health care professionals provided different information to the caregivers, depending on their main professional roles, points of view, training and experiences. Conclusion: The multidisciplinary stroke rehabilitation team is a specialized version of a health care team whose members collaborate with each other to establish a plan and goals for the achievement of the survivor's maximal potential. The multidisciplinary rehabilitation team is a powerful coalition capable of planning, managing, and evaluating strategies designed to enhance the maximal effectiveness of daily living and the highest quality of life of stroke survivors possible.

**PB6 271 EPIDEMIOLOGICAL DESCRIPTIVE STUDY OF INJURIES OF ELDERLY PEOPLE IN FRENCH SKIING RESORTS**

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INTRODUCTION Using the database of the Medecins de Montagne Association epidemiological network, we have carried out a retrospective descriptive study of 1360 elderly people (aged > 74 years) injured in French skiing resorts, between 1992 and 2005. METHODS AND MATERIALS Every injured person treated by a doctor from the association was registered on an anonymous standard file. The data were entered and analysed anonymously by a specific health programme EPI info and EPI 2000 for statistical analysis. Regarding the analysis of the distribution of data among the population, the program gives an analysis of the population variances. To check the normality of the distribution, an ANOVA test or non-parametric test equivalent of chi2 was used. The level of significance was set at  $p<0.01$ . RESULTS We observed that elderly people > 74 years old went to consult a doctor in the skiing resort more and more often and compared with the younger population presented the following characteristics : - A significant majority of severe lesions with an over representation of leg fractures, shoulder fractures and disjunctions, cranial and facial traumatisms. - A significantly higher rate of domestic accidents, public highway and street accidents, and collisions on the slopes. - A significantly higher rate of hospitalisation CONCLUSIONS - These results can be explained by the bone fragility of old people, and by physiological factors due to aging such as sarcopenia, the diminution of neuronal conduction, and existence of sensorial deficiencies. - Fall prevention, the treatment of osteoporosis and the prevention of sarcopenia among elderly people are the principal prevention methods. The wearing of helmets is also recommended. - With the current demographic trend, it is time to plan prevention measures aiming at elderly people. These preventive measures could fit in with an extensive national campaign of fall prevention.

**PB6 272 REHABILITATION FOR OLDER PEOPLE IN LONG-TERM CARE: A COCHRANE SYSTEMATIC REVIEW**

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Introduction: The benefits of physical rehabilitation for older people who are resident in long-term care (LTC) are unclear. A systematic review of published studies has therefore

been conducted with an emphasis on outcome measures indicating activity restriction. Methods: 17 electronic databases were systematically searched. Selection criteria: Any randomised controlled trial examining a physical rehabilitation intervention intended to maintain or improve physical function in LTC residents aged 60 years or older were included. Results: The search produced more than 20,000 titles, and 49 studies involving 3,611 participants were included in the review. The mean age of the study population was 82 years and most subjects were only mildly disabled. Interventions varied considerably but most involved an exercise programme that included one or more of walking practice; strength, flexibility, and balance training. Most trials lasted fewer than 20 weeks and comprised three 30-45 minute sessions per week. Trial quality was often unclear. 37 trials reported positive effects on mobility outcome measures. Positive effects on strength, flexibility, balance, physical condition, mood and cognitive status were also reported. Adverse events were unusual. There was little data available on longer term benefits or harms. Conclusions: There is a considerable existing evidence base in this area that indicates that interventions involving physical rehabilitation for older residents in LTC can be both safe and effective. However, the size and duration of the effects are unclear. Further research should be conducted to investigate the optimum content of the rehabilitation programme, identify the target group and estimate longer term outcomes.

**PB6 273 LONG-TERM EFFECT OF A MULTIFACTORIAL FALL PREVENTION PROGRAM ON THE INCIDENCE OF FALLS REQUIRING MEDICAL TREATMENT**  
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Introduction: Falls among the elderly represent a major public health problem with substantial medical and economic consequences. The purpose was to evaluate the long-term effects of a multifactorial fall prevention program on the incidence of falls requiring medical treatment. Methods and materials: Participants of the study were community-dwelling elderly living in the town of Pori in Finland. Altogether 591 subjects were randomly assigned into an intervention group (IG) (n=293) and a control group (CG) (n=298). The subjects of IG attended a 12-month multifactorial fall prevention program. The subjects in CG got one session of counseling and guidance on risk factors of falling. The occurrences of falls requiring medical treatment for 591 subjects were collected from the health center and hospital registers by a research assistant. Results: The intervention did not significantly reduce the incidence of falls requiring medical treatment during the 3-year follow-up (incidence rate ratio for IG compared to CG 0.87, 95% confidence intervals 0.63-1.21). However, the number of falls requiring medical treatment tended to be lower in IG (n=32) than in CG (n=50) (0.65, 0.40-1.07) during the first year after the intervention, while there were not such a difference between the groups during the intervention year (48 and 48, respectively) and second year (44 and 48, respectively) after the intervention. Conclusion: The multifactorial fall prevention program could not decrease the incidence of falls requiring medical treatment during the 3-year follow-up from the baseline in community-dwelling elderly with a previous fall. However, some positive effect was found the following year after the 12-month intervention. This effect was no longer evident during the second year after the intervention.

**PB6 274 THE EFFECT OF AGE ON RANKL EXPRESSION OF OSTEOBLASTS AND T CELLS IN A MURINE MODEL**  
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Introduction: Age-related osteoporosis is hallmarked by excessive bone resorption, relative to bone formation. Since receptor activator of NF $\kappa$ B ligand (RANKL) and its antagonist, osteoprotegerin (OPG) are critical osteoblast-produced regulators of osteoclastogenesis, the aim of our study was to assess whether aging is associated with an increased expression of RANKL. Methods: Bone structure was analyzed by micro computed tomography of the 4th vertebral body in young (6 weeks), adult (6 months) and old (18 months) male C57BL/6 mice. Osteoclasts, defined as TRAP-positive multinucleated cells, were generated by treatment of bone marrow cells with 1,25-dihydroxy vitamin D3; osteoblasts were derived from bone marrow stromal cells in the presence of ascorbic acid and beta-glycerophosphate. RNA and protein levels of RANKL and OPG were determined by real time PCR and ELISA. Moreover, the expression of RANKL by spleen cells was analysed by flow cytometry. Results: Bone mass decreased significantly in the vertebral column of aged mice (young: 27%, adult: 20%, old: 16%, p<0.001). A significantly higher number of osteoclasts was generated in vitro from old compared to young mice. Immature osteoblasts from old animals displayed a lower RANKL/OPG ratio; in contrast, the ratio was higher in intermediate osteoblasts from old mice. Protein levels of RANKL and OPG in the supernatant of osteoblast cultures revealed no significant differences between the age groups. A higher percentage of CD4+ and CD8+ spleen cells in young mice expressed RANKL at the cell surface and also the production of intracellular RANKL was higher compared to adult and old animals. Conclusion: Our results suggest that the increased osteoclastogenic potential found in the bone marrow of old mice is not associated with an

enhanced production of RANKL. Thus, other molecules than RANKL appear to contribute to the augmentation of osteoclastogenesis.

**PB6 275 INTERVENTION IN PRE- FRAIL ELDERLY AT THE PRIMARY HEALTH CARE: PILOT STUDY**

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Objective: development of a methodology aimed at intervention in pre-frailty. Methods: study with a convenience sample of 20 elderly presenting with one or two criteria: complaints of fatigue or weakness for one month or more; non-intentional loss of 5% of weight or more; two or more falls in the last six months; dismobility. Intervention: oriented physical activity (OPA) twice a week up to a total of 32 sessions, aimed at muscular strength and balance improvement. The elderly performances were assessed before and after the intervention in the following domains: cognition, humor, social integration (SI), gait speed (GS), balance, mobility, time to rise from the floor (TRFF), manual abilities (MA), activities of daily living (ADL). The statistical significance of the averages was measured by the T Student Test, with significance level of 5%. Results: effects of the OPA were not significant in: cognition, humor, SI, ADL. Significant differences were observed in GS (p=0,05), balance (p=0,0001), mobility (p=0,03) and TRFF (p=0,009), and a tendency to significance in the time to perform the MA (p=0,06). Conclusion: this pilot study proved the feasibility of the adaptation of pre- frail elderly to an OPA able to modify the physiologic response to physical exercise in order to postpone frailty, and can subside the elaboration of a randomized controlled trial. Training with a low level complexity and low cost technology can be implemented in a primary care unity, with few risks to the elderly health.

**PB6 276 RELATION BETWEEN THE GRAVITY CENTER AND THE RISK OF FALLS IN ELDERLY**

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Introduction: During the aging process, it increases the postural asymmetries that could affect the mechanism of balance control, causing the falls. The objective of the study was to evaluate the static posture of each elderly, measure the risk of falls and correlate the projection of gravity center with the risk of falls. Methods and materials: The study involved 14 elderly people (7 males: 68.57 ± 4.12 years old; and 7 females: 72.57 ± 5.38 years old). They were informed about the experimental procedures and signed a Consent Form approved by the Ethics Committee. The volunteers were photographed, the images were transferred to a computer and it was calculated the projection of gravity center and the asymmetries of frontal and sagittal planes using the Software of Postural Evaluation. The risk of falls was assessed with the Berg Balance Scale (BBS). Statistical analysis was conducted using the Spearman correlation test ( $p < 0.05$ ). Results: The data are presented as mean ± SD. Score of BBS = 51.5 ± 3.3; sagittal plane (asymmetry anteriorly) = 42.0 ± 10.7%; frontal plane (right or left asymmetries) = 10.7 ± 8.9%. It was found a correlation between BBS and asymmetry of sagittal plane ( $r = -0.57$ ,  $p = 0.0312$ ) and between BBS and asymmetry of frontal plane ( $r = -0.72$ ,  $p = 0.0032$ ). Conclusion: The data founded suggest that as bigger the offset anteriorly (asymmetry of sagittal plane) and the offset laterally (asymmetry of frontal plane), lesser the scores of BBS, indicating an increase of risk of falls in elderly. Funded by FAPESP Proc. n° 2008/507128 and by FUNDUNESP Proc. n° 424/08.

**PB6 277 COPING STRATEGIES AND SOCIAL PARTICIPATION OF COMMUNITY-DWELLING OLDER ADULTS**

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Introduction: Literature on the social participation of community-dwelling older adults confirms that some daily activities and social roles are affected by age, albeit not strongly enough for them to require formal services. Dealing with those restrictions in participation thus seem to require some personal adaptation if the older adults are to remain in their community. This study sought to explore the relationships between cognitive and behavioral coping strategies and the social participation of community-dwelling older adults in conjunction with sociodemographic and health-related characteristics. Methods and materials: This cross-sectional study involved 350 randomly recruited older adults living at home independently. The Assessment of Life Habits (LIFE-H) and the Inventory of Coping Strategies Used by the Elderly (ICSUE) were used to document social participation and coping strategies. Socio-demographic and health-related characteristics were also assessed. Regression analyses were performed to evaluate the relationship between social participation, coping strategies and the other variables. Results: Behavioral coping strategies were the most important factor associated with daily activities, social

roles and total participation, followed by the type of living environment and age. These variables explained 33% ( $p = 0.04$ ), 13% ( $p = 0.02$ ), and 28% ( $p = 0.00$ ) of the variance of the models, respectively. The absence of any relationship between the cognitive coping strategies and social participation was a striking result. Conclusion: This study demonstrated the important association of behavioral coping strategies with social participation of among community-living older adults. Results suggest expanding current geriatric approaches to integrate knowledge on useful, safe and appropriate behavioral changes and to help older people acquire such strategies when they are lacking. Additional research is required to illuminate the influence of cognitive coping strategies.

**PB6 278 PERFORMANCE OF COMMUNITY DWELLING ELDERLY IN QUESTIONNAIRE OF QUALITY OF LIFE (SF-36) AND YOUR CORRELATION WITH DISEASES AND DISABILITY**

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The aging is characterized by the accumulation of diseases, progressive dysfunctions and disability. These factors may influence in the independence and autonomy of elderly. OBJECTIVE:Correlation between performance of the community dwelling elderly in the Medical Outcomes Study Short-form (SF-36) and the number of diseases and dysfunctions. Methods:It was applied a multidimensional questionnaire of quality of life (SF-36),based on 8 domains: functional capacity, pain, general state of health, vitality, mental health, social, physical, and emotional aspects. The number of diseases and dysfunctions were evaluated through a clinical and structured questionnaire. It was made a descriptive analysis of the sample and the correlation was accomplished by the coefficients of Pearson and Spearman( $p \leq 0.05$ ) RESULTS Participated 72 elderly of the community ( $71.49 \pm 9.0$  years), which had  $2.39 \pm 2.0$  chronic diseases. The main disease were: arterial hypertension 28%, osteoarthritis 10.86%, diabetes 8.0%, osteoporosis 5.71%; all controlled by medication ( $2.42 \pm 1.7$ ). The most common dysfunctions were: decrease of the visual sharpness 32%, pain of articulation 22.40%, hypoacusia 16.80% and instability 12%. The correlation between the performance of the elderly in SF-36 and the number of dysfunctions did not present any relevant statistical result. However, in the domains of functional capacity, general state of health and pain of SF-36, was observed a decrease of the medium score in the questionnaire, when it was correlated with the increase of the number of diseases. Conclusion: Controlled diseases and dysfunctions which not influence the independence and the individual's autonomy should not interfere in the elderly quality of life. Nevertheless, the increase of the number of diseases was correlated negatively with three domains of SF-36. SF-36 is subjective,simultaneous application of other objective tests is suggested.

**PB6 279 COMPARISON OF HIP FRACTURE INCIDENCE AND TRENDS BETWEEN GERMANY AND AUSTRIA 1995-2004**

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Introduction Pronounced variations in hip fracture incidence rates and trends have been documented not only between countries regions but also within geographical areas. We aimed to compare incidence rates and trends between Austria and Germany from 1995 to 2004 by analysis of hospital discharge diagnosis register data. Methods Annual frequencies of hip fractures and corresponding incidences per 100,000 person years were estimated, along with 95% confidence intervals (CI), overall and stratified for sex and age, assuming Poisson distribution. Multiple Poisson regression models including country and calendar year, age and sex were used to analyse differences in incidence and trend between 1995 and 2004. The difference of annual changes between the two countries was tested using an interaction term (calendar year \* country) Results Overall, hip fracture risk was 1.31fold (95% CI 1.29-1.34) in Austria compared to Germany, adjusted for age, sex, and calendar year. The risk was equally higher for both sexes (men RR 1.35 (95% CI 1.32-1.37), women RR 1.31 (95% CI 1.29-1.33)). Hip fracture trends from 1995 to 2004 indicate an increase in both countries without a statistically significant difference between Austria and Germany (interaction term:  $p=0.67$ ). Sex-specific interactions were also not significant (men:  $p=0.07$ ; women:  $p=0.96$ ). Conclusion The hip fracture incidence in Austria is 30% higher compared to its neighbouring country Germany. For both countries a similar increasing trend of hip fracture incidence over the ten years study period was calculated. Further studies to explain the difference between the countries are needed.

**PB6 280 A SIMPLE CLINICAL SCALE TO STRATIFY RISK OF RECURRENT FALLS IN ELDERLY PEOPLE**

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Introduction: Identification and correct classification of subjects at risk of recurrent falls are essential in elaborating prevention strategies in older adults. Methods and Materials: We conducted a prospective study with a fall follow-up in 1618 community-living subjects ( $70 \pm 4$  years) consulting for a health check-up, to develop and validate a simple clinical scale to stratify risk of recurrent falls based on easily obtained social and clinical items. We had subsequently tested in three risk category groups the added value of the One-Leg Balance, Timed Up-&-Go and Five-Times-Sit-to-Stand, in predicting the risk of recurrent falls. Subjects were randomly divided into two groups: one was used to develop the scale (Group A, n=999), and the other (Group B, n=619) was used to prospectively validate the scale. Results: Logistical regression analysis identified four significant variables for the risk of recurrent falls in Group A: positive history of falls, living alone, taking  $\geq 4$  medications, and female gender. Thereafter, three risk categories of recurrent falls (low, moderate, high) were determined. Predicted probability of recurrent falls increased from 4.1% to 30.1% between the first and third category. This scale was subsequently validated with great accuracy in Group B. Only the Five-Times-Sit-to-Stand provided added value in the estimation of risk of recurrent falls, especially for the subjects at moderate risk, in whom failure to the test doubled the risk. Conclusion: In clinical practice, physicians could easily classify older patients in low, moderate or high risk groups of recurrent falls by using four easy-to-obtain items. The Five-Times-Sit-to-Stand provides added value to stratify risk of falls in subjects at moderate risk.

**PB6 281 COMPARISON OF STRENGTH AND AEROBIC TRAINING ON BASAL SERUM IGF-1 AND CORTISOL LEVEL IN ELDERLY WOMEN**

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Introduction: IGF-1 shows a strong relationship with the conservation of the skeletal muscle system, but its secretion decreases with aging. On the other hand, cortisol, when persistently elevated, can be an inhibitor of protein synthesis and of increased muscle mass. Thus, the aim of this study was to compare the effects of strength and aerobic training on basal serum IGF-1 and cortisol levels in elderly women. Methods: The subjects were divided into three groups: Strength Group (SG) (n=12; age= $66.08 \pm 3.37$  years; BMI= $26.77 \pm 3.72 \text{ kg/m}^2$ ) submitted to strength training (75-85% 1-RM) using weights, and the Aquatic Group (AG) which performed water aerobic training (n=13; age= $68.69 \pm 4.70$  years; BMI= $29.19 \pm 2.96 \text{ kg/m}^2$ ) and a Control Group (CG) (n=10; age= $68.80 \pm 5.41$  years; BMI= $29.70 \pm 2.82 \text{ kg/m}^2$ ). Fasting blood samples were collected to measure basal IGF-1 and cortisol levels (chemiluminescence method), at the start and conclusion of the intervention (12 weeks). Results: Student's t-test showed only an increase in IGF-1 in SG (pretest= $116.85 \pm 36.87$  and posttest= $151.48 \pm 46.95 \text{ ng/ml}$ ;  $p<0.05$ ) in intragroup comparison. Repeated measures ANOVA showed increased levels of IGF-1 ( $p<0.05$ ) in SG ( $\delta\%SG=29.64$ ) compared to the other groups: AG ( $\delta\%AG=12.76$ ;  $p=0.005$ ) and CG ( $\delta\%CG=4.21$ ;  $p=0.003$ ). No differences were observed in cortisol levels. Conclusion: Strength training increased IGF-1 levels; therefore, it can be indicated for elderly individuals to promote the conservation of the skeletal muscle system. Keywords: aquatic exercises, muscle strength, IGF-1, cortisol, aging. Conflict of interest: none.

**PB6 282 SARCOPENIA AND CARDIOVASCULAR DISEASE IN OLDER MEN AND WOMEN**

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Introduction Sarcopenia is defined as the loss of muscle mass and strength with age. It has serious adverse health consequences in terms of mortality and morbidity and previous work has shown associations with both type 2 diabetes and metabolic syndrome. However its relationship with cardiovascular disease (CVD) has not been explored. We used data from the Hertfordshire Cohort Study to test the hypothesis that sarcopenia is associated with CVD in older men and women. Methods We studied 1,589 men and 1,418 women born between 1931 and 1939. Trained researchers used standardised questionnaires and an electrocardiogram grading protocol to identify participants with established CVD (typical angina, previous bypass surgery or presence of significant Q-waves on ECG). Information was also collected on co-morbidity and lifestyle (smoking and alcohol history, physical activity). Sarcopenia was characterised by measurement of grip strength and anthropometry included measurement of weight. Results 225 (15%) men and 127 (9%) women had CVD. CVD was associated with lower grip strength in women (average grip strength 24.9kg vs 26.7kg for those with and without CVD,  $p=0.001$ ) but not in men. The relationship among women remained significant after adjustment for age, weight, lifestyle and physical activity ( $p=0.04$ ). A significantly higher proportion of women reported angina, (54% vs 35% of

people with CVD) and higher proportion of men reported previous CABG, (44% vs 12% of people with CVD). Conclusions We have shown a significant association between sarcopenia and cardiovascular disease in older women. The association was not replicated in men, perhaps due to low numbers of self reported angina and higher previous CABG. Replication and more accurate characterisation of markers of CVD as well as investigation of potential underlying mechanisms are the next stage for this research.

**PB6 283 COURSE OF IMPROVEMENT IN INPATIENT GERIATRIC REHABILITATION - FEAR THE FEAR OF FALLING**

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Objectives: To examine potentially new and known risk factors for their influence on the course of rehabilitation with regard to three differently measured functional outcomes. Setting: Geriatric inpatient rehabilitation unit. Participants: 161 geriatric rehabilitation inpatients (men, women) with a mean age of XX years who were capable of walking at baseline. Methods: Weekly assessments from admission until discharge, using the function component of the Short Form - Late Life Function and Disability Instrument, the Barthel Index and Gait Speed. A follow up was performed four months after discharge at home. Rarely reported factors such were examined in addition to common baseline parameters. Bivariate graphs of the course of rehabilitation were used to detect clinically relevant risk factors. Those factors were then used as independent variables in a multivariate linear regression model. Results: Relevant factors for any of the three outcome measures were age, gender, cognition, primary diagnosis, comorbidity, depression and fear of falling. Additionally minor adverse events were relevant for the in-hospital analysis and the amount of physiotherapy for follow up analysis. In the multivariate linear regression only falls related self efficacy, measured by the Falls Efficacy Scale - International significantly explained functional status in all three functional outcomes and across both, in-hospital and follow up analysis. Conclusion: Falls related self efficacy is the only parameter that significantly predicts rehabilitation outcome at discharge and at follow up at home in all outcome measures. It should therefore be considered in future studies on (geriatric) rehabilitation.

**PB6 284 A MULTICENTRE RCT OF A DAY HOSPITAL FALLS PREVENTION PROGRAMME FOR COMMUNITY DWELLING OLDER PEOPLE**

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Falls are a major public health issue. Most UK falls prevention programmes are reactive, rather than directed towards people at high risk on the basis of screening. The effectiveness of falls prevention programmes for people in primary care at risk of falling has not hitherto been evaluated. We carried out a multicentre RCT of falls prevention programmes based in three day hospitals in England, for people identified by screening using a validated postal screening questionnaire to be at high risk of falls. Participants were randomised to a falls prevention service, consisting of a medical assessment, strength and balance training and a home hazards review, or to a control group (falls advice only). The primary outcome was the rate of falls over 12 months ascertained using a monthly falls diary. 6133 people were screened, 1481 were at high risk of falls, 364 of which were recruited to the RCT and randomised: intervention (n=183), control (n=181). 37% of those allocated to the falls prevention programme attended six or more sessions. The rate of falls in the control group was 2.0 falls per person-year compared to 1.7 falls per person-year in the intervention group, adjusted IRR 0.73 (0.51-1.03), p=0.071. There were no significant differences between the groups in terms of the proportion of fallers, recurrent fallers, medically verified falls, injurious falls, time to first fall, function or quality of life. The magnitude of the reduction in falls risk observed is compatible with that seen in other fall prevention studies, and so this study may have been underpowered. At present, there is insufficient evidence for health care commissioners to recommend screening and intervention for falls in this manner. Further work to improve the take-up of falls prevention programmes, is warranted.

**PB6 285 RELATIONSHIP BETWEEN FALLS, FEAR OF FALLING AND HEALTH-RELATED QUALITY OF LIFE IN A COHORT OF COMMUNITY-DWELLING OLDER ADULTS**

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Introduction: Falls and fear of falling are common in older adults. The aim of this study was to determine the relationship between falls, fear of falling and health-related quality of life (HRQoL) in a cohort of community-dwelling older adults. Methods and materials:

Prospective, longitudinal cohort study of 834 participants aged 55 years or older, recruited as part of a larger study examining the health status and aging process in community-dwelling older adults (Singapore Longitudinal Aging Study). Demographic information, medical history and functional status of all participants were obtained. The occurrence of falls, measures of fear of falling and HRQoL were recorded at baseline and then every 3 months for a total of 12 months. Fear of falling was determined using the revised Falls Efficacy Scale (rFES) and HRQoL was determined by the EQ-5D, with utility values derived using the York tariff. All participants underwent assessment of cognition, gait and balance. Results: The mean age of the study cohort was 65.0 years. 34.4% were male and 65.6% were female. 9.8% of the study participants lived alone and 38.2% had 2 or more chronic illnesses. 8.9% of the study participants reported at least one fall in the 6 months preceding recruitment into the study. The quarterly incidence of falls ranges from 2.8% to 4.4%. Longitudinal analysis using the generalised estimating equations method showed statistically significant association between HRQoL and falls (coefficient -0.029, 95% confidence interval (CI) -0.042, -0.016) and fear of falling (coefficient 0.046, 95% CI 0.039, 0.052). Conclusion: Falls and fear of falling are independently associated with health-related quality of life. In this cohort of community-dwelling older adults, both these factors have detrimental effects on health-related quality of life.

**PB6 286 QUALITY OF HOSPITAL RECORDING AND CODING FOR GERIATRIC SYNDROMES**

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Introduction: Majority of hospitalised patients are elderly, frail with multiple diagnosis, comorbidity and functional impairment. Little information is available on the quality of hospital recording of common geriatric syndromes. Aim : of the study was to determine the completeness of recording of 4 geriatric syndromes in discharge summaries (DS) and in hospital Coding (HC). Methods: we reviewed case notes of 300 hospitalised elderly patients above age of 70 years in medical wards for the presence or absence of geriatric syndromes and compared information recorded on discharge summaries and by hospital coder. Results: 46 males. Age range 70-101 years. Median 82 years. Case notes identified 88% patients with one/more geriatric syndromes (fall, immobility,incontinence,intellectual impairment). Only 40% syndromes were mentioned on discharge summary and 35% captured on hospital coding. Of the geriatric syndromes, intellectual impairment was least likely to be identified and mentioned in DS and HC. Conclusion: The study demonstrates significantly incomplete recording of 4 geriatric syndromes on DS and HC. High quality coding and capture of information is essential for monitoring hospital activity accurately as data is used for measuring hospital performance, resource allocation and service planning in United Kingdom.

**PB6 287 PHYSICAL ACTIVITY AND EXECUTIVE FUNCTION IN AGING: THE MOBILIZE BOSTON STUDY**

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Introduction. Studies have found that physical activity and cognition, specifically executive function, in older adults are positively associated, but possible mediating factors such as cardiovascular disease (CVD) and CVD risk factors, chronic pain, and depressive symptoms have not been taken into account. Methods. and materials Older community-dwelling adults (n=544; mean age 78 years, 62 % female) participated in the population-based MOBILIZE Boston Study. Presence of CVD, pain, and depressive symptomatology were assessed in the home interview and blood pressure was measured in the clinic exam. Engagement in physical activity was determined by the self-administered Physical Activity Scale for the Elderly (PASE) and by self-reported number of blocks walked per week. Cognitive function was measured by a battery of neuropsychological tests. Results. Older adults that engaged in more physical activity (higher PASE score) showed significantly better performance on all cognitive tests after adjusting for age, sex, education, and total number of medications, except for Letter Fluency and the memory test of delayed recall. Similarly, older persons who reported more walking showed better performance on all cognitive tests. With further adjustment for CVD and CVD risk factors (i.e. heart disease, diabetes mellitus, stroke, and hypertension), pain, and depressive symptoms, both PASE score and number of blocks walked per week remained significantly associated with executive function tests. Conclusion. Even after multivariate adjustment, neuropsychological tests that were executive in nature were positively associated with physical activity in this cohort of older community-dwelling adults. In contrast, episodic memory subtests were not consistently associated with physical activity supporting the idea that the relationship with executive function represents a specific biologically determined relationship.

**PB6 288 COGNITIVE IMPAIRMENT IMPROVES THE PREDICTIVE VALIDITY OF THE PHENOTYPE OF FRAILTY FOR ADVERSE HEALTH OUTCOMES**

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**Objective:** To determine whether adding cognitive impairment to the phenotype of frailty improves its predictive validity for adverse health outcomes. **Design, Setting, and Participants:** Four-year longitudinal study of 6030 community-dwelling subjects aged 65-95 years, participating in the French Three-City Study. **Main Outcome Measures:** Frailty was defined as having at least three of the following criteria: weight loss, weakness, exhaustion, slowness, and low physical activity; subjects meeting one or two criteria were prefrail; and those meeting none as nonfrail. The lowest quartile in both the Mini-Mental State Examination (MMSE) and the Isaacs Set Test (IST) was used to identify subjects with cognitive impairment. The predictive validity of frailty for incident disability, hospitalization, dementia, and death was calculated adjusting for confounding factors. **Results:** 421 individuals (7%) met frailty criteria. Cognitive impairment was present in 10%, 12%, and 22% of the nonfrail, prefrail, and frail subjects, respectively. Those classified as frail at baseline reported more cognitive complaints and scored lower on the MMSE and IST in comparison to prefrail and nonfrail. After adjusting for potentially confounding variables, frail persons with cognitive impairment were significantly more likely to develop disability for activities of daily living (ADL) and instrumental ADL over the next 4 years. The risk for incident mobility disability and hospitalization was marginally increased. Incident dementia was increased in the groups with cognitive impairment irrespective of their frailty status. Conversely, frailty was not a significant predictor of mortality, although the risk tended to be higher among frail participants who were cognitively impaired. **Conclusions:** Cognitive impairment improves the predictive validity of the operational definition of frailty as it increases the risk for adverse health outcomes in this particular subgroup of elderly population.

**PB6 289 SCREENING FOR FALLS ON THE GERIATRIC WARD: ARE INSTRUMENTS PERFORMING BETTER THAN NURSES?**

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**Introduction** Fall prevention in hospital starts with a good riskstratification. Some instruments are developed to select highriskpatients as the St-Thomas Risk Assessment Tool for Fall in the elderly (STRATIFY) and the Morse Fall Scale (MFS). The study's objective is testing if these instruments are able to detect highriskpatients in a more appropriate way than the current used 'nurse competence' (NuCom). **Material & methods** Prospective study in the geriatric ward of the University Hospital of Ghent from January 2007 till march 2008. The STRATIFY and MFS were collected by two independent persons, namely the researcher (RS) using anamnesis and a referent nurse (RN), using nurselfiles and collecting the NuCom score defined as no, low or highriskpatient. Results 272 patients were included in the study by the RN, only a part of them, 95, were seen by the RS. The interrater correlation was weak and different results were obtained by the RS and RN. Looking at the whole population, only the morse fall scale ( $p=0.014$ ) and the NuCOM ( $p=0.001$ ) were significantly correlated with the fall incidents. For MFS and STRATIFY, a cut-off score of respectively 60 and 2 are withhold. Positive and Negative predictive values for the MFS, the STRATIFY and the NuCOM are comparable and respectively 25.6, 85.7; 25.6, 82.6 and 31.3, 87.2. Factor analysis shows fall history, gait difficulties, use of IV or heparines and mild transfer&mobilityscore to be significant risk factors for falls. **Conclusion** The usefulness of screeninginstruments are depending on the way of collecting the data. On a geriatric ward the best risk stratification is made by competent nurses capable of identifying risk factors as fall history, diminished locomotor capacity, evaluation of underlying illnesses and medication use. Screeningsinstruments don't seem to improve risk stratification.

**PB6 290 FALLS IN THE ELDERLY: WHO, WHEN, WHERE AND WHY FALLS IN NURSING HOME**

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**Introduction:** Falls are a major problem in the elderly: up to 60% of nursing home residents fall each year and 50% of these "fallers" have multiple episodes. **Methods and Materials:** Over a period of 42 months (1/07/2005 – 31/12/2008) 544 falls occurred in 146 persons (101 females) over 65 yrs (mean age =  $84 \pm 7.5$ ) living in RSA Villa San Clemente. For every fall we collected age and sex of the faller, time, location, cause and dynamics. Patients were categorized into 5 groups: 1 fall (Gr.A= 51 pts), 2-3 falls (Gr. B=45pts), 4-5 falls (Gr. C=20pts), 6-10 falls (Gr D=18 pts) and > 10 falls (Gr. E=12pts). Fallers were categorized into three groups in relation to the walking ability: walking without assistance,

walking with assistance; not walking. **Results:** Mean age was related to the number of falls. Elderly with an higher autonomy in walking fell more frequently than impaired ones ( $p < 0.000001$ ). Falls occurred particularly in the afternoon (24.22%) and in the morning (19.87%) for all groups. Location of falls was more frequently the bedroom (38.41%) or other living spaces (41.17%). With regard to causes of falling, accidents were the leading cause of falling (63.6%); moreover, 271 (49.81%) falls were due to slipping, and 169 (31.06%) to an hazard of the patient. We want to remark that a number of falls could have been avoided, because they were caused by drugs use (6pts), inappropriate dresses or shoes (21pts), inappropriate aids (5pts), shoving (12pts), slipping (26pts). **Conclusion:** Falls are a frequent event in the elderly living in nursing home; the 13% of them could be avoided with a more careful health care.

**PB6 291 CONCURRENT UTILIZATION REVIEW TO FACILITATE THE EARLIER REHABILITATION OF OLDER PATIENTS**

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Utilization review is method used to determine whether a patient is appropriate for a particular care setting. Predominantly developed in the US, utilization review is used there as a tool of payers to justify payment for care. Outside the US utilization review is used as an aid to facilitate appropriate care, rather than approving or denying payment for care. We have trialed the InterQual utilization review tool in two studies in Australia in order to: 1. Test its utility in the Australian health care setting; 2. Compare the findings of utilization review to current practice, especially at the interface between acute and subacute care, and; 3. Compare current rehabilitation service provision against that suggested by utilization review. An initial pilot study was undertaken in 2004 and a further study in 2007/2008. Older patients in acute care with stroke, hip fracture, elective joint replacement, amputation and a range of other diagnoses were followed. The results show that, guided by utilization review, almost all older patients would be transferred to rehabilitation much earlier than currently occurs. Also, within the rehabilitation setting, older patients are shown to be receiving less therapy than suggested by utilization review. This paper will: 1. Describe the process of utilisation review and present and discuss the study findings; 2. Discuss the role of utilization review as an adjunct to routine clinical assessment in the early identification for rehabilitation of older patients in acute care; 3. Discuss the role of utilization review within the rehabilitation setting. 4. Examine the costs and barriers associated with the implementation of concurrent utilization review. We conclude that concurrent utilization review could improve outcomes for older people by reducing the opportunity for the functional decline associated with prolonged stays in acute care, and improve efficiency by promoting earlier and more effective rehabilitation.

**PB6 292 UNMET PHYSICAL ACTIVITY NEED IN OLD AGE**

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**Introduction:** Unmet physical activity need refers to lack of perceived opportunities to increase physical activity level, even though being willing to do so. It may be common among older people and impact negatively to physical, social and mental well-being. Purpose of the study was to examine which individual characteristics and environmental factors correlate with unmet physical activity need in old age and predict development of unmet physical activity need over a two-year follow-up period. **Methods:** A total of 643 75- to 81-year-old people took part in face-to-face interviews at baseline, of which 314 persons took part in a two-year follow-up. **Results:** At baseline, 15 % of women and 12 % of men reported unmet physical activity need. Unmet physical activity need was more prevalent among those with musculoskeletal disease, depressive symptoms and difficulties in walking. Of the environmental factors, hills in the nearby environment, lack of resting places and dangerous crossroads were associated with unmet physical activity need at baseline. The effect of environmental features on unmet physical activity need was pronounced among those with difficulties in walking. Over the follow-up, 17 % of women and 10 % of men developed unmet physical activity need. Fear of moving outdoors, hills in the nearby environment and noisy traffic predicted development of unmet physical activity need over a two-year follow-up. **Conclusion:** Older people with health and mobility problems who report negative environmental features are more likely to experience unmet physical activity need. Solutions to overcome barriers to physical activity need to be developed to promote equal opportunities for physical activity participation.

**PB6 293 EFFECTS OF RESISTANCE STRENGTH OR STRETCHING TRAINING AND DETRAINING ON FUNCTIONAL STATUS IN ELDERLY**

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**Introduction:** the purpose of the present study was to evaluate the effects of 12 weeks of stretching or resistance strength training, followed by 6 weeks of detraining on functional

status of elderly. Materials and Methods: The subjects were divided into 3 groups: control (CG; n=13; 66 years), stretching (SG; n=10; 69 years), and resistance strength (RSG; n=13; 69 years). The CG was not submitted to exercise, while SG and RSG performed twice a week 10 min of active exercise warm-up prior to exercises for lower body muscle groups. The SG performed 4 repetitions of stretching for 60s each. The RSG trained progressive resistive exercise with initial level set at 65% of 10 repetition maximum (RM) for the first five weeks, 70% for the next four weeks and 75% for the last three weeks. It was evaluated the cardiorespiratory performance by 6 minutes walk test (6MWT) and lower body muscle strength by stand up from a chair and sit down five times (SUCSD). The variables were measured before, 6 and 12 weeks during training and 6 weeks detraining. The homogeneity results were compared by ANOVA ( $p < 0.05$ ). Results: Twelve weeks of stretching decreased the SUCSD time compared before training. While, only 6 weeks of RSG diminished the time of SUCSD in comparison before training and increased the walking distance compared to CG. Conclusion: the resistive exercise, no more than 6 weeks, enhanced the strength of lower body muscle groups and the cardiorespiratory status. Thereafter it was efficient to maintain the gain even after detraining. Whereas the stretching training required 12 weeks to improve the strength of lower body muscle groups.

#### **PB6 294 DIFFERENCES IN MUSCLE ACTIVITY BETWEEN NONFRAIL AND PREFRAIL OLDER WOMEN DURING DAILY LIFE**

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Introduction: Identification of the early stages of frailty is imperative in prolonging functional independence. However, categorization between prefrail and nonfrail is not only complex but often ambiguous. Measuring muscle activity during daily life may provide an objective clinical method to assess early stage development of frailty. Purpose: Examine if electromyography (EMG) recordings for a typical day were different between nonfrail and prefrail older women. Methods: Twenty-six, community-dwelling, Caucasian, older women were classified as nonfrail (n=13, 73 ± 6 yrs) and prefrail (n=13, 75 ± 4 yrs) based on Fried's 5 criteria for physical frailty (weight loss, muscle weakness, physical inactivity, slow walking speed, and exhaustion). Surface EMG over a 9-hour typical day was recorded from the biceps brachii, triceps brachii, vastus lateralis, and biceps femoris. Muscle activity was quantified by burst analysis, where a burst is defined as a period of EMG activity greater than 2% of maximum voluntary contraction for a duration longer than 0.1 sec. The spatial (i.e. amplitude) and temporal (i.e. rate, duration) characteristics of the bursts were examined. In addition, leg extension strength, hand grip strength and physical activity were compared between groups. Results: The two groups were not significantly different in age, muscle strength and physical activity. Nonfrail women had a greater number of bursts and burst rate compared with prefrail women. In contrast, prefrail women had greater mean burst duration and mean burst area. Peak amplitude, burst activity, burst percent, total burst duration and total burst area were not significantly different between groups. Conclusions: These data indicate that prefrail women have fewer bursts which last for longer duration than nonfrail women of similar age, muscle strength and physical activity. Quantifying patterns of muscle activity with portable EMG may enable discrimination between early stages of frailty.

#### **PB6 295 DIZZINESS AMONG COMMUNITY-DWELLING ELDERLY ADULTS: RESULTS FROM ANDES MOUNTAINS**

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Background: dizziness is a common symptom in adults. The majority of those with dizziness complaints tend to have more than one risk factor, suggesting that dizziness is a multifactorial geriatric syndrome. Associated factors must be determined to permit risk-reduction approaches. Objective: to examine the associations between dizziness with socio-demographic and health factors among older persons living in the Colombian Andes Mountains. Design: population-based cross-sectional study. Settings/Participants: one thousand six hundred ninety-two community-living persons aged 60 years and over living in four sub-urban areas of villages in coffee-growers zone in Colombian Andes Mountains. Measurements: outcome measure was the report of dizziness very often and continuously presented in the last month. Independent variables were demographic, socioeconomic and social factors; disease and biomedical factors, functional status and performance based measures and psychological factors such as depressive symptoms and self-rated health. Results: Dizziness was reported by 15.2%. The prevalence of outcome was higher in women than men, but prevalence no rose with age. Variables independently associated with dizziness were: number of chronic conditions, decreased physical activity in the last year, visual and hearing impairments, the use of four or more medications, and fear of falling. Psychological variables independently associated were: poor perceived health and cognitive impairment. Health, functional and psychological factors classified 85% of dizziness. Conclusion: Older persons who referred dizziness are more physically frail, with more chronic conditions and sensory impairments, and have poor perceived health. Biomedical and functional factors showed a strong independent association with dizziness. A multifactorial intervention targeting the factors identified would reduce dizziness in

older people. However, this approach may need to address different sets of specific factors related with dizziness subtypes.

#### **PB6 296 DEMENTIA AND HIP FRACTURE: EPIDEMIOLOGY, PATHOPHYSIOLOGICAL AND CLINICAL CONSIDERATIONS**

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Aims: (1) estimate the prevalence of dementia in older adults with hip fracture (HF), (2) evaluate the clinicopathological profiles of HF patients with and without dementia and (3) determine if dementia predicts poor outcomes. Methods and materials: A prospective study of 842 consecutive patients ≥ 60 years with HF within 162,608 person-years of observation. The main end-points were HF, pre-fracture diagnosed dementia, residential status and HF outcomes. Results: Dementia was diagnosed prior to HF in 31.7% of patients. The relative risk of HF in individuals with dementia was 6.3 times higher (95% CI 5.1-7.1) than in people without dementia and this risk was 2.6-fold greater in people with dementia living in a residential care facility (RCF). All patients demonstrated a high prevalence of vitamin D deficiency [25(OH)D < 50 nmol/L, 77.7% with dementia and 80.4% without dementia] and secondary hyperparathyroidism (PTH > 6.8 pmol/L, 37.8% and 35.8%, respectively). Those with dementia were significantly older ( $85.0 \pm 6.7$  vs.  $81.1 \pm 8.1$  years;  $p=0.002$ ), more often living in an RCF (73.0% vs. 15.4%;  $p=0.001$ ), had a history of stroke (26.4% vs. 9.0%;  $p=0.001$ ), ASA score ≥ 3 (87.3% vs. 67.6%;  $p=0.005$ ), were malnourished (42.2% vs. 25.3%;  $p=0.010$ ), most had abnormally elevated bone resorption makers (92.5% vs. 80.3%;  $p=0.028$ ). Pre-fracture dementia was predictive of being discharged to a long-term RCF (RR = 2.6; 95% CI 2.1-3.0;  $p=0.001$ ), but did not influence survival or length of stay. Conclusion: Dementia is a significant risk factor for HF and both conditions share common characteristics which may indicate common pathogenetic mechanisms.

#### **PB6 297 RE-DEFINING THE "GERIATRIC GIANTS"**

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Introduction We wished to assess whether the "Giants of Geriatrics" (Immobility, Instability, Incontinence, Intellectual Impairment) defined by Isaacs remain relevant in today's acute healthcare system. Methods We audited a random selection of 1:10 admissions to our acute geriatric service over one year in a 750 bed teaching hospital. We identified triage presentation and, from electronic discharge summaries (or case notes), we collected data on demographics, length of stay, status and destination on discharge, final diagnosis and documented organ dysfunction or 'failure' (presence of underlying significant co-morbidities likely to be of relevance). We classified (by consensus) into the 'Giants', or alternative syndromes. Results The commonest triage presentations were 'fall' (20%), 'infection' (16%), 'pain' (13%), 'shortness of breath' (12%) and 'stroke' (6%). Mean age was 83 years; 60% female. Mean length of stay 8 days; 83% returned to pre-admission residence, 10% required higher care, 7% died. Only 45% could be classified according to the 'Giants' compared to 95% for our new suggested modern syndromes (the 8-Ss): Sepsis (44%), Stumble/fall (29%), Sore/pain (27%), Shortness-of-breath (21%), Stupor (16%), Stroke (8%), Side-effect (7%) and Stuck/immobility (7%). Underlying 'organ failures' were common, e.g. brain failure (included conditions such as dementia, stroke disease, Parkinson's Disease, epilepsy, neuropathy) in 62%, cardiovascular failure in 61% and bone failure in 54% of patients. Conclusions Awareness of the common syndromes of decompensation in frail elderly patients should assist with training staff, research and health service planning. Our study suggests that the "Giants of Geriatrics" may need to be revised to reflect the current pattern of acute presentation in the elderly. A heightened understanding of the importance of underlying organ dysfunctions also needs to be encouraged.

#### **PB6 298 EFFECT AT 1 MONTH OF A LARGE DOSE OF VITAMIN D3 IN FRAIL ELDERLY PATIENTS WITH LOW 25OHD SERUM CONCENTRATION**

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Introduction: Vitamin D deficiency is highly prevalent in frail elderly persons living in nursing homes or in the community. A 25OHD serum level of at least 75 nmol/l (30 ng/ml) is required to avoid metabolic consequences of a secondary hyperparathyroidism. The currently recommended supplementations seem insufficient to reach this level. However, there is little data in the literature on the effectiveness of a large loading dose of vitamin D. Materials and methods: In a prospective observational study, the 25OHD serum concentration was measured 28 days (D28) after a loading dose of 200,000 IU of vitamin D3 followed by a daily supplement of 880 IU in frail patients aged 75 or over, who were admitted in a geriatric department of the University Hospital of Tours from May 15 to

October 20, 2008, with osteoporosis (bone mineral density Tscore <-2.5 SD or presumed osteoporotic fracture(s)), history of fall, depression and a serum 25OHD concentration below 50 nmol/l (20 ng/ml) (D0). Results: One hundred one patients (36 males, 65 females, aged 87.9 ± 5.9 yr) were included among 345 consecutive admitted patients. Serum 25OHD concentration were 20.3 ± 9.9 and 62.0 ± 32.3 nmol/l at D0 and D28 respectively. Twenty five patients (24.7%) reached a 25OHD serum level >or=75nmol/l. There is no significant seasonal relationship. Conclusion: Despite a controlled in-hospital vitD3 supplementation, 3/4 patients did not reach an optimal 25OHD serum level at 1-month. The inter-individual variability in the response to a 200,000 IU vitamin D3 loading dose argues for a monitoring of the 25OHD serum level and further trials with higher supplementations of vitamin D.

#### **PB6 299 OPERATIONALISING FRAILTY DEFINITIONS IN THE EMERGENCY DEPARTMENT – A MAPPING EXERCISE**

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**Introduction:** Emergency departments (EDs) assess a large number of older patients every day many of whom are subsequently admitted to acute medical units (AMUs). We assessed the frailty status of older patients attending an ED with a set of simple operational criteria. **Methods:** Medical student volunteers identified patients aged ≥70 years attending one ED over a five day period (8am-10pm). Frailty was defined as the presence of ≥1 of: fracture in a medically unstable patient, care home residency, confusion (Abbreviated Mental Test-4 score <4) or a Waterlow score >25 (measure of skin integrity and nutrition). The frailty status was recorded along with demographics, geriatric syndromes and the final destination. **Results:** There were 1723 admissions in all, 256 aged ≥70 years. 177/256 older patients were assessed, mean age 82.5 (range 69-99, 76 (43%) were men. 52 (29%, 95% CI 23-37%) were classified as frail, with confusion being the most commonly met criterion (38/52, 73%). Frail older people comprised 3% (52/1723) of all ED patients. The operational definition of frailty correlated well with the number of geriatric syndromes (Pearson's coefficient 0.56, p<0.0001). 75% (21/28) of frail patients required admission compared to 24/37 (66%) non-frail patients. Overall, 16/33 (48%) of those admitted to an AMU from ED were frail. **Conclusion:** The operational definition of frailty used in this mapping exercise was simple and easy to use, as demonstrated by its successful application by untrained volunteers. This pragmatic practice without dependence on complex criteria identifies a small but vulnerable population at risk of a prolonged hospital admission and other adverse outcomes. Interventions to improve care for this group early in their hospital stay have the potential to greatly influence patient flow in the axis of acute medical care.

#### **PB6 300 IMPLEMENTATION OF A PHYSICAL EXERCISE PROGRAM IN COMMUNITY FOR PEOPLE WITH STROKE: THE STANDPOINT OF PARTICIPANTS**

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**Introduction:** The amount of time people with stroke spend in acute care is measured in days, whereas the time spent in the community after formal rehabilitation may be years. However, as described in recent focus groups and interviews, there are very few sustainable community programs suited to the needs of these people. This qualitative study aimed at 1) exploring the impact of a tailored community-based exercise program from the participants' point of view, and 2) observing the sustainability of this program. **Material and Methods:** The study enrolled seven community-dwelling persons with chronic stroke in an exercise program including health education sessions led by two kinesiologists. Participants met twice weekly for 10 weeks. A community partner organization working with stroke survivors provided all the facilities and logistical support. Qualitative methods were used to identify impacts, facilitators and barriers to the program. Individual structured interviews were conducted, audiotaped and transcribed. The transcribed interviews were analyzed using the analytical questioning method. **Results:** Participants reported increased mobility, reduced fear of falling and opportunity for socialization as positive elements. The most significant outcomes were self-confidence and feeling of achievement as catalysts for lifestyle modification. The group approach involving only people with stroke was considered a facilitator and transportation problems a barrier. Six months post-intervention, all participants continued to do physical activity. The sustainability of the program was demonstrated as the research kinesiologist was hired by the community organization and exercise was added to its regular program. **Conclusion:** The format under which the exercise program was delivered is innovative and interesting in terms of knowledge transfer and sustainability. Participants reported physical and psychological benefits. Moreover, results show that they decided to commit to a more active lifestyle. Funded by the Canadian Stroke Network

#### **PB6 301 PREDICTORS OF MORTALITY IN ELDERLY HIP FRACTURE PATIENTS ADMITTED TO AN ORTHOGERIATRIC UNIT IN OSLO**

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**Introduction:** Hip fractures are associated with high morbidity and excess mortality. An orthogeriatric unit providing multidisciplinary treatment to elderly patients was established

in Diakonhjemmet hospital in 2004. **Methods and materials:** One-year mortality of all causes was registered for 335 hip fracture patients aged 65+ who underwent surgery during January-October 2007. **Results:** Three-fourths (76%) of the patients were women. Women were older than men (mean age 85.9 vs. 83.2 years, p=0.002). One-fourth (27%) were admitted from nursing homes. One-year cumulative incidence (CI) of death was 25%; it was higher in men (CI 35% vs. 22%; cumulative incidence ratio (CIR) 1.6 (p=0.013)). The gender difference persisted when adjusting for age, body mass index (BMI), delay in operation, falling indoors, and cardiovascular disease. However, it was attenuated when adjusting for pneumonia during the hospital stay, as pneumonia was far more prevalent in men (22% vs. 6%, p<0.001). Unadjusted CI of death in patients with pneumonia was 52%, and 22% in those without (CIR 2.3, p<0.001). Unadjusted CI of dying in patients admitted from nursing homes was 47%, and 14% in those admitted from their homes (CIR 3.4, p<0.001). In a multivariable analysis (n=209) including age, gender, BMI, delay in operation, falling indoors, cardiovascular disease, pneumonia, and admittance from nursing home, the only significant predictors of mortality were pneumonia (CIR 2.3, p=0.045) and admittance from nursing home (CIR 3.6, p<0.001). **Conclusion:** One-fourth of the hip fracture patients died within a year after surgery. Mortality was higher in men than in women, despite their lower age, explained by a higher occurrence of pneumonia. Pneumonia during the stay and admittance from nursing home were significant predictors of mortality.

#### **PB6 302 COMPARISONS OF TOOLS PREDICTING FUNCTIONAL DECLINE AFTER HOSPITALISATION OF OLDER PATIENTS**

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**Introduction:** Older patients frequently experience functional decline after hospitalization. Identifying at-risk patients is important to early plan appropriate care management. Several tools predicting functional decline upon admission have been designed: ISAR, HARP and more recently, SHERPA which has still to be prospectively validated. We aimed to compare the operational characteristics of this score to previous ones. **Methods:** Prospective cohort study including patients aged 75 years and over, hospitalized for hip fracture, infection or heart failure. ISAR (6-items questionnaire), HARP (age, iADL, MMSE), and SHERPA (age, fall, self-rated health, iADL, MMSE) were measured at admission. ADL score three months after discharge was compared to the preadmission ADL status and a decrease of one point determined functional decline. ROC analyses were performed. Results Ninety-eight patients were recruited (mean age 82±5 years, 56% of females, mean number of comorbidities 5.7±2.0). At 3 months, 46 (47%) presented functional decline. Area under ROC (95% CI) for ISAR, HARP and SHERPA were respectively 0.58 (0.48-0.68), 0.68 (0.57-0.77) and 0.73 (0.63-0.82). Difference between SHERPA and ISAR was statistically significant (p=0.001) and tended to statistical significance between SHERPA and HARP (p=0.078). To rule out the risk of functional decline, the optimal SHERPA cutoff was 3.5 (Se=98%; Sp=33%) and was reached by 82% of the patients. **Discussion:** SHERPA better predicted functional decline in older hospitalized patients in this study as compared with two other predictive tools. The predictive performances of the three tools are moderate, and the advantage for SHERPA is slight. Recruitment among three selected diagnoses may however limit the generalization of these results and further studies are needed to validate SHERPA.

#### **PB6 303 CARDIAC ARRHYTHMIAS IN GERIATRIC PATIENTS REFERRED TO FALL CLINIC AND EXAMINED WITH EVENT RECORDER**

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Bispebjerg Hospital has a catchment area of 220.000 persons. Geriatric department is part of the medical field; there are 36 beds and several outpatient treatment centers where the fall clinic has approximately 350 new-referred patients pr year. The patients in the fall clinic are examined with vestibular investigations, orthostatic BT mode, Biotelemetry, para-clinical studies and, in cases of suspected cardiac syncope, with Event Recorder (R-test). We have chosen to study the amount of cardiac arrhythmias needing treatment, in patients studied with Event Recorder. Analysis of 50 patient records: The patients had all been investigated with Event Recorder for at least 72 hours in order to investigate fall-tendency. The patients were all +65yr, 31 female, 19 males, range 65-95yr. Of the 50 patients we studied had 23 changes in the conventional ECG, 11 patients equivalent to 48% had no arrhythmias on Event Recorder, while the other 12 had arrhythmias that lead to intervention. 5 patients, equivalent to 22% were treated with Pacemaker, 6 patients representing 26% were treated medically and 1 patient, equivalent to 4% were treated both medically and with pacemaker. In review of 50 patient records of patients referred for investigation of causes of fall. We found with Event Recorder cardiac arrhythmias in 24% (12 patients) who needed treatment and 50% of these needed Pacemakers. These findings indicate that Event Recorder is a valuable test applied to geriatric fall-patients. It could be of interest to examine a larger number of patients in order to validate the findings. It also would be interesting to review the indications for Event Recorder because there was a large proportion that had normal conventional ECG nor had arrhythmias at Event Recorder. One

could compare changes in the conventional ECG with arrhythmias on Event Recorder and thus using

**PB6 304 KNOWLEDGE AND ATTITUDES ABOUT PARTICIPATION IN PHYSICAL ACTIVITY: AN INVESTIGATION OF OLDER POST-ACUTE HOSPITAL INPATIENTS**

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**Introduction:** The habitual physical activity levels of most older people are sub-optimal. Post-acute rehabilitation provides an opportunity to promote physical activity. The illness experience may trigger a change in health behaviours. Readiness to participate is also affected by knowledge, attitudes, intentions and deterrents. **Methods:** We investigated these factors using a semi-structured questionnaire (developed from previously validated questions) in older patients pre-discharge from an urban hospital older persons' medicine unit in the UK. Frailty was defined according to published norms for grip strength. Responses to open questions were thematically analysed. Relationships between quantitative data were analysed using non-parametric tests. **Results:** From 256 patients screened, 66 patients were approached for inclusion and 44 (71% female) completed the interview. Age-median (range) was 83 years (67-91), Barthel Index 18/20 (9-20). Mean length of hospital stay was 13.7 days (SD 9.7). Frailty was present in 72% (31/43). Despite hospitalization for acute illness or injury, and a wide disability range, only 23% (10/44) reported "poor" general health. Knowledge of specific health benefits of physical activity was mixed with fewer participants responding correctly about the benefits of physical activity on hypertension (56% versus 78% p=0.0098) and osteoporosis (58% versus 84% p=0.0004) compared with community samples. Most wrongly believed their habitual activity levels were adequate. Intentions towards future physical activity were unrelated to frailty. Deterrents to increase activity were predominantly related to "breathing" and "leg" problems. **Conclusions:** These patients, potential benefactors from increased physical activity, have lower knowledge and poorer attitudes toward physical activity than in well community samples. These data provide insight about the challenges to delivering exercise related health messages and interventions.

**PB6 305 PARTICIPATION RESTRICTION IN FRAIL OLDER PEOPLE: EXTENT, NATURE AND UNDERLYING FACTORS.**

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**Introduction:** Participation restriction, as defined by the World Health Organisation, is a key component of disability. Participation restriction has not been previously examined in frail older people. The objective of this study was to determine the extent and nature of participation restriction in community-dwelling frail older people, and to identify which health and demographic factors best explain participation restriction in this population. **Methods and materials:** Cross-sectional study of 132 community-dwelling adults aged 70-101 years (mean age 84.2, SD = 5.85), who met the criteria for frailty defined by Fried and colleagues. Participation restriction was evaluated using the Reintegration to Normal Living Index, which measures participation on a 5-point scale in 11 areas of life. Associations between participation restriction and ten health and demographic factors were examined using linear regression models. Results Eighty-eight percent of subjects reported participation restriction in at least one aspect of their life. Restricted participation was most prevalent in the areas of work in the home or community (55%) and community travel (60%), and least frequent with regard to indoor mobility (15%). Multivariate regression analysis showed impaired mood (assessed by the Geriatric Depression Scale), older age, greater number of health conditions, greater muscle weakness (as assessed by grip strength), and decreased performance at the activity level (assessed with the Barthel Index and Short Physical Performance Battery) were independently and significantly ( $p<0.05$ ) associated with participation restriction and explained 30% of the variance in participation restriction. Living with a carer and cognitive impairment were not significant predictors. **Conclusion:** In community-dwelling frail older people, participation restriction has a high prevalence. It is influenced by psychological, physiological and health-related factors. These findings indicate that a multidisciplinary approach may be helpful with improving participation in this population.

**PB6 306 NEUROLOGICAL ASSESSMENT OF IMPAIRED MOBILITY IN NURSING HOME RESIDENTS**

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**INTRODUCTION:** Nursing home care is generally provided by care-workers without exact knowledge of underlying disorders or conditions in elderly residents. By contrast, in

acute care settings organ-targeted medicine is prevalent, paying little attention to the mental and/or functional status of the elderly patients. We therefore have undertaken a prospective study to evaluate residents upon admission into a nursing home by using a multidimensional assessment method to elucidate mental/physical disability and accumulation of underlying diseases. To characterize the motor function and mobility aspects of impaired ADL, we here describe the results drawn from neurological examination domain of assessment in consecutive 100 residents. **METHODS AND SUBJECTS:** Upon admission, every resident was examined by the use of a comprehensive assessment including mental (Folstein Mini-Mental State Examination, MMSE), functional (Functional Independence Measure, FIM), and physical /neurological evaluations. The subjects were 32 men and 68 women, mean age 81 years. **RESULTS:** All but four residents were cognitively impaired (mean MMSE score of 11.9/30); 49 Alzheimer disease, 14 vascular dementia, 13 Parkinson disease with dementia and Lewy body dementia, seven frontotemporal dementia and corticobasal degeneration. The motor segment of FIM was decreased to 41.4/91. The immobility was found to be mainly associated with muscle weakness relevant to sarcopenia (44%), parkinsonism (26%), cerebrovascular disorders (17%), and cervical myelopathy (6%), though these conditions were often overlapped. **CONCLUSION:** The thorough neurological examination showed that the major motor deficits in the nursing home residents was comprised of disuse muscle weakness, parkinsonism, cerebrovascular symptoms and cervical myelopathy in this order. Like cognitive deficits, many of these motor dysfunctions escaped recognition before the current nursing home placement.

**PB6 307 STRONTIUM RANELATE OVER 5 YEARS REDUCES NON VERTEBRAL FRACTURES IN WOMEN AGE > 80 AND IS COST SAVING**

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**Introduction** - Longevity has resulted in a greater proportion of the population entering a time of life when increasing bone fragility and falls predispose to fractures, particularly nonvertebral fractures. Women over 80 years of age constitute 10% of the population but contribute 30% of all fractures and 60% of all nonvertebral fractures. Despite this, few studies have examined anti-fracture efficacy of treatments in this high risk group and none have provided evidence for benefits beyond 3 years. **Methods and materials** - To determine whether strontium ranelate reduces the risk of vertebral and nonvertebral fractures during 5 years, we analysed a subgroup of 1489 female patients over 80 years of age (mean 83.5 ± 3.0 years) with osteoporosis from the SOTI (Spinal Osteoporosis Therapeutic Intervention) and TROPOS (Treatment Of Peripheral Osteoporosis) studies randomized to strontium ranelate 2g/d or placebo. All received a supplement of calcium plus vitamin D. **Results** - By intention to treat, vertebral fracture risk was reduced by 31% (relative risk, RR = 0.69; 95% confidence interval, CI 0.52-0.92), nonvertebral fracture risk by 27% (RR = 0.73; 95%CI 0.57-0.95), major nonvertebral fracture risk by 33% (RR = 0.67; 95%CI 0.50-0.89) and hip fracture risk by 24% (RR = 0.76; 95% CI 0.50 - 1.15, not significant). Treatment was cost saving as it decreased cost and increased QALYs and life-years. **Conclusion** - Strontium ranelate safely produced a significant reduction in vertebral and nonvertebral fracture risk during 5 years in postmenopausal women over 80 years of age and was cost saving.

**PB6 308 THE EFFECT OF A HIGH ANIMAL PROTEIN DIET COMBINED WITH RESISTANCE TRAINING ON APPENDICULAR MUSCLE MASS IN OLDER ADULTS.**

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**Introduction:** The availability of essential amino acids is essential to promote muscle protein anabolism during a resistance training program in the elderly, as demonstrated in previous studies using a supplement (Parise & Yarasheski, 2000; Volpi, Kobayashi, Sheffield-Moore, Mittendorfer, & Wolfe, 2003). It remains uncertain if a high intake in animal proteins from food (especially rich in essential amino acids) can allow greater gains in muscle mass. **Purpose:** The objective of this study was to verify if a high consumption of essential amino acids coming from animal proteins in the diet could improve muscle mass gains after resistance training in older persons 59 to 73 years of age. **Methods:** 16 participants were submitted to resistance training 3 times a week. The resistance training intervention consisted in 3 sets of 8 repetitions at 80% of 1 RM. Nutrient intakes were measured by a 3-d food record. Subjects were divided into 2 groups of 8 participants based on animal protein intake and were paired for age and baseline lean mass (T1). The average intake of the high animal protein group (HPG) was  $1.27 \pm 0.4$  g/kg and  $0.55 \pm 0.1$  g/kg in the low animal protein group (LPG). Appendicular lean body mass was measured by DEXA at T1 and at the end of the intervention (T2). **Results:** While HPG showed a tendency to significantly increase appendicular lean mass ( $p=0.069$ ), no such effect could be observed in the LPG group. **Conclusion:** It seems that a high intake of animal proteins (including

essential amino acids) would tend to produce a gain of appendicular muscle mass compared to a low animal protein diet. Our results suggest that we need to study this question with a larger sample size.

**PB6 309 VIDEOFLUOROSCOPIC SWALLOW FINDINGS IN ADULT PATIENTS AND THE ELDERLY WITH COMPLAINTS OF COUGH.**

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Aim: Describe swallow alterations that may provoke complaints of cough in adults and the elderly through videofluoroscopy. Casuistry and Method: is a retrospective study of swallow videofluoroscopies of the databank at the Fleury Diagnostic Medical Center. Subjects with neurological diseases, cancer and/or radiotherapeutic and/or chemotherapeutic treatment, mouth, stomach or esophagus surgery were excluded, thus reaching an overall of 119 patients. Events occurred while ingesting the following consistencies: fine, thick and pasty liquids and solids. The Statistical Method used was the chi-square test. Results: A significant difference was observed in the 40-to-59-year and 70-to-79-year old groups when swallowing phases were compared among different age groups, with a greater index of alteration occurrences in the esophageal phase. There was also a greater index of alteration occurrence in the esophageal (N=14), pharyngeal and esophageal (N=5) phases in the 60-to-69-year old group. There are alterations in the pharyngeal (N=12), pharyngeal and esophageal phase (N=13) and esophageal phases (N=11) when swallowing alterations were compared in 80-year and older patients. This result shows physiological changes in the pharyngeal phase that are provoked by aging. Conclusions: Alterations related to complaints of cough in all swallowing phases were found. It was also verified that the number of alterations in the pharyngeal phase among persons with 80 years or more (N=25) was greater than in all other age groups (N=19). The gastro-esophageal reflux appeared as most recurrent alteration. Hiatus hernia is quite associated to the RGE disease and is always present in its most serious forms. The third most prevalent occurrence was laryngeal-tracheal aspiration, which is directly related to the aging process. Treatment: phonoaudiological therapy (N=29), surgical treatment (N=18) and drug treatment (N=27).

**PB6 310 REHABILITATION NEEDS OF CARE HOME RESIDENTS: WHO DETERMINES IT?**

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Introduction The importance of rehabilitation in long-term care goes without saying, and the rehabilitation need for care home residents should be evaluated periodically. However, the precise description of "need" is a complex issue in health care system. The main purpose of this study is to evaluate the differences in the perceived rehabilitation need of care home residents and the assessed rehabilitation need of carers in the care home. Methods Senior residents of Banciao Veterans Care Home were invited for study and were enrolled when they were fully consented. Inter-RAI Minimum Data Set Nursing Home 2.0 Chinese version (MDS-NH 2.0) was implemented for all participants. Activities of daily living (ADL) of all participants were evaluated by the MDS ADL. The G8 section (evaluation of rehabilitation needs) was analyzed to explore the differences of rehabilitation need between participants' perception and onsite carers' assessment. Results In total, 581 residents were enrolled (mean age= 80.8 ±5.2 years, all males) for study. Overall, 91.3% of them were considered physically independent according to MDS ADL scale. Among all participants, 63.2% believed they would be physically improved by certain rehabilitation services. However, only 9.8% of study participants were considered having rehabilitation potential by their carers. Conclusions A significant gap of rehabilitation potential existed between senior care home residents and their carers. The judgment of carers was more compatible with the results of MDS ADL. However, perceived rehabilitation needs of care home residents deserve further attentions to promote better quality of care in care homes.

**PB6 311 PHYSICAL ACTIVITY AS A PREDICTOR OF ALL-CAUSE MORTALITY AMONG OLDER PEOPLE WITH CARDIAC DISEASE**

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Aim: We investigated physical activity as a predictor of all-cause mortality among older people with and without cardiac disease. Methods: The study is part of the Evergreen-project. The study group consisted of 481 75 or 80 year-old residents of the city of Jyväskylä, central Finland. The baseline data were collected in the years 1989 and 1990. Participants gave self-reports of physical activity and chronic diseases. Diseases were later ascertained by a medical doctor in a clinical setting. Severity of cardiac disease was rated based on self-reports of symptoms and the use of heart medicines. Date of death was recorded for all subjects who died during the ten-year follow-up period. Cox regression analysis was used to investigate the

relationship between the dependent variable and the covariates. Results: 259 people died over the ten-year follow-up. The results showed that among physically active older people the full adjusted (age, gender, other chronic diseases, health behaviours, severity of cardiac disease) relative risk of death did not differ among those with or without cardiac disease. Results also show that the sedentary older people without cardiac disease had a higher mortality risk than the physically active older people with a cardiac disease. Conclusions: According to the results physically active life style predicted longer life among the older people with cardiac diseases. The severity of cardiac disease did not explain the result.

**PB6 312 RAPID IMPROVEMENT PROGRAMME FOR HIP FRACTURE CARE IN ENGLAND**

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Introduction Patients who suffer a fractured neck of femur have high mortality (20% in first 4 months) and morbidity with up to 20% needing long term care post fracture. Care varies throughout the UK with length of stay varying between 17 to 40 days. Methods and materials The Institute for Innovation and Improvement (Delivering Quality and Value Team) has developed a tool kit. This toolkit reflects feedback from site visits to high and low performing Trusts and through evidence based literature, identifies key characteristics of high performing pathways for good fractured neck of femur care. At local level, the orthopaedic pathway team will be working with Trusts (Acute and PCT) to improve the quality and value of care provided to patients with fractured femur, by transforming care pathways and processes within short timescales. This will be achieved by offering improvement skills, project management support, metrics and measurement support and clinical expertise to NHS organisations (local and system wide) to make improvements. Results The 6 key characteristics of organisations providing high quality care and value for money in patients with fractured femur are: · Coordinated pathway, designed to reduce variation in length of stay, mortality and, re-admissions · Appropriate, medically fit patients receive surgery within 24 hours · Patients are mobilised within 12-18 hours post op including weekends · Patients are discharged back to their usual address using a criteria based discharge process · Health and social care multi agency teams are coordinated and integrated · The MDT works in partnership with an orthogeriatrician Conclusions A coordinated integrated pathway for fractured neck of femur care has been shown to decrease length of stay and improve quality of care and outcomes for patients. By reducing variation in these processes and sharing good practice it can be disseminated through Regional Networks throughout England.

**PB6 313 DOES THE ORAL NUTRITIONAL SUPPLEMENTATION IN UNDERNOURISHED OLDER PEOPLE AFTER HOSPITALISATION REDUCE DISABILITY?**

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Introduction To discover whether nutritional supplementation in recently discharged older patients reduces disability and improves muscle function. Methods This 2-centre, double blind, placebo controlled trial was conducted in the homes of community dwelling patients aged 70 years or over. Participants were randomised to receive either 2 cartons of a nutrient rich supplement (600kcal) or a matching placebo (200kcal) daily for 16 weeks. The primary outcome was Barthel which measures disability based on activities of daily living. Barthel, weight and handgrip strength were recorded at 0, 8 and 16 weeks. Participants wore an accelerometer for 7 days to record activity levels at the beginning and end of the study. Results Of the 2409 patients screened, 937 (39%) were eligible to participate, 684 declined, leaving 253 participants (61% female, mean age 82 years) who were allocated to the nutritional supplement (n=126) or matching placebo (n=127). 62/253 (25%) withdrew from the study, of whom 20 withdrew their consent and 18 died. We found no evidence for a reduction in disability with nutritional supplements, as measured by change in Barthel. Handgrip strength improved more in the supplemented group (mean difference 1.48kg, p=0.005, corrected for gender and baseline values). There was a modest increase in physical activity levels in the nutritional supplemented group (p=0.018) and a trend towards weight increase (p=0.037); both significant when adjusted for adherence (median 38% supplemented group, 50% placebo group). Approximately 25% patients reported gastrointestinal side-effects. Conclusions Oral nutritional supplementation in older people recently hospitalised did not reduce disability, despite improving muscle function and modestly increasing physical activity levels. The absence of benefit on function may be because of the modest increase in calories achieved or because more prolonged supplementation is necessary. Future trials should assess acceptability and tolerability.

**PB6 314 SURVIVAL AND LONG TERM FUNCTIONAL OUTCOME IN NONAGENARIAN PATIENTS AFTER HIP FRACTURE**

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The number of individuals 90 years of age or older with hip fracture is expected to rise significantly in the next decades. This dramatic event is associated with morbidity, mortality, as well as poor quality of life. Nonagenarians may require a unique treatment and rehabilitation approach as well as an inpatient rehabilitation setting. In the present prospective study, the rate of survival and functional recovery after intensive rehabilitation was investigated in this very elderly population. Method: Consecutive nonagenarian patients suffering from hip fractures and admitted to an intensive rehabilitation setting were enrolled. Outcome measures included survival rate, Barthel scale assessment and gait evaluation at admission, discharge and follow-up (26.3±8.8 months). All patients were treated with a multidisciplinary therapeutic approach and rehabilitation treatment for almost two hours a day. Results: Sixty patients were screened and 42 subjects (38F, 4M, mean age 92.6±3.5 years, range 90-101) were successfully evaluated. Analyses demonstrated that patients achieved good functional recovery as the Barthel mean scale score was 51.6±7.8, 82.7±18.2 and 81.4±19.1, at admission, discharge and follow-up, respectively. At discharge, 8 (20%) patients achieved ambulation without aid and were independent, 28 (70%) walked with assistance and 4 (10%) subjects were bedridden. Globally, 18 (45%) subjects achieved their pre-injury functional level of gait. The in-hospital and two-year mortality rate was 4.7% and 19%, respectively. At the follow-up visit, 26 (76.4%) patients still lived at home and 8 (23.5%) at nursing facilities. Conclusion: Patients 90 years of age or older with hip fracture achieved a good functional outcome after intensive rehabilitation. The mortality rate was low and about one half returned to their pre-injury functional level of ambulation.

#### **PB6 315 HOME AND CLINICAL ASSESSMENTS OF INSTRUMENTAL ACTIVITIES OF DAILY LIVING IN FRAIL OLDER ADULTS**

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Introduction: Hospitalized older patients are usually assessed in the clinical setting for their ability to accomplish instrumental activities of daily living (IADL) in an independent and safe manner before going home. However, for many frail older adults, this assessment in an unfamiliar environment might not be as representative of their functional abilities as an assessment performed at home. The aim of this literature review was to determine if differences exist between home and clinical assessments of IADL in frail older adults and identify factors that might explain those differences, if any. Methods: A review of studies comparing home and clinical IADL performance-based assessments in frail elderly was conducted. Medline, CINAHL, AMED, psycINFO, Embase, and Current content (1988-2008) databases were searched. As no relevant studies concerning frail people were found, the search was extended to mixed-age and older adults populations. Ten articles were retained and critically appraised. Results: The results suggest differences in IADL assessment between settings for older adults without significant cognitive impairments. More specifically, the studies reviewed tend to report a home advantage of IADL assessment with this population. Some factors, such as familiarity with the environment, might explain those differences. The results also suggest that fewer coping skills, reduced balance and grip strength, declining vision, higher anxiety level as well as less schooling may affect IADL assessment between settings. Based on this review, similar results might be expected with frail older people. Conclusion: The review suggests that home setting may be advocated for a more accurate assessment of IADL with older adults. However, further research is needed to compare home and clinical assessments and measure relevant factors in a frail population. Helping health professionals identify frail patients, who may show different abilities in unfamiliar settings, could mean more appropriate services after discharge from hospital.

#### **PB6 316 EPIDEMIOLOGY OF FALLS IN THE ELDERLY IN TUNISIAN POPULATION**

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**INTRODUCTION** The ageing of the Tunisian population means a need to prevent falls which constitute a very important public health problem. **METHODS AND MATERIALS** The present study aims to identify the risk factors of falls in the Tunisian population aged 65 years old and more. The data used in this study are extracted from the national survey on the health of the old Tunisian population. It was about a transverse descriptive survey which allowed to study, by a survey at home, a representative sample of persons of 65 years old and more consisted of 2165 individuals. The objectives assigned to the present study are to estimate the frequency of falls, to identify the demographic, medical and socioeconomic predisposing factors and to elaborate propositions for the prevention. **RESULTS** Our study allowed to notice that 22.6 % of the investigated persons declared to have fallen at least once during the last 12 months preceding the survey, among which 12.7 % had put it because of an obstacle. Thus, this analysis allowed us, to notice that the fall results from the conjunction of several parameters which we can distribute in three groups: I) An indicator of the risk: the sex with a feminine ascendancy II) Risk factors which are on the base of the process leading to the fall: it is about the decline of the visual

capacity, the disorders of the walking and the balance, the invalidating articular diseases pulling a locomotiv embarrassment as well as decline of the muscular strength. III) Risk factors which increase the risk of falling: it is about dizziness, cognitive impairment and loneliness. Conclusion The falls thus result from the conjunction of several variables at the same time. This supposes that every old person detected at risk will have to benefit from an action of multifactorial prevention.

#### **PB6 317 IMPACT OF A NURSES' URINARY INCONTINENCE EDUCATIONAL PROGRAM ON THEIR HOME CARE OLDER INCONTINENT PATIENTS**

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Introduction: Few studies have examined the impact of urinary incontinence educational programs designed for generalist nurses working with community-dwelling older adults. This research related to an evaluation of the effectiveness of a urinary incontinence educational program for nurses in reducing their home care patients' urinary incontinence and improving their quality of life. Methods: Pre-experimental design involving 11 community nurses and 24 of their urinary incontinent older patients. Participants' urinary incontinence and quality of life were assessed at baseline, and again two and six months after the end of the nurses' educational program. The aim of the program was to integrate the nurses' knowledge, skills and attitudes through three interactive workshops combining the case study method with lectures. Results: Two months post-intervention, urinary incontinence and quality of life improved in the older adults, although differences were not statistically significant ( $p=0.054$  and  $0.212$ , respectively). However, both outcomes had significantly improved by six months ( $p=0.002$  and  $0.001$ , respectively). Conclusion: This study suggests that the care provided by nurses who attended the program can significantly improve urinary incontinent older adults' clinical condition and quality of life.

#### **PB6 318 FUNCTIONAL STATUS IN FRAIL OLDER PEOPLE PREDICTS CARER BURDEN**

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Introduction: Frailty affects a person's independence by diminishing their physical function and ability to carry out activities of daily living. These deficits erode the caregiving experience, potentially placing a burden on informal carers and reducing their ability to provide appropriate levels of care. This paper examines the relationship between carer experiences and the functional status of frail older persons. Method: This study involved the informal carers of community dwelling people (>70years) who were participants of a randomised controlled trial aimed at investigating frailty interventions. The informal carers were administered a questionnaire to identify carer experiences using the Caregiving Reaction Assessment (CRA). The correlation of carer experiences with frail older persons' functional status (Barthel Index) was investigated. Results: Sixty three (64%) of the carers have completed the questionnaire. Mean carer age is 65.5 (SD 13.5) years, of which 71% are female and 54% reside with the intervention participants. Mean participant age is 84.5 (SD 6.2) years, 71% are female. Overall, carers experienced higher levels of burden 2.6 (SD 0.6), mainly due to disrupted living schedules and impact on their health, whilst self esteem was derived from caregiving. Carer burden significantly correlated with frail older persons' functional status ( $r = -0.384$ ,  $p = 0.002$ ) particularly the dimensions of financial impact ( $r = -0.405$ ,  $p = 0.001$ ) and disrupted schedule ( $r = -0.433$ ,  $p = 0.000$ ). Regression analysis indicated that frail older persons' functional status is a predictor of carer burden ( $p = 0.005$ ). Conclusion: Detection of poor functional status in frail older persons enables the development of tailored strategies for their at-risk carers. Additionally, improving frail older persons' functional status may reduce carer burden. These results highlight the essential nature of the informal carers' role in community interventions to improve frailty in older people.

#### **PB6 319 WEIGHT CHANGES IN ELDERLY AND HOW IT ASSOCIATES WITH THE RISK OF DEVELOPING OSTEOPOROSIS**

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In elderly how body weight relates to bone health/osteoporosis is not without controversies. Weight loss due to loss of muscle mass (sarcopenia/frailty) has been reported to compromise bone health. Such a clarity though lacks for the relationship between body fat loss and bone health. More often obesity has been examined. Beneficial role of obesity is explained via weight loading and hormones, e.g. estrogens. A more deleterious role of obesity is explained via the controversial leptin, and co-existence of sarcopenia with obesity. Our sample (cross-sectional, n=576, men: women 313:263, age: 82.6y [82.3;82.8];  $P<=0.05$ ) was divided into six groups: osteoporosis and comorbidities, osteopenia and comorbidities, comorbidities, osteoporosis, osteopenia, and

healthy. Of this 59.4% had either osteoporosis or osteopenia, of which, 73.4% were overweight-obese. However, osteoporosis (with/without comorbidities) had the lowest weight and body mass index (BMI) among all six groups, and correlated inversely with weight (-0.11 to -0.28), and BMI (-0.15 to -0.23). Conversely, comorbidities-group (87.2% overweight-obese) correlated directly with weight (0.31) and BMI (0.21). Body weight is reported among the most powerful predictors of bone health. While overweight-obese elderly were found both in (a) osteoporosis and osteopenia (73.4%), and (b) comorbidities groups (87.2%), our study shows that osteoporosis (with/without comorbidities) as the crucial old-age disease that related to lower weight/BMI. Finally, our study had a study-specific healthy group with an average BMI of 28.5 (overweight), which was quite similar to osteopenic groups. We conclude that, old age with overweight might be a relatively healthy alternative for elderly. However, why some elderly remain healthy with overweight while others do not is yet an open question.

#### **PB6 320 TEN YEARS BONUS OF FITNESS AFTER A SHORT TRAINING PROGRAM AMONG OLDER SUBJECTS**

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Introduction: Prolonged training programs improve elderly's maximal aerobic and endurance capacities, but little is known about short programs. We tested a 9-week Intermittent Work Exercise Training (IWET) among healthy volunteers Methods and Materials: 130 participants were evaluated in 2 groups, according to their age: Group I (GI) including 62 subjects (mean age 60.8 years) and Group II (GII) with 68 subjects (mean age 68.9 years). All subjects performed before and after the IWET an incremental exercise test to obtain their first ventilatory threshold (VT1), Peak Oxygen Uptake (V02 peak) and Maximal Tolerated Power (MTP). IWET consisted to 18 sessions of our program: each session of 30 minutes of cycling consisted of alternating 4 minutes at the intensity of VT1 and 1 minute at a submaximal intensity. Results: in both groups before training, maximal values of V02 peak and MTP were near the mean theoretical values. After training all subjects increased significantly their maximal values: V02peak +9.9% (GI) and 13% (GII); MTP +14.3% (GI) and 16.4% (GII). The post-training maximal values (V02 peak, MTP) of GII regained the maximal pre-training values of GI. The VT1 intensity, increased highly after training: 20.5% in the GI (78.2 to 94.2 watts) and 25% in the GII (68.8 to 85.9 watts). During the training sessions, the intensity of the 4 minutes stage also increased regularly: from 75.8 to 107.4 watts in the GI and from 63.3 to 94.8 watts in the GII. Conclusion: this short "tailor-made" program seems to have the same effectiveness that prolonged program. After training, the 70-years old group (GII) regained the same level of fitness that had the 60-years old group (GI) before training. With a grant from CAMES

#### **PB6 321 EPIDEMIOLOGY OF THE DEPENDENCE WITHIN THE TUNISIAN POPULATION OF 65 AND MORE YEARS OLD**

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Introduction Because of the demographic evolution, the number of old persons and especially the very old ones will increase in the next years in Tunisia. We can thus expect an important increase of the number of persons in situation of dependence. Material and methods Towards this situation, we decided to begin this study which has for objective to identify the risk factors of the loss of autonomy within this population and to make propositions for the prevention. It was begun by the national Institute of Public health with a representative sample of the Tunisian population of 65 and more years old living at home consisted of 2165 individuals distributed on more than 7000 households. To do it, we built an indication which measures the handicap of physical independence such as it was defined by the International Classification of the Handicaps: deficiencies, Incapacities and Disadvantages of the OMS. Results The analysis of this indication showed that the dependence concerns 10 % of our population of 65 and more years old living at home. Among the 216 dependent old persons, 104 are heavily disadvantaged, they are confined on the bed and/or on the armchair. 112 others are dependent for certain activities of the everyday life. This analysis also showed that the dependent population is dominated by the 80-year-old subjects (40 % of the total strength) and the women (about 56 % of the whole dependent population). The women of 75 and more years old represent to them only 36 % of the dependent persons and about 42 % of those who present a heavy dependence. This study allowed us to identify the risk factors of the dependence including medical and

sociological parameters Conclusion Our results suggest that any strategy of prevention must have a double medical and social approach.

#### **PB6 322 FEASIBILITY OF THE FRIED CRITERIA FOR FRAILTY SCREENING IN AN INTERVENTION TRIAL**

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Introduction Among the current operational definitions of frailty the criteria established by Fried and coworkers have aroused intensive interest in the recent scientific literature. Nevertheless these criteria have been applied mostly in epidemiological and rarely in interventional studies. In this presentation we provide data on the applicability of the Fried criteria in the context of a RCT (NCT00783159) of physical exercise in prefrail older persons. Methods and materials Recruitment was supported by newspaper articles, information by health insurance companies and advertising in senior residences. Potential candidates were invited to our research institute and screened for prefrailty (weight loss, hand grip, exhaustion, gait speed, physical activity). For the diagnosis of prefrailty one or two of these criteria had to be fulfilled. Results In total 270 persons were screened. Among those 183 were not frail, 87 were prefrail and none was diagnosed as frail. The most prevalent criterion was exhaustion (41%) whereas hand grip was the second most frequent criterion (37%). Weight loss (4%), gait speed (14%) and physical activity (4%) were much less frequently positive. 18% of the screened persons who scored positive for the criterion "exhaustion" were depressed according to Geriatric Depression Scale. With regard to the Minnesota Leisure Time Physical Activity Questionnaire (MLTPAQ), relevant for the criterion "physical activity", only three activities among the 18 of the MLTPAQ selected by Fried were applicable. Conclusion In our opinion the cutoffs (weight loss, gait speed), the applicability (physical activity) and the validity (exhaustion) of certain Fried criteria have to be reconsidered. In addition they should be adapted for application in an European population. Nevertheless the Fried criteria show high practicability, especially in the clinical setting.

#### **PB6 323 COMPARISON OF A BIOMEDICAL SPECTROSCOPIC ELECTRICAL IMPEDANCE ANALYSIS WITH FOUR CLINICAL MEASURES OF MUSCLE PERFORMANCE TO DETECT SARCOPENIA FOR THE OLD PATIENTS.**

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Sarcopenia refers to the loss of skeletal muscle mass and to the decline in muscular performance in aging. The use of the bioelectrical impedance analysis is one of the ways to evaluate the skeletal muscle mass but to our knowledge, the correlation between muscle mass and muscle performance is not well established. Objective of the study : to look for a correlation between four different clinical performances (Grip Strength, Tip Pinch, Key Pinch, Ten Meters Walk Test) and bioelectrical impedance analysis. Patients and Method : 50 patients admitted in our rehabilitation hospital during february and june 2009. Exclusion criteria : terminal diseases, major motor difficulties (score of 5 or less for ambulation and transfer evaluated by the Barthel Index), severe to very severe dementia, cardiac, hepatic or kidney insufficiency with oedema, patients with coronary stents or pace maker. The preliminary results of this study will be given and the predictability value of these different measures commented.

#### **PB6 324 GENDER DIFFERENCES OF UPPER MUSCLE STRENGTH AND OXYGEN HEMOGLOBIN SATURATION IN ELDERLY RESIDENTIAL HOME**

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Introduction: It is well known the muscle strength in male better than in female adults. And physical fitness decreases with aging. However, the difference of functional fitness by gender was still unclear. The purpose of this study was to compare functional fitness between female and male elderly. Methods and Materials: Ninety-nine subjects were recruited (male=62, female=37) from residential home. The average age of the subjects was  $82.0 \pm 7.5$  years. Chair stand and arm curl in 30 seconds, 2-minute step, chair-sit reach, back scratch and 8-feet up and go were performed. Oxygen hemoglobin saturation (%) in arm was recorded by near infrared spectroscopy (NIRS). Spearman correlation and independent t-test were used for statistics. A level of  $<=0.05$  was set for significant on all tests. Results: The results showed that arm curl performance, oxygen hemoglobin saturation with resting, exercise and recovery phase in male were significantly higher than in female. Chair-sit reach and back scratch performance in female were better than in male. Arm curl performance was significantly related to oxygen hemoglobin saturation with resting, exercise and recovery phase. Conclusions: W suggested the upper muscle

strength was late of degeneracy with aging in male elderly and it was related to oxygen hemoglobin saturation.

**PB6 325 OCCUPATIONAL THERAPY AT AN ACUTE GERIATRIC UNIT: DESCRIPTION AND RESULTS**

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**INTRODUCTION.** Hospitalization has different consequences for aged people than younger. Staying at hospital has often a functional decline for the elder, as seen on the independence in Activities of Daily Life (ADL). It's suggested that 80% of people over 80 years old, will decline their functionality in Activities of Daily Life during hospitalization. At the Acute Geriatric Unit of the Clinical Hospital of University of Chile, an Occupational Therapist provides intervention to support the patients' process of functional and occupational recovery. This article contains a description of the Occupational Therapy treatment at the AGU and results in the functionality of a sample of 26 patients. **METHOD.** During august and december 2008, 26 patients with an average age of 83 years, received Occupational Therapy (OT) at the AGU. The intervention consisted on a daily 30 minutes session of individualized OT during the length of hospitalization. The Occupational Therapist also participated in medical meetings, and carried out educational and informative sessions wit most of the patients' family. **RESULTS.** From this sample, results can be resumed: When discharged, 18 patients increased the level of independence in Basic Activities of Daily Life (BADL) they had by the first day of hospitalization; 6 of them mantained the level of independence; and 2 of them decreased their independence in BADL. **CONCLUSIONS.** Hospitalization increases the possibility of functional loss in aged people and difficults reinsertion at home. From the analized sample, more than 50% of the patients could increase the level of independence they had. The intervention of an Occupational Therapist at the AGU, enables the aged patients to increase and mantain their level of independence in BADL at the moment of discharge.

**PB6 326 EFFECT OF PHYSICAL ACTIVITY COUNSELING ON DISABILITY AMONG OLDER PEOPLE: A 2-YEAR RCT**

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**Introduction** The aim of this study was to study the effect of a physical activity counseling intervention on Instrumental Activities of Daily Living (IADL) disability. Methods and materials The Screening and Counselling for Physical Activity and Mobility in Older People (SCAMOB) –project was a 2-year, single-blind, randomized controlled trial on the effects of individualized physical activity counseling on older sedentary people. The 632 participants (intervention group n=318 and control group n=314) were 75-81-year-old registered residents of the City of Jyväskylä, Finland. To be eligible, persons had to be able to walk 500 meters without assistance, be only moderately physically active or sedentary, have a Mini-Mental State Examination score >21, and have no severe medical contraindications for physical activity. The intervention group received a single face-to-face physical activity counseling session with supportive phone calls by a physiotherapist every four months for 2 years and annual lectures on physical activity. The control group received no intervention. The outcome was IADL disability defined as having difficulties in or inability to perform IADL tasks. Analyses were carried out according to baseline IADL disability, mobility limitation and cognitive status. Results At the end of the follow-up, IADL disability had increased in both groups ( $P<0.001$ ) and was lower in the intervention group, but the group by time interaction effect did not reach statistical significance. Subgroup analyses revealed that the intervention prevented incident disability among those without disability at baseline (risk ratio=0.68, 95% confidence interval 0.47-0.97), but had no effect on recovery from disability. Conclusions The physical activity counseling intervention had no effect on older sedentary community-dwelling persons with a wide range of IADL disability, however it prevented incident IADL disability.

**PB6 327 FRAILTY, FALLS, FEAR OF FALLING AND FUNCTIONALITY IN ELDERLY ASSISTED AT AN INTERDISCIPLINARY OUTPATIENT GERONTOLOGIC AND GERIATRIC CLINIC**

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The Frailty Syndrome is a condition associated with the vulnerability related to the aging process and with outcomes of health, such as falls, fear of falling and disability. The objectives of this study were to determine the frequency of frailty and to verify the

existence of correlation of that with falls, fear to falling and functionality in a group of elderly in a cross-sectional study in which elderly persons registered in a geriatric outpatient clinic were assessed according the frailty phenotype characteristics and for the outcomes: falls, fear to falling, functionality and socio-demographic data. Descriptive analysis of the sample identified 20% of frail, 46.7% of pre-frail and 33.3% of non-frail. There were significant differences between frail and pre-frail, and fragile and non-frail groups in relation to the functionality measured by the Lawton scale ( $p=0.000$ ;  $p=0.000$ ) and fear to falling evaluated by the Falls Efficacy Scale FES-I ( $p=0.011$ ;  $p=0.039$ ). There were a moderate and significant correlation between the FES-I scores and the number of falls and a moderate inverse significant correlation between the FES-I scores and the Lawton scores. The frailty frequency in the present study was greater than in previous ones and there were significant differences between groups according frailty classification, indicating that the most frail had greater incapacity for instrumental activities of daily living and more fear to falling.

**PB6 328 ADVANTAGES FOR SUBCUTANEOUS HYDRATION IN FRAGILE PSYCHO-GERIATRIC PATIENTS**

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**Introduction:** Evaluate if hypodermoclysis (HDC) is a good alternative to treat fragile psycho-geriatric patients with dehydration due to acute processes. **Methodology:** It is a descriptive prospective study of 30 weeks duration, carried out in the psycho-geriatric and geriatric psychiatry units. All patients who needed subcutaneous hydration were included. **Results:** The total number of treatments was 41, carried out in 22 patients. The average age was 82 years old. Functional dependency measured by the Barthel index was of total or severe degree in 90% of the cases; mental dependency measured by MMSE was of total or severe degree in 68% of the cases. The reason for HDC indication in 80% of patients was the presence of dehydration associated to infection in 50% of cases. In a 15% of them it was caused by the denial of food with behavioural disorder. The clinical improvement of patients was related with the used analytical parameters (urea and creatinine in blood). For HDC physiological saline was used, with a volume oscillating between 1 to 2 litres/ day. The average duration of HDC was of 2,8 days with an interval of 1 to 5 days. The most used puncture area was abdomen (80,5%). Complications were only detected in 7,3% in an oedema, haematoma or pain form, always coinciding with subcutaneous hy on thighs. **Conclusions:** -HDC is highly indicated for psycho-geriatric patients with frequent behavioural disorders that need dehydration due to acute processes. -HDC is a very easily technique with few complications. Complications were only observed in 7% coinciding with subcutaneous hydratation on thighs. -The analytical renal function parameters confirms the duration and volumes necessary to

**PB6 329 REMOVAL OF URINARY CATHETERS IN OLDER'S WOMEN: A PROTOCOL USING PORTABLE ULTRASONOGRAPHIC DEVICE**

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**Introduction** The objective of this study was to evaluate a protocol using portable re-education device when removing urinary catheters from old women. **Methods and materials** All the women with urinary catheters admitted in the Geriatric Rehabilitation Unit of the University Hospital of Tours (France) from May 2005 to January 2008 were enrolled in the present study. The main outcome measures were: the age, the ground of admission, the impaired cognition – which was evaluated with the Mini Mental State of Folstein(MMS) -, the existence of an initial urinary retention higher than 700 ml, the length of re-education, the success or the failure of the re-education, and the number of urinary catheterizations avoided thanks to the ultrasonographic device. **Results** The average age of the sixty six patients included in the study was  $85 \pm 5$  years, and the average score to the MMS was  $20 \pm 6$ . The main admission grounds were osteoarticular (35%), cardiovascular (18%) and neurologic (12%) diseases. There was an initial urinary retention higher than 700ml for 28 (42,5%) patients. The average length of re-education was  $6 \pm 6$  days. The removal of the urinary catheter was a success for 57 (86%) old women and was independent of an impaired cognition (21 vs 17,  $p = 0.24$ ) as well as of the existence of an initial urinary retention higher than 700 ml. It was pointed out that the older the patients were the less successful the results were (85 vs 87,  $p = 0.043$ ). The number of urinary catheterizations avoided thanks to the ultrasonographic device was 844 that is to say a 1723 euro-material resource expenditure saving. **Conclusion** This protocol allows the nursing team to reach a consensual behaviour regarding urinary catheter removal.

**PB6 330 GERIATRIC-ORTHOPAEDIC UNIT: FUNCTIONAL AND RISK OF FALL ASSESSMENT OF PATIENTS INCLUDED IN A REHABILITATION PROGRAMME.**

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**INTRODUCTION:** These units have considerable efficiency in functional gain of inpatients as well as in secondary prevention of fractures. A functional assessment of inpatients was developed in a geriatric-orthopaedic medium-stay unit and a risk of fall assessment at discharge after developing a specific rehabilitation programme. Inclusion criteria: early post-operative without complications, clinical stability. Exclusion criteria: severe previous functional damage, severe diseases. **METHODS AND MATERIALS:** Transversal study. Patients: those included in the programme between 2006 and 2008. Analysis: Age, gender, length of stay; previous Barthel index (Bip), at Admission (Bia) and at discharge (Bid), Functional gain (FG), Tinetti Assessment Tool at discharge (TATd), and Downton scale. **RESULTS:** 175 patients were included in the rehabilitation programme (72.6% of the initially admitted). Mean age: 79.2; 65.1 % women. Mean length of stay: 38.5 days. Diagnostics: hip fracture 70.8%, other diagnostics: 29.2 %. Functional indicators: Bip 81.2, Bia 30.1, Bid 67.6, FG 37.5, TATd 21.6/28 TATd <19: 39 patients (22.3 %), TATd 19-24: 85 (48.4%), TATd >24: 21 51 patients (29.3%) Downton 0-1-2: 22 patients (12.51%) Downton 3 or above: 153 patients (87.49%). Gait at discharge: walker 55.2%, cane 26.2 % without help 10.7 %. Not recovered 7.9%. **CONCLUSIONS:** The functional gain results show a slight dependence level (Bid 67.6) that allow most of patients to walk with or without help. The proportion of patients that do not recover gait is low compared to other series of the integral rehabilitation programme. The evidence provided by TATd shows a 70.7 % of patients with a high or medium risk of fall. This proportion is even higher when considering the Downton Scale. The gait assessment and the risk of fall are fundamental.

**PB6 331 EFFECT OF AGE ON PHYSICAL FUNCTION, EXERCISE PERFORMANCE AND DYSPNEA IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

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**Introduction:** Older adults with chronic obstructive pulmonary disease (COPD) experience both age-related and disease-related decline in pulmonary and physical function. Progressive dyspnea is a major symptom in COPD and is associated with decline in physical function. Self management programs for COPD that include exercise improve physical function and the intensity of dyspnea. It is not known if advancing age moderates the effect of programs on exercise and functional performance or dyspnea intensity. The purpose of this study was to determine if advancing age is a moderator of the outcomes of exercise and functional performance or dyspnea intensity following three different dyspnea self-management programs (DSMP) that varied only by the number of supervised exercise sessions. **Methods & Materials:** This is a secondary analysis of a 12-month, longitudinal, randomized-controlled trial. One hundred and three (103) participants with COPD (57 women; mean age 66 ± 8) were randomized to one of three groups: 1) DSMP with education and home walking; 2) DSMP plus four supervised treadmill exercise sessions or 3) DSMP plus 24 supervised treadmill exercise sessions. Outcomes were three measures of self-reported functional performance, incremental treadmill test performance and dyspnea intensity. **Results:** Age was a significant moderator of one self-reported physical function measure (role function), incremental treadmill duration and stage and dyspnea intensity during and after exercise. **Conclusion:** Advancing age was not a detriment to the effectiveness of the DSMP intervention. A more intense DSMP may positively influence or perhaps temporize age-related lung function decline in COPD patients. For role function and exercise performance outcomes, advanced age was associated with favorable and sustained improvements; this was not necessarily the case with a younger age prototype.

**PB6 332 DETERMINANT FACTORS FOR THE PHYSICAL-ACTIVITY LEVEL OF ELDERLY INDIVIDUALS IN A MEDIUM-SIZED CITY IN INNER SÃO PAULO STATE, BRAZIL**

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**Introduction:** Physical activity has been scientifically discussed and analyzed as fundamental for a healthy ageing process. This study aimed at evaluating the factors influencing elderly individuals to not perform physical and leisure activities in a medium-sized city in inner São Paulo state, Brazil. **Methods:** The complete IPAQ was applied to a population-based sample consisting of 364 elderly individuals in the city of Botucatu, São Paulo, Brazil. Such sample was obtained from a database of elderly individuals in the city by considering an unknown prevalence. Here, "walks" were considered to be mild physical activity, and the "days of activities developed during the leisure time" were considered to be moderate and intense ones. The number of days of physical activity was taken into account and logistic-type models for the data were fitted by including socio-demographic and life-satisfaction variables. **Results:** It was observed that 58.24% of the elderly individuals did not walk for at least 10 continuous minutes in their free time. 95.05% of the elderly persons did not perform physical activity requiring great effort and 93.13% did not perform moderate physical activity. For the fitted models, it was found that the unmarried

elderly individuals: OR=0.09, the oldest individuals: OR=0.91(CI) and those with the lowest education (OR= 0.36) were more likely to not perform physical activities considered to be intense. However, males (OR=0.24) and unmarried individuals (OR=0.25) were more prone to not perform physical activity considered to be moderate. Concerning walks as physical activity, no significance was found. **Conclusion:** A high level of sedentariness was observed among the elderly in relation to intense and moderate physical activity, and was associated with older age, not being married, being a male and having poor education.

**PB6 333 EXERCISE REHABILITATION TO HOME-DWELLING PATIENTS WITH DEMENTIA – A RANDOMIZED CONTROLLED INTERVENTION STUDY. PRESENTATION OF THE TRIAL DESIGN AND ITS FEASIBILITY.**

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**Introduction:** Over 70 randomized controlled trials have investigated the effects of exercise rehabilitation among older people. However, the trials in dementia patients are still scarce. Intensive, long-lasting exercise may improve even physical functioning among older people. Exercise may also have favourable effects on behavioural and psychological symptoms of dementia (BPSD), and on cognition. The aim of this study is to investigate whether intensive, long-lasting exercise rehabilitation has effectiveness on mobility and physical functioning of home-dwelling patients with dementia. **Material and methods:** During years 2008-2010, patients with Alzheimer disease (n=210) living with their spousal caregiver in community will be recruited using central registers in Finland, and they will be offered exercise rehabilitation lasting one year. The patients will be randomized into three arms: 1)tailored home-based exercise (one hour) x2/wk 2)group-based exercise (four hours)x2/wk in rehabilitation center 3)control group with information of exercise and nutrition. Main outcome measures will be Guralnik tests and FIM-test to assess mobility and functioning, respectively. Secondary measures will be verbal fluency, NPI and Cornell, and RAND-36 to assess cognition, BPSDs, and QoL of caregivers, respectively. Data concerning admissions to institutional care and the use of health services will be collected during a two year follow-up. **Results:** By December 2008, 120 patients have been randomized. They will complete intervention by May 2009. Further 90 patients will be randomized by June 2009. Baseline data and preliminary results for the feasibility of intervention will be presented at congress. **Conclusions:** This is the first intervention study investigating the efficacy of intensive exercise on functioning of patients with dementia. If the intervention has efficacy on functioning and decreases the need for health services, it would have great significance for the care of these patients.

**PB6 334 CIRCUMSTANCES OF FALLS IN PATIENTS WITH PROXIMAL FEMUR FRACTURE**

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**Introduction:** Femur fracture is the worst consequence of osteoporosis due to its high morbidity and mortality. The majority of fractures occur after a fall. Several factors are involved in the fall, and being aware of the circumstance in which it happened is very important to improve prevention. The aim of this study was to evaluate the circumstances of falls in patients with proximal femur fracture at a medical school hospital in a medium-sized city in São Paulo state, Brazil. **Methods and Material:** Sixty-four patients (44 females and 20 males) with proximal femur fracture admitted to our hospital in 2008 were studied. Descriptive analysis was performed for the variables related to the circumstances of the falls. **Results:** The mean age was 80 years (SD, 8, range 60 to 98). Of the 64 patients, 8.1% had the fracture at dawn, 38.7% during the morning, 25.8% in the afternoon and 27.4% at night (before midnight). The most prevalent locations of the falls were the bedroom (37.5%), kitchen (20.3%), backyard (17.2%), bathroom (10.9%), sitting room (7.8%) and sidewalk (6.2%). The majority of the fractures were secondary to a fall (96.9%), and only two were spontaneous fractures (3.1%) followed by a fall. The causes of the fall were stumbling (28.3%), sliding (28.3%), leg weakness (23.3%), dizziness (13.3%) and other causes (6.7%). **Conclusions:** We conclude that it is important to focus on the morning and afternoon periods with preventive actions and on the use of safety devices in all locations, particularly in the bedroom and kitchen. We also conclude that situations leading to stumbling and sliding should be given careful attention.

**PB6 335 THE EFFECTS OF DELAYS IN COMMUNITY HOSPITAL TRANSFER ON INDEPENDENCE OUTCOMES FOR OLDER PEOPLE**

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**Introduction** A multi-centre RCT of post-acute community hospital (CH) rehabilitation care for older people (JAGS 2007;55:1995-2002) provided an opportunity to investigate the effects on patient outcomes associated with delays in the time to CH transfer. We hypothesised that prompt transfer from the general hospital (GH) would be associated with better outcomes. Methods Medically stable patients needing post-acute rehabilitation care were randomised to CH transfer ( $n=280$ ) or to remain in GH elderly care wards ( $n=210$ ). The primary outcome was change in independence (Nottingham extended activities of daily living scale (NEADL)) baseline to six months. The effects of CH transfer times in patients treated as randomised were investigated: 1. Relationship: time to CH transfer and NEADL outcome. 2. Comparison: 'early' CH transfer (within two days), 'late' CH transfer (after two days), and control (remaining in the GH) groups adjusted for baseline variables. 3. Comparison: CH ('early' plus 'late') and GH groups, adjusted for baseline variables including time to transfer as a covariate. Results 1. A trend in the relationship between time to CH transfer and NEADL outcome: worse outcomes were associated with later transfers (Pearson's  $r = -0.140$ ;  $p=0.072$ ). 2. A significant difference between the three groups for NEADL outcome adjusted for baseline variables (ANCOVA  $p=0.016$ ). Post-hoc analysis of pairwise differences with Bonferroni adjustment showed a significant difference only between the 'early' transfer and control groups. 3. A significant difference between the CH and GH groups in NEADL change scores (adjusted mean difference 6.12; 95% CI 2.59 to 9.67; ANCOVA  $p=0.001$ ). Conclusion There was provisional evidence that time to CH transfer was associated with improved independence at six months: the sooner the patients were able to transfer, the better was their outcome.

**PB6 336 CHARACTERISTICS OF ELDERLY PATIENTS WITH HIP FRACTURE AND THEIR NEED FOR REHABILITATION**  
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**Introduction:** Oslo, Norway has the highest incidence of hip fractures in the world. Hip fracture is a common cause of hospital admissions in the elderly. Orthogeriatric units combine geriatric and orthopaedic expertise. Early mobilisation, comprehensive geriatric assessment and planned discharge are important principles of care. In order to provide the best care, information about patients' characteristics is needed. Methods and material: An orthogeriatric unit for patients 65+ years with hip fractures was established in 2004. From 2007 data from routine assessment performed by the interdisciplinary team were collected to a patient database for quality improvement. Results: From January 2007 to November 2008, 735 patients, included 175 from long-term care institutions, were enrolled in the database. Mean age was 85.1 years, 77% were females and 85% had experienced in-door falls. Waiting time for surgery was 10 hours (25, 75 percentile 5, 19). Length of stay was 10 days (25, 75 percentile 4, 15 days). Chronic diseases were present in 89%, and 59% of those living at home had cognitive impairment. Postoperative complications were registered in 54%, the most common being need of blood transfusion, delirium and urinary tract infections. Prior to the fracture, 60% of home dwelling patients were independent in activities of daily living (Barthel Index 19-20), while only 16% at discharge. Conclusions: Patients in this orthogeriatric unit are old, with co-morbid disorders, cognitive impairment, and high risk of complications and decline in function. They are in need of comprehensive geriatric care. Many require further rehabilitation after discharge from hospital to regain their pre-fracture function.

**PB6 337 DIFFERENCES IN THE MOMENTUM DEVELOPMENT DURING SIT TO STAND TEST BETWEEN FALL AND NO FALL ELDERLY.**  
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**INTRODUCTION.** Rising from a chair (STS) is one of the most common tasks of daily life (Cahill 1999). The loss of the ability to execute STS, implies an important loss in functionality, being related with falls, crucial problem in elderly. The momentum developed on superior body (HAT), in the execution of STS could be related with a loss of balance under dynamic conditions determining higher risk of falls. The aim of this study is to quantify the differences in momentum development during STS in a sample of frequent fall (FFE) (two or more within a year period) and "non-fall" elders (NFE). **METHODS.** The sample consisted in elderly subjects ( $n=23$ ), divided into two groups of FFE and NFE. Criteria for exclusion used: severe dementia; Neurological illnesses; Musculoskeletal disabling pathologies; Vestibular alterations; Uncorrected visual pathologies; Obesity or malnutrition. The kinematics of the HAT during STS was registered through a motion analysis system (APAS). We calculate maximum values the vertical (↑), horizontal (↔) momenta, and the maximum (↑) and minimum (↓) angular momenta of HAT. Analysis variables were subjected to a non-parametric test to determine the possible differences among the groups. The level of significance used was of 95%. **RESULTS AND DISCUSSION** A significant difference was found for the variable of ( $p = 0.03$ ) between both groups. No difference was observed in ↑ and (↑ > 0.05). The main discovery was the poor capacity of elders with a frequent fall antecedent for the production of vertical momentum on the HAT during STS, in comparison with NFE. Our results showed that the low momentum production on HAT is a characteristic of the "fall" subjects.

**CONCLUSIONS** Therefore, the values of HAT momentum may be considered a better predictor of falls in elderly subjects.

**PB6 338 MEASURING FRAILTY: THE TILBURG FRAILTY INDICATOR (TFI) A TOOL TO IDENTIFY FRAIL COMMUNITY-DWELLING OLDER PEOPLE**  
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**Introduction** There is yet no uniform conceptual and operational definition of frailty, and the result is that frailty is measured in many ways. Most conceptual and operational definitions of frailty place heavy emphasis on physical losses in older people. However, more and more researchers are becoming convinced of the multidimensional and/or multifactorial nature of the concept of frailty. The aim of this study was to develop and test a user-friendly questionnaire for screening frail community-dwelling older people, including only self-reported information and which explores multiple domains of human functioning. **Methods and materials** On the basis of literature and after consulting representatives of professional disciplines the Tilburg Frailty Indicator (TFI) was developed. The first part of the TFI includes a list with ten determinants of frailty. The second part screens for losses in the physical (eight components), psychological (four components) and social (three components) domain of human functioning. The TFI was tested in a sample of 484 community-dwelling older people, 75 years and older. Results All results were obtained by regression analyses. The determinants explain about 35% of the variance of frailty. Controlled for other determinants, either a low or high income, an unhealthy lifestyle, and having at least two diseases predicted frailty. Interestingly, the effects of the determinants differed across domains of frailty; age predicted physical frailty, life events predicted psychological frailty, whereas being a woman predicted social frailty since elderly women have a higher probability to live alone. **Conclusion** Our finding that the effect of the determinants on frailty differs across domains suggests that it is worthwhile to distinguish the domains of frailty instead of just concentrating on frailty.

**PB6 339 THREE UNEXPECTED HAPPY END CASE REPORTS**  
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**Introduction :** In clinical practice, geriatricians are often faced with life-threatening situations that at first glance seem to be hopeless. However, thanks to the use of meticulous procedures for diagnosis, such situations can sometimes have a favorable outcome, which leads practitioners to reconsider the fatalism often experienced in the treatment of elderly patients. **Methods:** This is a report of three clinical cases involving patients hospitalised in a Geriatric Internal Medicine (GIM) department. **Results:** The first case is that of an 88-year-old man transferred to the GIM department for the continued treatment of community acquired pneumopathy with hypoxemia that required intubation in a context of severe undernourishment (albuminemia 15 g/l). Faced with the persistence of bronchopulmonary symptoms despite several courses of antibiotic therapy, bronchoscopy was performed. It revealed the presence of a tablet in the inferior right lobe. Appropriate treatment was given and the patient recovered his initial level of autonomy and a satisfactory level of nourishment (Albuminemia 44.6 g/l). The second case concerns an 86-year-old woman hospitalised for cachexia with a major inflammatory syndrome. Radiography and thoracic tomodensitometry revealed nodular lesions suggesting metastases. Staphylococcus aureus was found in the bronchoalveolar lavage. After appropriate antibiotic therapy, the general health status of the patient progressively improved and pulmonary radiography returned to normal. The third case concerns an 84-year-old man hospitalised for a severe depressive syndrome with the loss of 80 kg in 4 years. After a number of investigations, ileo-caecal tuberculosis was diagnosed and anti-tuberculosis quadritherapy was implemented. Nine months later, the patient had put on 7 kg and the general physical state and mood were greatly improved. **Conclusion:** In Geriatrics, one must not be satisfied with appearances, but must persevere to obtain a diagnosis or try a test treatment.

**PB6 340 A LONGITUDINAL STUDY OF BONE STRENGTH AND PHYSICAL FUNCTION IN COMMUNITY-DWELLING AND INSTITUTIONALIZED ELDERLY**  
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**Introduction:** Institutionalized elderly population has been increasing in Japan. The aim of our study was to evaluate bone strength and physical function in institutionalized elderly. **Methods and materials:** Our subjects were 65 community-dwelling elderly and 19 institutionalized elderly. The community-dwelling elderly participated in "Falls Prevention Program" in a hospital, but the institutionalized elderly did not. The program was twelve weeks class to maintain examines health condition, muscle strength, and physical ability of

participants through exercises. Bone strength and physical function were measured in all subjects before and after the program. Bone strength was assessed by a quantitative ultrasonic technique. Physical function was assessed by four tests: 10m-rapid gait time, maximum step length, 40-cm steps, and tandem gait. Differences in bone strength and physical function between groups were analyzed with unpaired t-test and analysis of covariance (ANCOVA). Partial correlations between bone density and changes in physical function were calculated after controlling for age, body mass index, and body weight in each group. The statistical package SPSS (Ver.15.0) was used for statistical analysis with 5% as the level of significance. Results: Body weight and bone strength decreased significantly ( $p < 0.05$ ) after the program relative to values before the program in the institutionalized elderly. A significant ( $p < 0.05$ ) negative correlation was observed between changes in body weight and changes in 10m-rapid gait time ( $r = -0.452$ ) or bone strength ( $r = -0.326$ ) in the institutionalized elderly. Conclusion: Decreased bone strength and physical deterioration were observed only in the institutionalized elderly. Our results suggest that the risk of fall and fracture might be higher in the institutionalized elderly compared to the community dwelling elderly. These might be prevented by improving nutrition and physical activity.

**PB6 341 THE INFLUENCE OF BODY MASS INDEX (BMI) OVER THE BONE MASS IN ELDERLY WOMEN.**

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Introduction: Obesity and osteoporosis are chronic illness of high prevalence. Although not universal accepted, the obesity seems to be an osteoporosis protector agent. The aim of this study is to analyze the influence of the BMI over the bone mass in elderly women. Methods and Materials: 51 women over 65 years old were random selected to participate. The sample was divided according to the BMI classification by WHO: normal (N), overweight (OW) and obesity (OB) groups. The lumbar spine (L1-L4) and the total hip bone mineral density (BMD) were measured by the Dual-energy X-ray Absorptiometry (DXA). Statistic analysis: Fisher's exact test. Results: Volunteers mean BMI was  $28.4 \pm 5.7 \text{ kg/m}^2$ . In the N group (30%, n=15, age:  $69.7 \pm 4.6$ ) the normal BMD rates were 6.7% in the L1-L4 and 0% in the hip; osteopenia BMD rates were 60% and 80%, and the osteoporosis BMD rates were 33.3% and 20%, respectively ( $P < 0.01$ ). In the OW group (31%, n=16, age:  $69.2 \pm 4.9$ ) the normal rates were 25% in the L1-L4 and 50% in the hip; osteopenia rates were 37.5% and 37.5%, and osteoporosis was detected in 37.5% and 12.5%, respectively ( $P < 0.01$ ). In the OB group (39%, n=20, age:  $69.8 \pm 4.4$ ) the normal rates were 55% in the L1-L4 and 75% in the hip; osteopenia rates were 45% and 20%, and the osteoporosis was 0% and 5%, respectively ( $P < 0.01$ ). Conclusion: In this study, the elderly women with the higher BMI showed lower osteopenia and osteoporosis rates, both in the spine and the hip. These results suggest that, even in this group, the weight was a protector factor against the loss of mineral bone mass.

**PB6 342 DYNAMICS AND HETEROGENEITY IN THE PROCESS OF HUMAN FRAILTY AND AGING: EVIDENCE FROM THE U.S. OLDER ADULT POPULATION**

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Introduction: This study investigated dynamics and heterogeneity of the frailty index (FI) conceived as a systemic indicator of biological aging in the community-dwelling older adult population in the U.S. Methods and materials: We used panel data on multiple birth cohorts from the Health and Retirement Survey 1993 – 2006 and growth curve models to estimate age trajectories of the FI and their differences by sex, race, and socioeconomic status within cohorts. Results and conclusions: The FI for cohorts born before 1942 exhibit quadratic increases with age and accelerated increases in the accumulation of health deficits. The average levels and rates of increment in the FI decrease in successive cohorts. Females, nonwhites, and individuals with low education and income exhibit greater degrees of physiological deregulation than their male, white, and high SES counterparts at any age. Patterns of sex, race, and SES differentials in rates of aging vary across cohorts. Adjusting for social behavioral factors, the analysis provides evidence for actual physiological differences in the aging process in recent cohorts of older adults, points to the need to seek biological explanations for female excess in general system damage, and reveals the inadequacy of any single mechanism for depicting the racial and SES differences in the process of physiological deterioration.

**PB6 343 WHICH IS MORE EFFECTIVE AT REDUCING FALLS AND IMPROVING QUALITY OF LIFE IN OLDER FALLERS? DOMICILIARY VERSUS CENTRE-BASED REHABILITATION.**

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Aim: The Southside District Community Rehabilitation Service offers falls prevention programs to older community dwellers. This paper presents results from a RCT of the

effects of two falls prevention programs on falls rates, HRQOL, activity levels, physical status and depression. Method: Data has been analysed for differences in outcomes between participants undertaking a home based rehabilitation program and those undertaking a centre based rehabilitation program. Measures were taken at initial assessment and two follow up points – after an 8 week program and again at 6 months after initial assessment. Between group analyses was conducted using generalized estimating equations for normally distributed data and negative binomial regression for count data (e.g. falls). Results: Subjects presented with a wide range of issues in addition to falling including being outside normal weight range, incontinence and anxiety/depression. Physical skills were poorer than normal for age for walking, balance, strength, reaction times and hand function. The centre based service demonstrated significantly better results in preventing falls over the home based service. Clients in the centre based arm of the trial experienced less total falls and this group also had a greater reduction in the total number of fallers after the intervention. Quality of life, timed up and go and reaction times all improved in the group based intervention over the home based intervention however these did not reach significance. Activity levels were similar in both groups however depression scores as measured by the K-10 scale improved more in clients receiving the home based service. Conclusion: This research demonstrates that delivering a similar service in different settings – home based or centre based has implications for the effectiveness of the service as measured by changes in falls rates and health related quality of life. In addition this research shows that clients presenting with different types of co-morbidities such as depression may benefit from different service delivery models.

**PB6 344 THE ECCENTRIC STRENGTH TRAINING INCREASES CARDIAC SYMPATHETIC MODULATION IN RESTING CONDITION.**

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Introduction: A decline in muscle force occurs with the aging process. The effect of eccentric strength training (ET) on the cardiac autonomic modulation is not clear. Methods and materials: The training group (TG) (9 men,  $62 \pm 2$  years) was submitted to ET (12 weeks, 2 days/week, 2-4 sets of 8-12 repetitions at 75-80% peak torque (PT) involving knee flexion and extension). The control group (CG) (8 men,  $64 \pm 4$  years) did not perform the ET. The cardiac autonomic modulation was evaluated by two symbolic indexes. The percentage of sequences characterized by three heart periods with no significant variations (OV%) and that with two significant unlike variations (2UV%) reflect changes in sympathetic and vagal modulations, respectively. Symbolic analysis was carried out over heart period variability series (around 200 cardiac beats) derived from ECG recordings during 15 minutes of rest in supine position. The unpaired and paired t-test was used in the statistical analysis. Results: ET increased the eccentric torque only for TG (TG:  $210 \pm 38$  to  $253 \pm 61$  and  $118 \pm 25$  to  $133 \pm 27$  N.m; CG:  $203 \pm 33$  to  $215 \pm 40$  N.m and  $126 \pm 20$  to  $135 \pm 26$  extensor and flexor PT respectively). There was a significant increase in OV% only for TG (TG:  $21 \pm 10$  to  $32 \pm 11$ ; CG:  $28 \pm 14$  to  $30 \pm 7$ ). The 2UV% declined in both groups (TG:  $21 \pm 11$  to  $15 \pm 10$ ; CG:  $17 \pm 10$  to  $12 \pm 5$ ). Conclusions: ET has improved the muscle force but had a negative effect on the cardiac autonomic modulation. The increase of symbolic index OV% reflects a shift of the sympathovagal balance toward a sympathetic activation. This fact has an important clinical impact on the elderly, because it can be associated with higher cardiovascular morbidity and mortality rates.

**PB6 345 INFECTIOUS DISEASES IN HOSPITALIZED ELDERLY PATIENTS IN BEHESHTI HOSPITAL OF KASHAN-IRAN 2007**

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Authors: Momen Heravi M, Soleymani Z, Esalatmanesh k Introduction: Elderly are the major and increasing portion of the world population. there are at increased risk for infection because of immunity and physiologic changes. Their mortality ,duration and cost of hospitalization are more than younger patients. This study was carried out to examine the common infectious diseases in elderly. Materials & Methods: This descriptive study was performed on 200 elderly patients( $\geq 65$ ) who hospitalized in infectious disease ward of Beheshti hospital in 2007. After history taking and physical examination laboratory test were requested. Clinical and Para clinical findings were entered in spss and analyzed. Results: 113 (56.5%) of patients were male and 87 (43.5%) were female. 65.5% were urban.the. The maen of age was  $75.7 \pm 5.97$ . 1.5% of them are above 90, 46% 75-90 and 52.5% 65-75 year.the rate of mortality was 2.5% and the most common cause of death was sepsis. The most common chief complaint and underlying disease was respiratory(24.5%) and hypertension 31.5% respectively. History of hospitalization was in 68.5% of patients.) The infections included: sepsis 29 (14.5%), COPD29 (14.5%), pneumonia 26 (13%), gastroenteritis 25 (12.5%), UTI 21 (10.5%), viral infection 12(6%), cellulitis12(6%), brucellosis 8 (4%), herpes zoster 6 (3%), prostatitis 4 (3%), TB 3 (1.5%) hepatitis 3 (1.5%), tracheobronchitis 3 (1.5%) Osteomyelitis 2 (1%), epididymoorchitis 2 (1%), cholecystitis 2 (1%), typhoid 1 (0.5%), non infectious 9 (4.5%) Conclusion: Sepsis was the

most common cause of admission and mortality in our patients. since the signs of sepsis in elderly is bland and pospond of treatment causes of dearh so the sepsis must be considred in differential diagnosis in any elderly patient with any change in functional state. Key word: Elderly,hospital,infectious diseasre

**PB6 346 GENDER DISPARITY IN HEALTH AMONG COMMUNITY-DWELLING CHINESE OLDER PEOPLE IN HONG KONG**

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**Background:** The gender differences in bio-psychosocial changes lead to the disparity in health between older men and women. Yet, Chinese older people have tended to be neglected in research on gender differences in health compared with the Caucasian population. This study compared the physical, psychological and social health between Chinese older men and women. **Methods and Materials:** This population-based survey was conducted in 1433 community-dwelling Chinese older people (mean age=75.6; 27% were male) in Hong Kong. The Short-Form 36 Health Survey, the Medical Outcomes Study Social Support Survey, the OARS Multi-dimensional Functional Assessment Questionnaire were used to assess HRQL, perceived social support, functional status, respectively. Data about stressful life event, life-style factors, chronic illnesses and somatic complaints was also collected. **Results:** The Chinese older men and women were similar in age but the later group was more likely to have no spouse ( $p<0.001$ ). The Chinese older men reported a higher perceived tangible support ( $p=0.003$ ) whereas women were more satisfied with their affectionate support ( $p=0.038$ ). Although there was no gender difference in the number of comorbidities and functional status, women reported more somatic symptoms including headache ( $p<0.001$ ), faintness ( $p<0.001$ ), stiff joint ( $p=0.002$ ), and chronic pain ( $p<0.001$ ) as compared with men. Chinese older women also reported poorer physical HRQL including physical function ( $p<0.001$ ), role physical ( $p=0.003$ ), bodily pain ( $p<0.001$ ) and general health ( $p=0.008$ ). No significant gender difference in mental HRQL was detected. **Conclusion:** The study reveal the poorer self-assessed health in Chinese older women even though there was only minimal gender difference in the objective health status. Promoting the health of Chinese older people may take into consideration such gender disparity.

**PB6 347 SELF-REPORTED HEALTH AS A PREDICTOR OF MORTALITY IN ELDERLY MEN LIVING IN A MEDIUM SIZE CITY IN BRAZIL**

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**Objective:** To examine the role of self-reported health as a predictor of mortality in elderly men. **Material and methods:** The study population consisted of 2875 elderly men residing in a medium size city in Brazil, who were followed for two years or until the date of their death, whichever occurred first. Individuals alive at the end of follow-up were censored. The Kaplan-Meier method was used for an exploratory analysis of the data, comparing individuals with self-reported poor health conditions with those who referred good/excellent health, in different stratus of socio-demographic, life style and health-related variables, through the log-rank test, admitting significance level of 5%. Multivariate analysis was performed through Cox regression models. Variables presenting statistically significant associations with mortality in the bivariate analysis where entered into the models. **Results:** During the period, 120 deaths occurred in the study population, and cardiovascular diseases (40%), neoplasias (22%) and respiratory diseases (20%) were the major causes. Elders with self-reported poor health presented a greater risk of death, compared to those with self-reported good/excellent health in almost all stratus of the analyzed variables. In the final model, poor self-reported health ( $HR=1.88$  95% IC 1.29-2.72), age ( $HR=1.05$  95% IC 1.03-1.08), use of the public health services system ( $HR=1.69$  95% IC 1.10-2.60), current use of cigarette smoking ( $HR=1.94$  95% IC 1.24-3.04) and self-reported cardiovascular disease ( $HR=1.62$  95% IC 1.06-2.47) were independently associated to mortality. **Conclusion:** Self-reported health was a predictor of mortality in elderly men, in a follow-up period of two years. It is important that health care services incorporate this indicator in the health evaluation.

**PB6 348 GENETIC VARIATION OF CYP19 (AROMATASE) GENE INFLUENCES AGE AT ONSET OF ALZHEIMER'S DISEASE IN WOMEN**

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**Introduction.** There is evidence of a higher prevalence of Alzheimer's disease (AD) in women, but whether this is due to their longer life expectancy or to biological gender-specific risk factors is unclear. One likely contributing factor is the reduced neuroprotective action of estrogen following menopause. In this context a candidate gene for AD susceptibility is CYP19, encoding for aromatase, an enzyme that catalyzes the conversion of androgens to estrogens. **Methods and Materials.** With the present study we

analyzed the role of three CYP 19 SNPs (rs 12907866, rs17601241, rs4646) in AD development and their possible influence on quantitative traits reflecting disease severity such as age at onset (AAO) and cognitive decline. The analyses were carried out, besides the total sample (319 AD patients with and 110 controls), in men and women separately to reveal possible gender specific effects of CYP19 SNPs in women. **Results:** no significant association was observed between the three CYP19 SNPs and AD risk. Yet CYP19 genetic variation did seem to contribute to AD development in women as rs4646 genotypes were found to significantly affect age at onset of AD in female patients. More specifically the presence of rs 4646 T allele was associated with a reduction of AAO ( $p=0.01$ ), and its effect turned out to be independent from the similar effect determined by the presence of APOE e4 allele ( $p=0.005$ ). Also, being present only in parous women, the effect of rs4646 genotypes on AD onset age appeared to depend on past fertility ( $P=0.01$ ). **Conclusions:** Together with gender-specific factors such as parity, genes controlling estrogen metabolism may play a relevant role in AD susceptibility, suggesting a substantial biological basis for the higher prevalence of AD in women.

**PB6 349 EFFECTS AND COSTS OF TELEPHONE COUNSELING FOR OLDER ADULTS WITH BREAST LUNG OR PROSTATE CANCER**

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**Introduction** This longitudinal, randomized, controlled study determined the effectiveness and efficiency of usual medical cancer care versus usual care augmented by an individualized problem solving counseling intervention, provided over the telephone by registered nurses, for older persons with cancer of the breast, lung or prostate. **Methods and Materials** Of 175 older persons (mean age=62.3 years) who consented to baseline measures, 76 with breast, 49 with prostate and 24 with lung cancer completed the 8 month follow-up. The primary outcome measures were changes in the Jalowicz Coping Scale, the Center for Epidemiological Studies in Depression Scale and the Derogatis Psychosocial Adjustment to Illness Scale. In addition expenditures for use of all health and social services were computed at baseline and follow-up. Analyses of covariance were used to assess differences between groups in changes in coping, depression and adjustment scores. **Results** Poor psychosocial adjustment was related to depression and use of evasive coping. Greater annual health care expenditures were demonstrated by cancer clients with fair to poor adjustment to illness scores, compared to those with good adjustment. Among a group of older breast, lung and prostate cancer patients, telephone counseling promoted more favourable coping behaviours and prevented a decline toward more depressive symptoms compared to the control group at no further costs. **Conclusion** These findings are consistent with the most recent meta analysis of the effect of psychological interventions on anxiety and depression in cancer patients. This study has implications for the management of cancer between medical specialist visits, and in reaching older, rural persons with otherwise low access to counseling; especially those who live alone. Those who refused to participate were somewhat older than those who consented. Further research on telephone counseling should emphasize approaches to reaching clients in significant distress or risk circumstances following their cancer diagnosis.

**PB6 350 NOCTURNAL WANDERING AND COGNITIVE FUNCTION: CROSS-SECTIONAL AND LONGITUDINAL STUDY OF ELDERLY INPATIENTS IN FRANCE**

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**INTRODUCTION:** Abnormal nocturnal wandering is well known among the elderly having varying degrees of cognitive function, although its objective assessment using modern technology is seldom carried out. **METHODS:** Hospitalised elderly patients were monitored using eight passive infra-red sensors. Nocturnal patient activity (00:00-06:00) was captured by the sensors and stored as a data file. A validated algorithm analysed the stored data and estimated the duration of activity. Nocturnal activity was the outcome variable ( $N = 21$ ) measured in patients after  $\geq$  eight nights of hospital stay. The principal exposure variable was global cognitive function (Mini-Mental State Examination (MMSE)). Median nocturnal activity (seven consecutive nights) was modelled in a cross-sectional way to determine if cognitive function and other covariates were significant risk factors of high nocturnal activity. Nocturnal activity was also modelled in a longitudinal way to determine, in addition to the variables used for cross-sectional analysis, if nocturnal activity changed with time (over eight consecutive nights). **RESULTS:** Cross-sectional analysis revealed cognitively impaired group (MMSE < 25) had 6.1 (2.3-16.4, 95% CI) times the median nocturnal activity compared to the normal cognitive function group. Longitudinal analysis revealed that time (nights) was not significantly ( $P = 0.76$ ) associated with nocturnal activity in a model that included random-effects; no interaction was observed between time and cognitive function. Cognitively impaired group had significantly 3.4 (1.3-8.6, 95% CI) times nocturnal activity compared to the normal cognitive function group. Borderline significant inter-patient heterogeneity was noted ( $P = 0.05$ ). **CONCLUSION:** Poor cognitive function among the elderly is significantly

associated with abnormal nocturnal wandering in hospitalised patients, although short-term (eight days) treatment does not result in improvement of nocturnal wandering among such patients. Acknowledgement: GRECO, France Alzheimer, and AGRICA foundations financed this project.

**PB6 351** COLLEGE TECHNICAL DEGREE IN GERONTOLOGY APPLIED TO HOME HEALTH CARE, ACCESSIBLE TO ANYONE WITH AN INTERNET CONNECTION ANYWHERE IN THE WORLD.  
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Introduction The CNED ((National Centre for Distance Learning) offers health care professionals an exclusively online college technical degree. With this course students can acquire specific knowledge in gerontology applied to maintaining elderly people at home, without having to stop working. The diploma is issued by the Medical School of Claude Bernard University Lyon-1. Methods and materials Entry requirements: a Baccalaureat (A-level) or any equivalent. Duration: one year. Programme structure: 11 online units, each representing one credit. The course addresses the following topics: - gerontological context, - the dietary needs of the elderly, - incontinence, - accidental falls, - rheumatism, - hemiplegia, - Parkinson's disease, - Alzheimer's disease, - maintaining the elderly at home / admission to a nursing home, - high blood pressure, - the elderly person suffering from cancer. The programme employs a variety of teaching and learning methods, including illustrations, videos, and training exercises. The course has been conceived and supervised by a doctor and an epidemiologist, with the help of specialists in geriatric medicine. The assessment is composed of an MCQ on the Cned on-line platform. A result of 80% in each unit is required to obtain the degree after the examining board's final decision. Results Every year a hundred people study for this degree. The pass rate is 70%. The diploma benefits from Claude Bernard Medical School's name, which is a guarantee of quality.

**PB6 352** EFFECTS OF A ROBOTIC WALKING EXERCISE ON WALKING PERFORMANCE IN COMMUNITY-DWELLING ELDERLY ADULTS  
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Introduction: Reduced gait speed and stride length are characteristic of gait in elderly people and increase their dependency on assistance. We developed a robotic stride assistance system (SAS) to automatically control the walk ratio during walking. Our aim was to quantify the effects of a walking exercise with the SAS on walking performance and glucose metabolism during walking in community-dwelling elderly adults. Methods: Fifteen elderly women (72–85 years old) participated in this study. Subjects participated in a three-month walking program using the SAS, involving two 90 min supervised sessions per week. The SAS assists both flexion and extension of the subject's hip joints in a ballistic manner via electrical actuators equipped with angular sensors that monitor the cadence, angular velocity, and degree of extension and flexion of the hip joints. The SAS automatically manipulates the walking action to increase the walk ratio by increasing the degree of hip flexion and extension. We assessed walking for 5 m at a comfortable speed before and after the intervention. Positron emission tomography with [<sup>18</sup>F]fluorodeoxyglucose (FDG) was used to assess muscle activity during an unassisted 50 min walk. Results: Walking speed was improved by the intervention and FDG uptake by the gluteus minimus, gluteus medius, rectus femoris, and pelvic muscles (iliacus and gluteus muscles) was reduced. Conclusion: These results suggest that a walking intervention program using an applied robotic system is useful for improving the walking ability and the efficiency of muscle activities during walking in the elderly.

**PB6 353** DEVELOPMENT OF EQUIPMENT FOR TEMPORAL ORIENTATION  
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Introduction: Impairment in temporal and spatial orientation is one of the most frequent symptoms of abnormality in brain function and can lead to a reduction in independence and autonomy in the performance of daily activities. Different approaches and methods are used in the rehabilitation of orientation deficit and often employ both electronic and non-electronic devices, such as alarms, calendars, day planners, etc. The aim of the present study was to develop appropriate technologies for the rehabilitation of individuals with temporal orientation deficit. Materials and Methods: Two pieces of equipment were developed separately: a calendar and a routine-structuring device. Two aspects were considered in the design of the calendar: 1) clear, easily visualized information; and 2) ease of handling. The routine-structuring device seeks to orient individuals with regard to activities they need to perform throughout the day. The equipment was evaluated by occupational therapists with regard to use, handling, suitability of the components and characteristics such as size and weight. The results of this evaluation directed the union of

the two devices and the development of a new version of the routine-structuring device. Results: The routine-structuring device functions as a calendar and helps in the organization of daily tasks, revealing the date and time, sounding an alarm at preprogrammed times and displaying (in writing) the activity to be performed. The equipment ended up being light, easy to use and of a low production cost. Conclusion: It is believed that the routine-structuring device could be a useful tool in the daily life of individuals with orientation deficit, enabling greater independence and autonomy in the performance of daily activities.

**PB6 354** HEALTH PROMOTION AND ELDERLY  
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Elderly biological phenomenon of natural and human development which is very slow and public all living things in it. According to predictions World Health Organization, in the year 2020 A. D. more than one billion people over 60 years. While the figure at the present 580 million. According to published Statistics from the registration organization the 4 million people equal to 6.6 percent of our population, over the seniors' constitute 60 years. With regard to the increasing elderly's percent of the population and important issue of senility phenomenon are involved in all societies also with insight that elderly is considered value. To prepare for the entire population of old age aspects should indivisibility of the policies of development of social-economic and with great efforts in all levels, local, today's suitableness family. As all aspects of life, including their participation in the development which determines the quality of life elderly's . Some aspects of this vital process include: economic security and the seniors' financial, health and continuing education, that these considerations, the general framework for action by governments in the seniors' issue. Conclusion: elderly kind of change and bring against the natural and tradition of God to be coordinated. The issue of the world that elderly for various reasons including the rate of birth, the progress of Medical Sciences, health, education and increase in the hope of living in the world has been mentioned. relatively new phenomenon. since this phenomenon in all aspects of human societies. Among the vast spectrum of the aging structures, values and the criteria and the creation of the Organization of the social changes have created a considerable brings. Therefore it can be with correct, policy making to elderly along with health and productive.

**PB6 355** A PILOT STUDY ON SELF-MEDICATION CARE OF COMMUNITY DWELLING ELTERS IN HONG KONG  
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W. CYNTHIA, L. CLAUDIA

Introduction : The majority of elderly people take drugs on a regular basis with the number of tablets increasing with age. Progressive cognitive impairment and physical function deterioration, contribute to medication non-adherence. Subsequent complications are having impacts on the cost of health care. Intervention to promote accessibility and drug knowledge may improve elders' drug adherence. Structural support, like organizing the drug and a reminder alarm, has shown a positive relationship. This study aims to identify factors contributing to medication non-adherence among the elderly and thereby contribute to the improvement of current medication devices. Methods : The data collection started in June 2007 and was completed in January 2008. The interviews were conducted in four residential areas, by face interviews using a semi-structured questionnaire. Focus group interviews were conducted to follow on the specificity of current medication devices. Convenience sampling was adopted to recruit fifty-six elders and thirty-one care-givers. Results : Forty-two respondents lived in public housing, while forty-five lived in private housing estates. Nineteen (33%) elderly participants self-reported having some visual impairment, and eight (14.2%) with some hearing loss. Eleven (19.6%) reported perceiving themselves to be in-need of assistance in activities of daily living (ADL). The number of tablets taken ranged from 1 to 10 tablets (mean = 3.59, SD = 2.39). There were twenty-three (31%) elders and twenty-four (27.6%) reported having forgotten to take the medication, citing reasons such as forgetfulness, being occupied or busy with others things, needing help, going out, and disease driven. Suggestions and opinions on the designs of the prototype of the medication device were collected and summarized. Conclusion : The results inform the production of the prototype of the new self-help medication device. Further accumulation of data will confirm the new features.

**PB6 356** SPORT TRAUMATISM AND QUALITY OF LIFE IN ELDERLY AND OLD PEOPLE

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Traumatism in professional sportsmen has remote impact on quality of life in elderly and old age. The study was conducted to evaluate the adaptive capacities of the former sportsmen to everyday conditions. The studied group consisted of 56 people aged 56-84, who were professional sportsmen when young (masters of sports). Control group consisted of 61 people aged 62-87 who never went into sports. For evaluation of quality of life (QL) of the former sportsmen we made a questionnaire containing a set of questions showing the level of adaptation to everyday conditions. The questionnaire was based on the general

questionnaire "SF-36 Health Status Survey" and special questionnaire "VF-14 – Visual Function". The comparative analysis of the results showed lowered QL in all respondents, but self-appraisal of the former sportsmen was lower than in their peers of the control group. Thus, 82.1% of respondents of the main group considered their QL to be significantly reduced or strongly reduced, while in the control group only 44.3% of people considered their QL to be significantly reduced or strongly reduced. Low self-esteem of the former sportsmen depended on their incapacity for active physical activity. Multiple diseases of the musculoskeletal system, neurologic and visual disorders forced former sportsmen to spend most of their time at home. Hypodynamia was the main reason to changes in the life style, and thus to the further health worsening.

#### **PB6 357 THE YIELD OF ROUTINE EEG IN GERIATRIC PATIENTS**

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**Objective:** To study the yield of routine EEG in geriatric patients. **Patients and Methods:** We examined standard EEG recordings of 701 patients aged  $84.6 \pm 6.4$  years which were performed during a 15 month-period in a geriatric hospital. The majority of patients were hospitalised and 46.5% suffered from multiple medical problems. **Results:** We found EEG abnormalities in 392/701 (56%) patients which were subdivided into two groups: 1. Severe perturbations in 157/701(22.4%) patients consisted of permanent diffuse slowing alone (76.4%), or with intermixed epileptiform abnormalities (EA) (10.8%), triphasic waves (5.1%), status epilepticus (4.5%), periodic epileptiform discharges (2.5%), coma (0.6%) 2. Others EEG abnormalities in 235/701 (33.5%) patients consisted of seizure (1.2%), interictal EA (26%), focal slowing (46%) and intermittent diffuse slowing alone (26.8%). EA, observed in 92/701(13.1%) patients, were focal in the majority of patients (85.9%) and mostly of temporal localisation (42%) followed by centroparietal (20.2%), temporo-parieto-occipital carrefour region (17.2%), multifocal (10 %) but less frequent in frontal (6.3%) and occipital region (3.8%). Sleep activity without EEG abnormalities were observed in 96/701(13.7%) patients and non epileptic events in 5/701 (0.7%) patients. **Conclusions:** In this study, the yield of routine EEG in geriatric patients was highest for diffuse slowing suggesting encephalopathy and/or neurodegenerative disorders, followed by focal slowing and EA but very low for ictal epileptic events which mostly consisted in severe events of status epilepticus types. Routine EEG is not sufficient for the assessment of seizures and epilepsy in the elderly while video EEG monitoring is more adequate according to recent data of the literature.

#### **PB6 358 IN HOME TELEREHABILITATIONFOR POST-KNEE ARTHROPLASTY SURGERY: A PILOT STUDY**

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**Purpose** - The purpose of this study is to investigate feasibility and efficacy of teletreatment as an alternative to conventional rehabilitation services following discharge from an acute hospital for a knee arthroplasty. **Method** - Four community-living elderly people were recruited for telerehabilitation services prior being discharged from an acute-care hospital. Telerehabilitation sessions with the participants were conducted by physiotherapists in a center of services to the home of the patient. The system used to support telerehabilitation services was built around network-attached remotely-controlled pan/tilt/zoom cameras with MJPEG compression, media displays. Once the patient returned home, an appointment was made for the independent research assistant to take the clinical measurements (T1). Five clinical variables were used (range of motion; lower-limb strength; balance; locomotor performance in walking and functional autonomy). In home telerehabilitation intervention was based on functional rehabilitation. A set of 10 exercises are adapted to the specific condition of the participant including increase of range of motion, strengthening lower limb muscles, balance and walking (inside and outside). 12 teletreatment was delivered at each of the patient. Before the patient was discharged from the in home telerehabilitation intervention, the same independent research assistant visited the subject again to take the T2 measurements. The satisfaction of the health-care professional was determined for each session with the homemade questionnaire. **Results** - Five subjects (3 men and 2 women) were recruited for this pilot study. Mean age was  $66.0 \pm 6.7$  years old. One participant was lost in the follow-up between T1 and T2. All five subjects improved on the five clinical variables. **Conclusion** - Telerehabilitation for post-knee arthroplasty is a practical alternative for dispensing rehabilitation services for patients discharged from an acute hospital.

#### **PB6 359 AGING DISABILITY AND OLD AGE DISEASES**

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**Background:** The level of health has increased while the level of aging disabilities has decreased in western counties. Limited researches are available in this topic from the developing countries. This study was conducted to evaluate the disability and its relation to

chronic disorders of the old peoples. **Methods:** A descriptive study was conducted in Kashan, Iran. Data was gathered of a clustered sample of 350 elderly people over the age of 65 years. The WHODASII questionnaire (36 items in 5 likert scale format [with a sum score ranging from 0-144]) was used to assess the disability. A lower score was indicating of a higher disability. T-test and ANOVA were used for data analysis. **Results:** From a total of 350 elderly people, 61% were male. 19.14% of the sample had no diagnosed chronic disease. Of the other subjects, 50.53% had one disease and the others had two or more diseases (mostly including of cardiac, musculoskeletal, neural and respiratory disorders and hypertension). Elders with no chronic disorder had a mean score of 112.05 that indicated the low level of disability. The mean score of disability had decreased to 96.36 in elders with one disorder and to 81.40 in elders with two or more disorders. Elders with neural, musculoskeletal and cardiac disorders had more disability with the mean scores of 83.28, 86.50 and 95.61 respectively. A significant difference was observed between the elders with one and more than one chronic disease. **Conclusions:** More than 68% of the old peoples were suffering of one or more chronic disorder that can increase their level of aging disability. Developing a regular program for assessing the elders' health can help to early diagnosis of their diseases, improving their health and decreasing their level of disability.

#### **PB6 360 AN EXAMINATION OF THE MARKET POTENTIAL FOR AMBIENT ASSISTED LIVING TECHNOLOGY IN CANADA.**

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**Introduction:** An Ambient Assisted Living (AAL) environment is an integration of stand-alone assistive technologies, with smart home innovation, and telecare services. The purpose of this integration is to provide individualized support services and health care to older people. Successful development of this emerging technology will promote the ability for older people, to live independently and age in place. **Methods and Materials:** Research was carried out as part of the European Commission's 6th Framework Programme SOPRANO Project. The strategy used to gather information concerned with the market potential for AAL technologies in Canada, was a case study design. A modified content analysis of government and corporate websites concerned with technology and/or aging in Canada was conducted. Additionally, telephone calls, using a snowball sampling technique were undertaken to contact key stakeholders. **Results:** AAL technology is not yet an active market in Canada. Therefore, extrapolation of historical data within similar Information and Communication Technology sectors, provides insight into the potential for AAL adoption in Canada. Key facilitators include the vast Canadian geography, and the number of older people living in remote and rural communities. The principle of universality in Canada's healthcare system bodes well for these technologies, as AAL has the potential to assist, in equalizing services to these communities. Barriers include fragmentation of the market, where in Canada, more than 100 different health authorities serve individuals across ten provinces and three territories. **Conclusion:** Under the domains of social care and housing, research suggests the market potential is low. The medical care, and informal care domains fared better, and market potential in these areas is considered to be medium.

#### **PB6 361 OBSTRUCTIVE SLEEP APNEA (OSA) IN ELDERLY PATIENTS**

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**Introduction** The prevalence of OSA is high in adult patients, but its features in elderly patients have not been fully characterized. We have therefore studied 464 consecutive adult patients (age range: 19-86 yr-old) with suspected OAS. Results obtained from patients older than 65 yr were then compared with those obtained from younger patients (less than 65 yr-old). **Methods & Materials** We recorded polysomnography (PSG), body mass index (BMI), Epworth test (to detect diurnal somnolence), systemic blood pressure, and the occurrence ischemic heart disease and arrhythmias in all subjects. **Results** One hundred out of 464 patients were more than 65 yr-old. OSA was present in 76% and 89% in patients less than 65 yr-old and in elderly patients, respectively. Sleep-related disorders, including reduced sleep effectiveness and sleep total duration, and increased duration of stage 1 of sleep, were significantly associated with OSA in elderly patients. Arterial oxygen saturation was significantly reduced in elderly patients with OSA. By contrast, the risk of systemic hypertension was significantly greater in younger as compared with elderly patients with OSA, whereas this risk was the same with regards to BMI in both groups. The risk of ischemic heart disease and arrhythmias increased with age, but only in patients with OSA as compared with those without OSA. **Conclusion** Increased risk of systemic hypertension was only present in patients with OSA less than 65 yr-old, as a result of decreased arterial oxygen saturation related to apnea-hypopnea episodes. In elderly patients, increased prevalence of ischemic heart disease and arrhythmias associated with OSA was likely related to elderly rather than OSA itself. Finally, OSA significantly deteriorated the quality of sleep in elderly patients as compared with younger patients ( $\geq 65$  vs  $< 65$  yr-old).

**PB6 362 IS THERE PRIVACY IN HOME HEALTH CARE?**  
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**Introduction** The experience of privacy is important for patient's well-being. In home health care, research in privacy is rare. The purpose of the study is to find out 1) what is the realisation of the privacy in home health care, 2) what factors are connected with the realisation of the privacy and 3) what are the factors, which promote or impede privacy in home health care from the viewpoint of the patient in Finland. **Methods and materials** The study consists of three phases among the patients of home health care. In the first phase, the data ( $n = 28$  patients) was collected by thematic interviews in 2006 and was analyzed by means of an inductive content analysis. In the second phase, the questionnaire based on the results of the first phase was developed and content validity was estimated by nurses ( $n = 13$ ) in 2008. In the third phase, statistical data collection is under process, including first 60 home health care patients and after psychometric testing a larger national data of home health care patients ( $n = 450$ ). Results In the first phase results included factors promoting or impeding privacy in home health care were connected with the patient, nurse, patient-nurse, environment, organization, society and data-systems. Privacy was described as dimensions including physical privacy (own space, control and management), psychological privacy (integrity, own control and management), social privacy (domestic peace, social relationships, own control and management and informational privacy (personal information and confidentiality). Results are not yet available. Analysis of the data is in progress and results will be presented at the 19th IAGG World Congress of Gerontology and Geriatrics on July. **Conclusion** The findings offer a basis for planning and improving the ethical quality of home health care. Moreover, the results can be made use of nursing education.

**PB6 363 A RELATIONSHIP BETWEEN THE NIGHT-DAY LEVELS OF ACTIVITIES OF ELDER PATIENT IN A HEALTH SMART HOME**  
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**I. INTRODUCTION:** The Health Smart Home has important application in Gerontechnology to address the problem of increasing rate in the elderly people. In this paper, a Health Smart Home called HIS [1] "In French: Habitat Intelligent pour la Santé" is used. It aims to evaluate the daily activities of an older patient, to find a relationship between day and night levels of his activities. **II. MATERIAL AND METHODS** The HIS was built, at the TIMC-IMAG Laboratory several years ago [2], equipped with presence infrared sensors and door contacts. The detected events are automatically collected and transmitted once a day by Email to a central data base [4]. The data is loaded in the Matlab™ environment to be converted into a preliminary matrix built with detection events. For further computation, data is formatted by time discretization, to the signal  $S(j,i)$ , which is transformed to  $S^*(j,i)$  by a "rectangularization" process [3]. Several parameters and indicators were elaborated, then normalized [value from 0 to 1] for the whole period, thus it is possible to proceed with data fusion techniques. **III. RESULTS** The experimental data belongs to an elderly person aged 86, suffering from congenital dysplasia with a reduced mobility, who spent 2 months in the hospital suite. We observed a strong disproportional correlation between day and night levels of activities, except in abnormal status. **IV. CONCLUSION** The evaluation of daily activity can be obtained with a simple set of PIR sensors. There exists multiple and complex relationships between the parameters of activity level, the health status and the self feelings of the person. This research aims at the automatic assessment of the daily activities of a person living independently in home.

**PB6 364 GERIATRICS RESEARCH IN TURKEY FROM A NATIONAL JOURNAL PERSPECTIVE 1998-2008**  
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**Introduction.** In this study, we aimed to assess Geriatrics research profile based on the evaluation of articles in Turkish Journal of Geriatrics (TJG) within the last 10 years. In the Turkish scientific literature, TJG is the only peer reviewed open access journal focused on elderly health in a multidisciplinary manner, cited in a number of national and international indexes. **Methods and materials.** TJG archive was searched between 1998-2008 based on type and number of articles, reference details, author profile. Differences from 1998 to 2008 were reported by these characteristics. **Results and conclusion.** 328 articles written by 1111 authors were published. Mean number of the authors per one article was 3.39. Total number of the references was found to be 6988. Mean number of references per one article was 21.3 whereas this number increases to 32 for review articles. References were less in number in 1998 (386) as compared to the 2007 data (814). Majority of the articles published in the journal was original researches (62.8%). Others were review articles (27.1%), case reports (4.6%), and editorials (5.5%). First three key words in the last 10 years were "ageing (88), "elderly (69), and geriatrics (45)". National literature findings were also assessed in order to improve the quality of research on ageing in Turkey. Mean percentage of citations to the Turkish authors (17.78) and to the TJG (3.22) were two important data which gave idea for the national strength and impact of the journal. In the

"National Impact Factor" list, TJG was in the first rank in 2004, 2005, and 2006. Improvement of researches in geriatrics should have been achieved in Turkey based on the rationale of the increase in aged population. TJG has provided the Turkish scientists a wide scientific discussion platform

**PB6 365 HUMANIZATION PROCESS IN ELDERLY PATIENTS ADMITTED IN THE INTENSIVE THERAPY UNIT**

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**INTRODUCTION:** Humanization, a philosophical theory which exalt human values, represents a challenge to hurdle the barriers of impersonality and glimmer the subject in a noble and more human way during one of its moments of more fragility and vulnerability. The Intensive Therapy Unit (ITU) is characterized by an interrupted rhythm, constant activity, lights, sounds and use of devices, provoking fear and anxiety, especially in elderly, as they are facing an unpleasant, stressing and traumatic atmosphere. It is from a great relevance the seeking of creating ways to promote love, comfort and harmony to patient, his family and interdisciplinary team, through technical able to humanize the Intensive Therapy Centers. **OBJECTIVES:** The present paper aims to report the process, used techniques and the results obtained from the humanization of the elderly patients admitted in the ITU of Hospital São José do Avaí, Itaperuna, Rio de Janeiro, Brazil. **MATERIALS AND METHODS:** Description of the humanization process of the Intensive Therapy Unit in Itaperuna, Rio de Janeiro, Brazil. **RESULTS:** During the period from July 2005 to December 2006, at the General Intensive Treatment Unit from Hospital São José do Avaí, Itaperuna/RJ, constituted of 11 beds, being 80% elderly patients, a multiprofessional team (medicine, physiotherapy, nursing and social service professionals) worked in the humanization process together with the patients in terminal phase and/or with an imminent risk of death. **CONCLUSION:** The ITU humanization process was important to improve the elderly patients' well-being, contributing to their recovery and reducing the necessity of chemical contention, with all advantages coming from this fact. Thus, the ITU environment humanization is a feasible process, which will benefit the patients and their families, increasing significantly the life quality promotion and the work conditions of the team involved.

**PB6 366 RAPID RESPONSE TEAM (RRT) IN INTRA-HOSPITALAR MEDICAL EMERGENCY CARE - AN OVERVIEW OF ELDERLY ASSISTANCE**  
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**Introduction:** Studies have shown that a significant proportion of hospitalized patients present serious adverse events such as cardiac arrest(CA), admission to the intensive care unit and death not provided. These events are preceded by warning signals detected from 6.5 to 8 hours before the critical event. The benefits of implementing a RRT include the reduction of sentinel events, especially the CA and sequels, and hospital mortality, focusing on increase of survival after CA. **Methods/materials:** The reference hospital is a tertiary private service in Rio de Janeiro/Brazil, including 200 beds, with 59 intensive care, 35 intermediary care and the remaining units of admission. There is a group of trained doctors available to work per hole week and weekend, with a total of 21 professionals. The total care provided on average 1500 to 1800 calls per month. All staff was focusing on the concept of RRT that has a feature to work efficiently, effectively and multidisciplinary view of a sentinel event, triggered by the operating system of communication (radio/mobile branch), reaching criteria signs of severity, monitored by nurses. **Results:** The analysis made after the first three months showed a total of 59 patients with warning signals, mean age of 73yo, time for response of the BEEP(radio)-patient care was 2.47 min, 50% with oxygen desaturation ( $SpO_2 < 90\%$ ), followed by tachypnea ( $RF > 30$ ) and 56% needed transfer to a intensive care unit, including the 2 cases of CA. **Conclusions:** The introduction of new concepts is fundamental to the management of RRT as seems to be the key of security and monitoring for the elderly customers (progressive increase in our country and in our medical practice). More data must be obtained for show the increase long-term survival of this population.

**PB6 367 INCIDENCE AND ASSOCIATED CONDITIONS FOR NOSOCOMIAL INFECTIONS IN BRAZILIAN UNIVERSITY HOSPITAL**  
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**Introduction:** Nosocomial infections are common in elderly inpatients. The objectives of this study were appraised incidence and associated conditions for nosocomial infections

(NI), and mortality attributable to such infections. Methods and material – A prospective study was performed with 28,189 elderly inpatients in Brazilian University Hospital according to NI and associated conditions, between 2002 and 2008. Standard definitions for infection and uniform reporting forms were used. Results – The incidence density and infection rates were 9.9 in 1000-patient days and 10.3% (3,028 episodes), respectively. The patient NI rate was 7.3% (2,054 patients). The prevalent topographies of NI were respiratory infection (33.7%), urinary tract infection (22.6%), surgical wound infection (12.8%) and skin and soft tissue infection (10.8%). The community infection (CI) rate was 20.9% (5,887 episodes) and its prevalent topographies were respiratory infection (30.9%), skin and soft tissue infection (24%) and urinary tract infection (21.7%). The mortality rate of the interned elderly patients was 10% and the lethality rate of the patients with NI was 38.2% ( $p = 0.00$ ; OR: 7.31; 95% CI: 6.61 – 8.09). The association conditions founds for NI were previous antibiotic use (in 48% patients), central catheters (35.9%) and respiratory ventilation (35.3%). The most used antibiotics for NI treatment were Cefepim (13.8%), Ciprofloxacin (10.8%) and Clindamycin (9.6%). Microbiological agents were isolated in 56% NI episodes and the most frequent were: Pseudomonas aeruginosa (14.8%) and Staphylococcus aureus (9.9%). IC microbiological agents were isolated in 1,397 episodes (26.1%) and the most frequent were: Escherichia coli (16.8%) and Pseudomonas aeruginosa (10.4%). Conclusion - NI presented elevated incidence and lethality of the elderly inpatients.

**PB6 368 PREVALENCE OF DERMATOPOROSIS IN GERIATRIC PATIENTS DURING SHORT- TO MEDIUM-LENGTH PERIODS OF HOSPITALIZATION**

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Dermatoporosis is a term recently proposed for the clinical signs and functional consequences of age-related extreme cutaneous fragility [1]. This term, proposed by analogy with osteoporosis, underscores the importance of employing preventive and therapeutic measures to avoid the complications of this pathology [2]. Study objective: To evaluate the prevalence of this pathology in geriatric patients during short- to medium-length periods of hospitalization. Material and methods: Cross-sectional, single-centre study to estimate the number of cases of dermatoporosis in patients hospitalized in 5 geriatric wards for short- to medium-length periods and to determine the factors associated with the presence of dermatoporosis. All patients in each of the wards taking part in the study (patients already hospitalized and new admissions) were monitored by the same dermatologist for a period of 1 month. Results: Each of the 5 wards was monitored for 1 month, yielding a total of 202 sets of patient data. Mean age: 83.4 years  $\pm$  7.25. Prevalence of dermatoporosis  $\pm$  95% CI: 32%  $\pm$  6.44. The lesions were localized on the forearms (77% of cases), legs (40%), and on the back of the hands (20%). In 82% of cases, the clinical severity of the dermatoporosis was rated stage 1 (atrophy, purpura, stellate pseudoscars). Factors significantly associated with dermatoporosis: age ( $p = 0.007$ ), chronic renal impairment (creatinine clearance < 30 ml/min) ( $p < 0.001$ ), confinement to bed (ADL < 2) ( $p=0.0293$ ). Conclusion: This is the first study measuring the prevalence of dermatoporosis in elderly patients and identifying the associated risk factors. The high prevalence of this pathology underlines the importance of conducting further studies to improve our understanding of its course and risk factors and to propose preventive therapies that would avoid the elevated comorbidity in an extremely frail elderly population. 1- Kaya G., Saurat J.

**PB6 369 THE USE OF POTENTIALLY INAPPROPRIATE DRUGS IN ELDERLY IN-PATIENTS**

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Introduction: As an adequate drug therapy can benefit and improve quality of life of elderly, the use of potentially inappropriate drugs (PIDs) may also be harmful by increasing risk of adverse reactions, increasing health expenditures, risk of hospitalization and mortality. This study objective was to evaluate the prevalence of potentially inappropriate drugs (PIDs) in elderly in-patients. Materials and methods. A transversal study at Albert Einstein Israeli Hospital wards in 100 elderly patients ( $\geq 60$  years old) with hospital length of stay from  $\geq 48$  hours to 30 days. For PIDs identification, modified Beers 2003 criterion was used. Results: 156 (62%) patients who have used at least one diagnosis- or condition-independent PIDs were found. Assuming exclusion of scopolamine, clonazepam, and flunitrazepam, which did not belong to the original Beers 2003 listing, 108 (43%) patients who have used at least one PIDs were found, with 28% being usually used. The most frequent diagnosis- or condition-independent PIDs was scopolamine (27.2%), followed by clonazepam (17.9%), and amiodarone (16.4%). The diagnosis-dependent PIDs was chronically used benzodiazepines associated to depression (47.4%). Conclusion: The present study has shown that the use of PIDs is usual in in-patients and the listing should be used as a guide of good practice rather than having a prohibitive character. This study will serve as a base for medical prescription intervention and

selection programs in order to warrant a safe and effective drug therapy for elderly inpatients.

**PB6 370 FUNCTIONAL DECLINE AND SELF-PERCEIVED HEALTH IN OLDER PATIENTS AFTER ICU STAY**

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Introduction Intensive care population is growing old: this raises ethical questions and complex choices for the management of elderly patients admitted to the ICU. In this population, post-discharge functional status and quality of life are as important as conventional outcomes such as mortality. Methods and materials: Ongoing prospective cohort study including patients 80 years old and over, admitted to the ICU for at least 24 hours. Functional status was evaluated by both ADL and iADL before and three months after admission. At least one point decrease in the ADL or iADL scores defines functional decline. Self-perceived health was rated three months after ICU admission. Results Currently, 33 patients followed up to three months after ICU admission are included (mean age: 83 years), of which 51.5% females. Mean preadmission functional status is: 4.18/7 in iADL score and 5.54/6 in ADL score. Mortality is 21.2% (n=7). Among survivors, 20 (60%) experience functional decline. Among the decliners, 14 patients (70%) consider their health condition as worse than before their admission and 14 (70%) estimate themselves as in identical or better health condition than same aged peers. Eighteen patients (69%) would agree with a new ICU stay. Conclusion Initial triage process before ICU admission selects octogenarians with a good premorbid functional status. At the very beginning of our study, it seems that a substantial proportion of survivors present loss of function three months after admission. Accordingly, they have a poor self perceived quality of health but still consider themselves as in better health condition than same-aged peers. Further research will highlight progress of functional status and self perceived quality of health 6 and 12 months after ICU admission, and their interaction with other parameters measured during ICU stay.

**PB6 371 URINARY RELATED QUALITY OF LIFE AFTER MEDICAL AND SURGICAL TREATMENT IN WOMEN**

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Abstract Background and Aims: Urinary incontinence is the most common women's problem while increasing their age. This research will assess the urinary incontinence related quality of life after medical and surgical treatment in women . Methods: One hundred and seventy five women (mean age 46.27 years) affected by mixed urinary incontinence (50 in medical treatment, 50 in surgical treatment and 75 in control group), participated in 13.5 month prospected study in four educational hospital in Tehran. Quality of life was measured through interview and follow up using both generic (SF-36) and specific (I-QOL) questionnaires . Results:The specific quality of life measured showed significant improvement in 3rd and 6th month after medical and surgical treatment ( $p = 0.000$ ) From the SF-36 questionnaire after 3 month , all scores except 3 component scores, and after 6 month all scores except bodily pain score showed significant improvement ( $p<0.05$ ). There was no statistically significant difference between medical and surgical therapy before treatment and 3 month after treatment in the I-QOL and SF-36 scores. No significant difference was observed among therapy and control group scores before treatment, but after 3 and 6 month there was significant differences ( $p> 0.05$ ). Conclusion: Treatment significantly improves the quality of life of women suffering from mixed urinary incontinence , and this improvement raete is the same in medical and surgical therapy . Therefore it is better to consider medical treatment as a first priority. This will reduce problems resulting from hospitalization. Keywords :Quality of life, Urinary incontinence, Women

**PB6 372 HEALTH AND FUNCTIONAL STATUS AND UTILIZATION OF HEALTH SERVICES AMONG HOLOCAUST SURVIVORS AND GENERAL POPULATION**

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Introduction – many studies addressed the traumatic long-term effects of the holocaust. Only a paucity of studies examined the impact of the holocaust on the health and functional status of holocaust survivors and even less about patterns of utilization of health services. Results of a number of studies were found to be inconsistent. Methods and Materials – A national stratified random sample of 1225 respondents was selected from the Israel nation registrant. The sample included 3 age-groups: 65-74, 75-89, and 90+ of whom 452 were holocaust survivors. Referring to health status and use of health services was conducted by face-to-face interviews at the respondents homes, using a structured questionnaire. Results – Significant differences were found between survivors and general population in

perceived health status, morbidity, and functional status, with survivors reporting worse self-rated health, more morbidity and more difficulties in performing ADL and IADL compared to the general population. Multivariate analyses showed that after controlling for other variables, being a holocaust survivor was a significant predictor of health and functional status. Holocaust survivors visited their family physician and the nurses at the health clinics significantly more often and were more frequently hospitalized, but no significant differences were found between both groups in visits to specialists and emergency departments. Conclusion – The findings indicate that holocaust survivors are more vulnerable compared to the general elderly population, which might be connected to the trauma they had undergone. This suggests that professionals should be more aware and sensitive to their special health care needs. More research is necessary to identify the specific and special needs for health services in this high-risk group.

**PB6 373 MENTAL AND FUNCTIONAL COMPARISON FOR INSTITUTIONALIZED ELDERLY IN PUBLIC AND PRIVATE LONG-TERM CARE FACILITIES**  
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**INTRODUCTION:** The study aims to characterize and to compare public and private long-term care facilities for the elderly regarding their mental and functional capabilities. **METHODS AND MATERIALS:** The Mini-Mental State Examination (MMSE) and the Barthel Index were implemented in 151 elderly residents in three public and two private institutions in Presidente Prudente. Statistical analysis was performed using the descriptive method, the correction of Person and ANOVA test (Analysis of Variance between groups). **RESULTS:** It was observed that 59,13% of the elderly in public institutions are male and in private, 41,67%. Analyzing the level of schooling, 54,66% of the elderly in public institutions are illiterate and in private long stay institutions, 41,67%; in MMSE, 76,72% of the elderly in public institutions had cognitive deficit while in privates, 69,44%. According to Barthel Index, 75,65% of the elderly in public institutions were considered independent to conduct their daily life activities and in private institutions, only 27,78%. Thus, there is statistically significant difference between the two kinds of institution regarding the functional capacities ( $p < 0.0001$ ), but there is not in relation to mental status ( $p = 0.7669$ ). **CONCLUSIONS:** The data analysis allows us to conclude that the mental state is a crucial factor in the institutionalization of the elderly, both in public and private ILPs. However, we noticed that the families of higher socio-economic level usually intern their elderly when their functional status is also very compromised.

**PB6 374 HEALTHCARE COSTS FOR PEOPLE AGED 65+ TWO YEARS PRIOR TO THEM RECEIVING LONG-TERM MUNICIPAL CARE**  
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**Introduction:** More knowledge is needed about patterns of healthcare consumption in old age in particular with regard to the relationship between various agents in the health system. The aim was to investigate healthcare costs in the public medical healthcare system in men and women (65+) and with regard to age in the two years prior to the start of long term municipal care and services. The aim was also to investigate patterns and determinants of costs. **Methods and materials:** The study comprised 362 people (aged 65+) who received a first time decision about long-term municipal care or/and services during 2002-2003 and was drawn from the Swedish National Study of Aging and Care (SNAC). SNAC provided data about informal care, functional dependency and demographics at time for decision which was merged with data from the County Council patient administrative system regarding costs for inpatient and outpatient care the two years prior to decision. **Results:** A majority (58% for the women and 54% for the men) of the costs for acute inpatient care occurred within five months prior to municipal care. The men had significantly higher costs compared with women for inpatient care (EUR 4 700 vs. 700) and visits to outpatient physicians (EUR 700 vs. 400) the year prior to municipal care. A cluster analysis revealed 13% with overall higher healthcare costs. Those were more often married, men, younger and diagnosed with cancer, circulatory diseases or injuries. **Conclusions:** A share of 13% had higher healthcare costs throughout the two years. Those were more often younger, men, married and diagnosed with circulatory diseases, cancer and injuries. Those at risk of high healthcare costs should benefit from a systematic clinical assessment and a more proactive and integrated care to prevent escalating costs the period preceding long-term municipal care.

**PB6 375 DEVELOPMENT AND RELIABILITY OF A QUESTIONNAIRE FOR DESCRIBING RESIDENTIAL CARE FACILITIES FOR SENIORS**  
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**INTRODUCTION:** In the province of Quebec, there is currently no official register of private residential care facilities (RCFs) that describe their physical and organizational

environments (e.g., rules, admission policies, staffing mix). Consequently, the choice of RCFs made by seniors, families and health care professionals is based on limited information. **METHODS:** We used a two-round postal Delphi survey based on the RAND/UCLA Appropriateness Method to identify characteristics of RCFs that need to be known to support the placement process of seniors. To assess the test-retest reliability of the questionnaire, 45 randomly selected RCF managers were invited to complete the questionnaire twice, one month apart. To calculate the inter-rater reliability, 40 randomly selected RCF managers were visited by a research assistant who fill out the questionnaire; the responses of the manager and the assistant were then compared. **RESULTS:** The Delphi process involved 48 experts who identified 131 characteristics as essential to describe RCFs. All retained characteristics were transformed into simple questions that can be answered by RCF managers. Those questions broadly describe staff, services and activities, organizational policies, neighbourhood, exterior, lobby, hallway and stairs, recreation area, dining room, apartment/room, bathroom, security aspects, and general information. The test-retest reliability for 81% of the characteristics and the inter-rater reliability of 69% of these were above 0.60; judged good to excellent. **CONCLUSION:** The reliability of the self-reported questionnaire proved to be satisfactory for most characteristics. Some questions were modified or withdrawn and a manual was developed to facilitate its completion. In fall 2008, a provincial census of 2139 RCFs was conducted with this questionnaire and manual. The main objective of the census is to develop a typology of private RCFs based on their physical and organizational characteristics.

**PB6 376 HOW TIME FLIES: EVERYDAY WORLDS OF NEW ZEALAND REST HOME DWELLERS**  
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**Introduction** This presentation comes out of the doctoral study Everyday Worlds of Older People living in New Zealand Rest Homes. The study aimed to examine and understand the ways that older people living in 21 rest homes in two New Zealand cities go about their everyday lives. The study investigated the social construction of activity patterns and social links of residents within and outside the rest homes. Methods Quantitative and qualitative mixed-methods including semi-structured interviews and survey data were used as a research paradigm. Results Findings from the study challenge commonsense perceptions that rest home dwelling elders have 'all the time in the world' and are merely 'biding time' in what have been termed 'God's waiting rooms'. Given this, a study of older people's everyday rest home life must necessarily take the concept of time into account. In all its conceptual senses 'time' is said to be the most commonly used noun in the English language. Yet, it is extraordinarily difficult to discuss a commonsense concept like time because it is so clearly socially and situationally constructed. This presentation explains how participants offer a (mainly) positive representation of how 'life goes on' through active management despite limitations imposed by failing bodies and/or minds. **Conclusions** Participants are not apathetic elders sitting around with nothing to do. In contradistinction to this view this paper illustrates how participants actively 'take time' in day to day life to make sense and meaning of their everyday worlds through 'time spent' taking part in many social and physical activities.

**PB6 377 FACTORS RELATED TO NURSING STAFF'S FAILURE TO REPORT ELDER ABUSE IN LONG-TERM CARE (LTC)**  
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The aim of this grounded theory exploratory research was to describe the factors related to nursing staff's failure to report elder abuse. Using a snowball sampling technique and after reaching data saturation, the sample consisted of seven nurses employed in LTC facilities from the Montreal metropolitan region. Face-to-face audio taped interviews comprised of open-ended questions were conducted and verbatim data using constant comparative techniques were analyzed. Seven categories of factors emerged: past experiences, taking charge of the situation, organizational inertia, culture of silence, severity of abuse, desensitization and intimate interpersonal relationships. Findings strongly suggest that nursing staff's failure to report abuse is at the same time linked to several factors, is a shared responsibility within organizations, points to an apparent absence of ethics, and comprises an underlying emotional turmoil.

**PB6 378 INFLUENCE OF MODELS OF CARE AND STRUCTURAL EMPOWERMENT ON INDIVIDUALIZED CARE IN LONG-TERM CARE**  
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**N. O'ROURKE(1) - (1)** Simon Fraser University (Canada)

**Objectives:** Implementing management initiatives that enable formal caregivers to provide quality, individualized care to older adults in long term care (LTC) facilities is increasingly important given that the number of LTC residents is projected to triple by 2031. The objective of this study was to explore the relationship between care provider access to structural empowerment and the provision of individualized care in LTC. **Methods:** Structural equation models (SEM) were computed separately for RNs/LPNs ( $n = 242$ ) and

care aides ( $n = 326$ ) to examine the relationship between access to empowerment structures (i.e., informal power, formal power, information, support, resources, opportunity) and the provision of individualized care. Invariance analyses were subsequently undertaken to determine if the association between empowerment structures and reported provision of individualized care differs between caregiver groups. Results: Access to structural empowerment had a statistically significant, positive association with provision of individualized care for both groups. For RNs/LPNs and care aides, empowerment explained 50% and 45% of observed variance in individualized care, respectively. These notable percentages did not significantly differ between caregiver groups. Discussion: Of the empowerment structures, support, especially in the form of access to educational opportunities and recognition for a job well done, seems to be particularly significant to care providers. Additionally, the variable informal power loaded across both latent variables (i.e., empowerment and individualized care) on the structural equation model computed for care aides, indicating that the quality of work relationships in LTC facilities may have a direct and meaningful influence on care aides' ability to provide individualized care. Findings from this study suggest that provision of individualized care in LTC may be significantly enhanced when formal caregivers have appreciable access to empowerment structures.

**PB6 379 THE ASSOCIATION BETWEEN A HIGH ELDERLY RISK ASSESSMENT INDEX SCORE AND THIRTY DAY HOSPITAL READMISSION.**

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Objective: Identification of high risk nursing home residents for hospital readmission is an important task for healthcare providers in subacute long term care. The objective was to determine the relationship between a high score on the Elderly Risk Assessment (ERA) index and 30-day readmission to the hospital. Patients: All community dwelling patients over 60 years of age impanelled within primary care internal medicine on January 1, 2005 and admitted to a local nursing home from the hospital were included. This study occurred within a primary care internal medicine practice in Rochester, MN. Methods: This was a retrospective cohort study utilizing administrative data from a nursing home population. The primary outcome was 30-day hospital readmission rate from the initial admission to the nursing home. The predictor variable was the ERA score with the highest 10% considered the highest risk population. The ERA is based upon age, previous hospitalization and comorbid health status. Data analysis involved univariable comparison between ERA score and 30 day rehospitalization from the nursing home. Results: There were 12,650 subjects in the initial cohort of which 1914 (15.1%) were admitted to the nursing home. Of these 1914 nursing home residents, 347 subjects were readmitted within 30 days. Readmission was higher in the group with the highest ERA score (top 10%) with a relative risk of 4.54 (95% CI: 2.74-7.54) compared to the lowest scoring group. Discussion: Residents possessing high ERA scores have a four fold higher risk for 30 day readmission to the hospital. These findings suggest that the utilization of an electronic risk score can help identify patients at risk for 30 day readmission. Clinically, the identification of high risk individuals may be useful for future clinical interventions.

**PB6 380 PREDICTING MORTALITY OF OLDER RESIDENTS IN LONG-TERM CARE FACILITIES: COMORBIDITY OR CARE PROBLEMS?**

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Introduction: Accurate prediction of life expectancy in long-term care facilities (LTCF) is important, but previous studies emphasized demographic characteristics, disease diagnosis or comorbidity. The purpose of this study is to evaluate the roles of geriatric care problems and comorbidity in predicting 12-month mortality in LTCF. Methods: Residents of Banciao Veterans Care Home were invited for study. Minimum data set (MDS) was implemented and resident assessment protocol (RAP) triggers were collected as the geriatric care problems. Comorbidity of the residents was evaluated by Charlson's comorbidity index (CCI). Results: 559 residents (mean age =  $80.9 \pm 5.3$  years, all males) were successfully followed and 50 residents (7.9%) died during the study period. Compared to survivors, dead subjects were higher in sum of RAP triggers ( $4.9 \pm 2.0$  vs.  $4.1 \pm 2.0$ ,  $P=0.004$ ), CCI ( $1.2 \pm 1.2$  vs.  $0.7 \pm 0.9$ ,  $P=0.014$ ), and were more likely to be hospitalized ( $1.6 \pm 1.9$  vs.  $0.4 \pm 0.9$ ,  $P<0.001$ ) and to visit emergency department ( $0.9 \pm 1.2$  vs.  $0.5 \pm 1.2$ ,  $P=0.012$ ). Moreover, dead subjects were more prone to suffer from cognitive loss, urinary incontinence, and behavioral symptoms than the surviving subjects ( $P$  all  $<0.05$ ). Cox proportional hazard model showed that both CCI ( $HR=1.44$ , 95% C.I.= $1.13-1.82$ ,  $P=0.003$ ) and sum of RAP triggers ( $HR=2.03$ , 95% C.I.:  $1.08-3.82$ ,  $P=0.028$ ) were significantly associated with 12-month mortality. Conclusion: Both geriatric care problems and comorbidity can significantly predict 12-month mortality in a veterans care home. Further intervention study is needed to evaluate whether elimination of these care problems can reduce the possibility of death in long-term care setting.

**PB6 381 TOWARDS CONTINUING NURSING CARE CONCEPTUALIZATION**  
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A. SILVA

Introduction - The recent implementation of the National Integrated Continuing Care Network (NICCN) constitutes a new approach to nursing care for the elderly in Portugal. This network was established in 2006 and, therefore, research in this field is still scant. The main objective of this study is to contribute to a better conceptualization of Continuing Nursing Care (CNC) for the elderly within an Integrated Continuing Care Unit in Portugal's. Methodology - This is a descriptive-exploratory study of a qualitative nature. A total of thirteen nurses took part in the study, and the data were collected through semi-structured interviews which were audio-recorded with the participants' consent. Data were analysed using a hermeneutic-dialectic approach with the aid of the QSR Nvivo software application. Results - It was thus possible to conceptualize the CNC, demonstrating their: conceptual definition - as a continuous process, plural, complex and dynamic, targeted to people with limitations in the independence and/or autonomy, resulting from post-acute episodes of illness and that is expressed in the articulation and integration of the all dimension of care; general objective - promote independence and autonomy and specific objectives - CNC focus on the person and family/informal caregivers; reaffirm the potential of older people; building new(s) meaning(s) of living with the elderly; promote with the elderly, care of themselves; develop a multidisciplinary approach; and presuppositions. Conclusion - This conceptualization process and the philosophy of the Network itself are at a very early stage of development. Nevertheless the complex dynamics of CNC as well as its synergy with the whole NICCN are already clearly visible, and these factors are essential for their success. This study aims to improve the quality of CNC for the elderly in continuing care units and to encourage new research in and a further development of the concepts

**PB6 382 WHISTLING:AN UNUSUAL PRESENTATION OF ACUTE DYSTONIA**  
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82y/o caucasian female resident of a nursing home with a history of moderately advanced dementia, H.T.N and osteoarthritis hips. She was evaluated for "disruptive whistling" for three weeks. It was profound during dining hours. This behaviour caused "arguments and verbal agitation among other residents" around her. There were no other associated behaviours. She had good appetite. No recent falls or changes in cognitive status were reported. Bladder/bowel functions unchanged. Her medications included Acetaminophen/hydrocodone (500/5mg) twice daily. Aspirin 81 mg daily, Donepezil 10 mg daily, Colace 200 mg daily, Senna one tablet daily, Risperadone 0.5 mg po daily and Amlodipine 5 mg daily. She was stared on risperadone 2 months ago for agitation and disruptive behaviours at night, trying to get out of bed and yelling. Review of systems negative for acute cognitive changes. No pain was reported. She was pleasant and following simple commands. Osteoarthric changes with mild contractures of both knees noted. Functional status required moderate assist with transfers and activities of daily life.) No cough, wheezing or hoarseness. O/E; B.P 120/70, Heart rate 72/minute, afebrile, weight 150lbs, R/R 16/minute, pleasant and cooperative, Euthymic mood. following simple commands. Heart, lungs and abdominal exam normal. Neurological exam was negative for tremors. Musculoskeletal exam shows mild contractures both knees. Recent abnormal involuntary movement scale(A.I.M.S) was unremarkable. On observation whistling had expiratory character. Blood work and urine test negative Intervention; Risperidone was discontinued and the resident was observed closely. Results; Whistling disappeared in 2 weeks. Conclusion; Dystonic reactions of small muscles of face and orbit are not uncommon but difficult to assess. Even newer generation anti-psychotic and smaller duration and doses are capable of such reactions. New behaviours in dementia should be carefully evaluated.

**PB6 383 FAMILY FUNCTION AND CAREGIVER'S MENTAL HEALTH OF DEPENDENT RELATIVE**

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Objective: To analyze the influence of family function on caregiver's perceived mental health. Design: Cross-sectional study Setting: two primary care urban health centres. Participants: 153 caregivers of dependent people. Measurement: sociodemographic variables from caregiver and dependent relative and psychoactive drugs prescribed to caregiver. Caregiver questionnaires: mental health evaluates with General Health Questionnaire (GHQ-12), family function with APGAR, and Duke-UNK functional social support questionnaire. Care-recipient questionnaires: cognitive disorders with Pfeiffer and functional dependence level with Barthel. Results: caregiver's mean age was 63.8 years old; 72.5% ( $n=111$ ) were female; 57.5% have primary studies; and 37.1% take psychoactive drugs. More than 40% of the care-recipients have cognitive disorders and 49.7% have total functional impairment. According to the GHQ-12, 27% of the caregivers had mental health disorders; 31.3% of the families were dysfunctional and 32.7% had poor social support. The variables that significantly contributed to the explanation of caregiver's

mental health have been: psychoactive drugs intake, family function, social support and educational level. Conclusion: Family function is an important predictor of caregiver's mental health. KEY WORDS: Caregiver. Dependency. Family function. Primary care

**PB6 384 WORK-INTEGRATED EDUCATION: PLACEMENT OF NURSING STUDENTS IN LONG TERM CARE FACILITIES**

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**Background:** In Hong Kong, as in Western countries, the number of elderly people is increasing. This situation is having significant impacts in health and social care. In particular the number of older people requiring residential long term care (LTC) is expected to grow. In light of the lack of clinical learning opportunities in LTC facilities for the pre-registration nursing students in our undergraduate programme, our research team proposed a work-integrated education (WIE) for students in a nursing home in 2008. **Objectives:** 1. To serve as a pilot for the School of Nursing (SN) in order to explore various issues involved in placing students in nursing homes, so that these issues can be addressed prior to the implementation of actual placements 2. To cooperate with nursing homes to provide learning opportunities for students, in order to prepare them for the care of LTC residents and their families, and possibly to foster their interest in a career in nursing homes and/or gerontological nursing 3. To explore various models of clinical supervision and identify the approach that is most facilitative to students learning Methods: It was a qualitative descriptive study. Focus group interviews were conducted with students and supervisors regarding teaching and learning. Results: Nursing students identified unique geriatric nursing roles within a multi-disciplinary working atmosphere. They also reported that they had gained awareness of current LTC practice and other social resources for older people. Students viewed the nursing home environment as a positive one conducive to facilitating learning about elderly care and gerontological nursing. Conclusions: Student placement in nursing homes has been found to have highly positive outcomes. Positive learning outcomes are vital to both widen and deepen students' nursing education. Thus, it will be beneficial to include LTC facilities as clinical placement venues in the undergraduate nursing programme.

**PB6 385 FOOT HEALTH PROBLEMS OF OLDER PEOPLE LIVING IN INSTITUTIONS - A LITERATURE REVIEW**

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**Introduction** Over the next few decades, societies will be ageing fast posing a need to support the functional capability of older people. Functional capability can be affected by foot health problems, preventing older people from independent functioning. The aim of this study was to describe the foot health problems and their prevalence of institution-dwelling older people based on previous research. **Methods and materials** A literature search of the MEDLINE and CINAHL databases was made for 1980-January 2009, using the search terms: foot, problem, deformity, disorder, complaint, foot care and limits: age (65+) and English language. Included articles had to concern foot problems of older people living at institutions. Articles which dealt with foot problems of home-dwelling or references concerning diabetic foot care, foot surgery, wound care or an unscientific article were excluded. Different search term combinations resulted 1180 titles. Examining the titles, 114 references were selected. The abstracts of these were examined and 62 studies were selected. The final amount of selected studies for the review was 12, and it was based on full-text articles. **Results** Older people living in institutions have different foot health problems. Most (23-87%) have one foot health problem, but 14-53% of institution-dwellers are reported to have three foot health problems. Different foot structural problems are prevalent, most common are lesser digital deformities. Nail problems such as thickened toenails and onychomycosis affect 23-94% of institution-dwelling older people. Most prevalent skin problems are dry skin (14-98%). Conclusion: Institution-dwelling older people have multiple foot problems. Health care providers should pay careful attention to these problems. It is crucial to care for these problems and prevent the exacerbation of the problems. Untreated foot problems can lead to functional limitations and weaken older person's functional ability.

**PB6 386 MEASURING THE EFFECTIVENESS AND OUTCOMES OF AN ACTIVE REHABILITATION PROGRAM FOR STROKE CLIENTS IN A LONG TERM CARE SETTING**

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**PROBLEM:** There is currently no known study that looks at the benefits of having an Active Rehabilitation Program for stroke survivors in a Long Term Care Setting. This study measures the effectiveness and outcomes of an Active Rehabilitation Program for

**Stroke Clients in a long term care setting.** **METHODOLOGY:** A descriptive study was done using the Functional Independence Measure (FIM) tool as a quantitative measure to assess the level of functioning of stroke survivors who attended an Active Rehabilitation Program four to five times a week in group sessions. The study was conducted in a 218-bed long term care home located in downtown Toronto. The study involved 16 participants who had a history of stroke prior to admission to the program. The FIM scores were taken on admission to the program and again six months post-admission after the participant's involvement in the Active Rehabilitation Program. The overall FIM scores were evaluated along with the individual FIM scores on the sub-scales of eating and transferring abilities. **RESULTS:** Two ANOVA statistical analysis tests and a T-test were done using sex and the number of group sessions as variables. The Anova tests showed no statistical significance, a statistical significance was noted in the T-test results. A statistically significant value  $p < .05$  was noted in the areas of the overall FIM scores ( $p < .01$ ); the sub-scales of eating score ( $p < .05$ ) and the bed-chair score ( $p < .05$ ). **CONCLUSION:** The results of the study supported that an Active Rehabilitation Program in a long term care setting has a positive effect on the elderly client's activities of daily living functioning. The effects were seen within the first six months of starting treatment in the program with participants maximizing their overall FIM scores up to 152% post-treatment.

**PB6 387 MEDICATION IN ACCOMMODATION INSTITUTIONS FOR THE ELDERLY: HOW TO RECONCILE ECONOMICAL RESTRAINTS, GOOD PRACTICE AND GALENICAL CONSTRAINTS**

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**introduction** Actual economical restraints and the latest regulation texts concerning EHPAD (établissement pour Personnes Âgées Dépendantes equivalent to long term care) in France entice professionals to reflexion on the good clinical use of medication. The objective of this study was to create a simplified list of medications with galenical presentations adapted to very aged multipathological patients. **Methodology:** This work was conducted in an EHPAD consisting of 7 units of 40 beds each with 3 prescribing hospital physicians. First, an inventory of all available medications was performed. Then this list was divided following the major pharmaceutical classes, in accordance with the recommendations concerning healthcare for the elderly above 80 years of age (Haute autorité de santé-Hight authority of healthcare-, scientific societies, specialised journals...). At this stage of our work, a minimal list by speciality was elaborated with the collaboration of the pharmaceutical department of the regional teaching hospital, taking into consideration cost and galenical forms that were requested. This list and the treatment guidelines issued from it are accessible to all physician via the computer network. **Conclusion:** This work will enable to standardize the contents of medication cabinets of the 7 units and also presumably the physicians' prescriptions and make information easily accessible. Moreover, the availability of adapted galenical forms enabled by crosswise implications of physicians and pharmacists should stop pill-crushing or capsule-opening practices which were responsible for the decrease of efficiency of these treatments.

**PB6 388 SOCIAL INTERACTIONS, BODY IMAGE AND ORAL HEALTH AMONG FRAIL INSTITUTIONALIZED ELTERS**

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**Introduction:** The extant research indicates that a positive body image is linked to increased social contacts, as well as improved health, well-being and quality of life irrespective of age. However, the extent to which oral health and diseases influence body image and social interactions amongst frail elders in care facilities is unknown. A preliminary study of these relationships suggested that oral health may have an important influence on the body image and social interactions of institutionalized elder women. The current study has expanded this investigation to explore these relationships within a more diverse group of frail elders. The research question underlying this study is "how are the social interactions and body image of institutionalized frail elders influenced by perceived oral health and disease?" **Methods:** Open-ended interviews were conducted with a purposefully selected group of cognitively intact, frail institutionalized elders who exhibited varying degrees of social engagement and oral health conditions. The narratives were analyzed using a constant comparative technique, and second interviews with the participants were conducted to check trustworthiness of the analysis. **Results:** Five major themes emerged: 1) culture of the environment; 2) influence of disability and social context; 3) embarrassment; 4) importance of a "nice smile"; 5) and life priorities. **Conclusions:** Poor oral health can embarrass frail elders and lead to altered body image, avoidance of social situations and reluctance to seek care. Consequently, the psychosocial impact of poor oral health needs more careful consideration to help sustain social interactions and quality of life for elders in care facilities.

**PB6 389 DIETARY AND FLUID INTAKES OF OLDER ADULTS IN CARE HOMES REQUIRING A TEXTURE MODIFIED DIET**

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Introduction Texture modified diets (TMD) are often prescribed for individuals with dysphagia as part of its clinical management. Often these individuals present with poor appetites. This along-with the need for the addition of fluid to foods to achieve the desired texture means intakes may be compromised. The present study aimed to evaluate and compare energy, protein, fibre and fluid intakes of a care home population consuming a TMD with those on a standard diet and evaluate the role of snacks in individuals' diets. Methods and materials Thirty individuals (n=15 Standard diet; n=15 TMD) from three care homes in Scotland were recruited. Dietary intakes were assessed using a three-day weighed plate-wastage method. All snacks and drinks consumed were observed and recorded and then weights of standard portions and volumes were used to determine actual amounts consumed of these items. Estimated intakes were converted to energy and nutrient intakes using WinDiets Dietary analysis software. Results Residents on a TMD had significantly lower intakes of energy (1312 (326) kcal versus 1569 (260) kcal, p<0.024), NSP (6.3 (1.7)g versus 8.3 (2.7)g, p<0.02) and fluid (1196 (288) ml versus 1611 (362) ml, p<0.002) when compared with residents on a standard texture diet. Snacks provided significantly less energy (13% or 173 kcal versus 22% or 343 kcal, P = 0.001) and NSP (p<0.001) in those requiring the TMD. Conclusion These results suggest that dietary and fluid intakes of older adults in care homes requiring a TMD are significantly less than individuals on a standard texture diet. These are unlikely to be meeting individuals' dietary and nutritional needs. Strategies that maximise provision of appetising energy and nutrient-dense foods (including snacks) & fluids of suitable textures require further investigation.

**PB6 390 A COMPARISON OF CANADIAN ALTERNATE LEVEL OF CARE (ALC) PATIENTS TO ELDERLY HOME CARE CLIENTS USING THE RAI-HC TOOL**

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Introduction: Elderly hospital patients who no longer require acute care, but cannot be discharged due to the lack of post-hospital resources are a significant concern for international health care systems. In Canada, these patients are labeled "alternate level of care" (ALC). ALC has been partly implicated in the overcrowding of emergency departments, increases in surgical cancellations, as well as health system financial risk. In Canada, approximately 60% of ALC patients are waiting for a nursing home bed. For these ALC patients, community care is thought to be a viable alternative placement. However, little is known about the ALC patient population in Canada. The aim of this research was to describe the ALC population in the province of Ontario using clinical items and scales embedded in the RAI-Home Care (RAI-HC) assessment instrument and compare them to that of elderly community clients. Methods and Materials: Analysis was conducted on a one year sample (2007-2008) of ALC patients and home care clients over 65 years of age collected in Ontario, Canada. The total sample included 153,048 individuals: 15,145 ALC patients waiting for nursing home placement; and 137,903 long-stay home care clients. Results: Numerous demographic and clinical factors distinguish the Ontario ALC and long stay home care population. Overall, ALC patients are more clinically complex and have higher caregiver burden relative to the home care population. However, summary results indicate that there is a substantial sub-group of ALC patients that share a similar clinical profile with elderly long stay home care clients. Conclusions: ALC patients have complex needs that require different approaches to care. Understanding such differences can inform new approaches and care options that meet the needs of ALC patients. Funded by the Change Foundation; Toronto, Canada.

**PB6 391 EMPLOYEE ENGAGEMENT, MONTHLY CELEBRATIONS, SMILES AND FUN, LIGHTS UP THE ROOM**

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Inflexible routines, often time rigid, based on a medical and nursing model of care, has traditionally been the norm in long term care facilities. Residents viewed as bedridden or shut-in required hands on care with all aspects of daily activities. Long term care is rapidly changing, as is the resident population. Now preferred is a social atmosphere in a home-like environment that has staff engaged and involved in the residents quality of life. In late 2007 Fraser Health collaborated with The Gallup Organization conducting a Q12 Employee Engagement Survey which measures questions that Gallup's extensive research worldwide has identified as the best indicators of high performing workplaces. In early 2008 Terms of Engagement author Dick Axelrod facilitated a three-day workshop for "organizational barn raising". Teams were focused and the working environment encouraged spirited involvement with remarkable projects occurring. Our team of ten Rosewood/Marwood staff, through lively dialogue determined that an event for the residents was an action plan that would derive satisfaction from a job well done. But the event needed to be the staffs event and a well-designed monthly birthday celebration for the residents was the outcome. The results have been phenomenal! Our first party in May

was a bit shaky but our celebrations have evolved into a major monthly social event. The introduction of music, with maracas for every resident, visitor and staff member, now shakes the walls. Staff remain or come in to facilitate the party, the residents look forward to the third Friday of the month and the parties are getting livelier and longer. When asked what is the satisfaction of this staff engagement event many will respond that the smiles of everyone, especially the residents having such a good time lights up the room.

**PB6 392 I WANT TO STAY IN MY OWN HOME: WHO'S GONA TAKE CARE OF ME?**

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Home care has always been an important subject in nursing care. The practices associated to home care have been changing dramatically in the last decade, driven, for example, by profound changes in patient clinical complexity, increase of early discharges from the hospital of patients still requiring a great amount of care and, specially, because of aging population. At present, different teams, often with different goals, provide home health care and it is therefore important to ensure the continuity of care. The nurse seems to be the professional best placed to assume the leadership of the process of continuity. As part of PhD achievement process we are conducting a study to identify the nurse's role in that environment of health care, with Symbolic Interactionism as theoretical framework and Grounded Theory as methodology. The research takes place in a Portuguese town with a newly program of Continuous Home Health Care performed by a multidisciplinary team under the management of the nursing staff. This program intends to support old people where they want to stay - their own home - after discharge from the hospital or in any situation of health needs such as chronic disease, dependency or elderly. By means of in deep interviews to informal caregivers, nurses and administrators, as well as participant observation of home delivery of care, we intend to identify the way they construct continuity of care and how ensure their maintenance. The main findings are a) the nurses and family build up its role as caregivers in partnership; b) the context of the home creates the particular conditions for the establishment and maintenance of a particular climate that makes possible the maintenance of continuity. We conclude that continuity is a movement for the independence of the person, built on close cooperation between the nurse and old person/family.

**PB6 393 STRATEGIES FOR IMPROVING ORAL HEALTH IN LONG-TERM CARE: A SCOPING REVIEW**

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INTRODUCTION Dentate elderly in long-term care suffer from caries and gingival bleeding, and the edentulous suffer from denture stomatitis and loose dentures. These conditions are debilitating, and have a negative effect on food consumption. Residents are now older, more functionally dependent, and more cognitively impaired upon admission to long-term care, and have more natural teeth. Oral care policies have been slow to adapt to these changes. Links between oral and systemic diseases indicate need for change but the literature is not clear on what leads to effective outcomes. Under the direction of nurses, mouth care is provided by nursing aides, who face resistive behaviours, absence of necessary supplies, fear or discomfort providing oral care, low confidence in levels of knowledge, lack of time and lack of staff. Nurses need access to the best evidence of effectiveness to improve oral health. METHODS Comprehensive oral care addressing three components is necessary: a) valid and reliable assessment tools; b) regular access to dental treatment; and c) provision of daily mouth care. We are examining the extent of evidence for these three components using a scoping review. Our scoping review, in progress, is a structured review of literature that summarizes research findings and identifies gaps in research activity. RESULTS We conducted a scoping search for mouthcare interventions. Searching Medline, CINAHL, and CDSR identified 345 citations for reviews, but no systematic reviews, and 376 citations for trials, with six RCTs. The search is expanding to other databases and studies with other designs. Upcoming stages will identify evidence on assessment tools and treatment strategies. CONCLUSIONS Evidence-informed policies are needed to reduce the burden of oral disease on elderly residents. Our scoping review will provide information on the state of the science, directly useful for developing oral health policy for long-term care settings.

**PB6 394 PREVENTION OF UNINTENTIONAL WEIGHT LOSS IN NURSING HOME RESIDENTS: A CONTROLLED TRIAL OF FEEDING ASSISTANCE**

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Objective: To determine the effects of a feeding assistance intervention on food and fluid intake and body weight. Design: Crossover controlled trial. Setting: Four skilled nursing

homes. Participants: Seventy-six long-stay residents at risk for unintentional weight loss. Intervention: Research staff provided feeding assistance twice per day during or between meals, five days per week for 24 weeks. Measurements: Research staff independently weighed residents at baseline and monthly during a 24-week intervention and 24-week control period. Residents' food and fluid intake and the amount of staff time spent providing assistance to eat was assessed for two days at baseline, three and six months during each 24-week period. Results: The intervention group showed a significant increase in estimated total daily caloric intake and maintained or gained weight, while the control group showed no change in estimated total daily caloric intake and lost weight over 24 weeks. The average amount of staff time required to provide the interventions was 42 minutes per person/meal and 13 minutes per person/between meal snack compared to usual care during which residents received, on average, 5 minutes of assistance per person/meal and less than one minute per person/snack. Conclusions: Two feeding assistance interventions are efficacious in promoting food and fluid intake and weight gain among residents at risk for weight loss. Both interventions require more staff time than usual NH care. The delivery of snacks between meals requires less time than mealtime assistance and, thus, may be more practical to implement in daily NH care practice.

**PB6 395 COST EFFECTIVENESS OF TWO NUTRITIONAL INTERVENTIONS: A RANDOMIZED, CONTROLLED TRIAL**

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Objective: To determine the cost effectiveness of oral liquid nutritional supplementation versus offering residents' snack foods and fluids between meals to increase estimated total daily caloric intake among nursing home (NH) residents at risk for weight loss due to low oral food and fluid intake. Design: A randomized, controlled trial. Setting: three skilled nursing homes. Participants: Sixty-three long-stay, NH residents with an order for oral liquid nutritional supplementation. Intervention: Participants were randomized into one of three groups: (1) usual care control; (2) supplementation, or (3) between-meal snacks. For both intervention groups, research staff provided either supplements or snacks twice daily between meals (10am and 2pm), five days per week, for six weeks with assistance and encouragement to promote consumption. Measurements: Research staff observed residents during and between meals for two consecutive days at baseline, weekly, and post six weeks to estimate total daily caloric intake. For both intervention groups, research staff documented residents' estimated caloric intake between meals from supplements or snack items, refusal rates and the amount of staff time required to provide the intervention daily during intervention. Results: Both interventions had a significant effect on estimated total daily caloric intake relative to the control group, and both interventions required more staff time than usual care. The amount of staff time and the refusal rates were higher for the supplement intervention group compared to the snack intervention group. Conclusions: The snack intervention was more cost effective than traditional sip-feed supplements in increasing total daily caloric intake among NH residents at risk for unintentional weight loss due to low oral intake during a six-week intervention trial.

**PB6 396 ACUTE PANCREATISIS DISEASE DUE TO MORPHINICS: AN ETIOLOGY TO BEAR IN MIND**

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INTRODUCTION A lot of acute pancreatitis diseases are due to medicines used in treatment (Tetracycline, Oestrogen, Diuretics...). Acute iatrogenic pancreatitis is a rare condition, it represents 2-4% of acute pancreatitis. Morphine is a very rare cause of pancreatitis.. CLINICAL CASE A 78 year old woman was hospitalised for lumbar pain due to 2 spinal column compressions. It was impossible to relieve the pain using second level analgics. Morphinic treatment alongside standard physical treatment (surgical corset, rest) was introduced. After two weeks, the pain seemed to be under control but the patient presented new pain who was increasingly severe and new symptoms appeared in the upper digestive area. Abdominal exam was painful. The hypothesis that there might be an occlusive digestive cause due to morphinic treatment was dismissed following abdominal radiography. Blood tests gave the following results: amylosaemia: 1500UI (<90UI/l), lipasaemia: 700UI (N<200UI/l). Abdomen echography and scan were normal. The gall-bladder showed no trace of biliary calculus and there was no sign of pancreatitis disease. We therefore concluded upon the likelihood of an iatrogenic cause due to morphinic treatment inducing a spasm of Oddi's muscle. When we have stopped morphinic treatment The blood test became normal within 2 weeks DISCUSSION Acute pancreatitis due to medicine is rare. In this case, we dismissed other etiological hypotheses. Here, there was a direct chronological link between morphinic treatment and acute pancreatitis as the patient recovered once morphinic treatment was stopped. The physiopathological mechanism responsible for acute pancreatitis is a spasm of Oddi's muscle due to the administration of morphine rather than to any other immunity mechanism. CONCLUSION Morphine is a

very rare etiology of acute pancreatitis that we need to bear in mind in view of the frequent prescription of morphine in treatment.

**PB6 397 THYROID DYSFUNCTION IN AGED HOSPITALIZED PATIENTS: PREVALENCE, ETIOLOGY, AND CLINICAL OUTCOME**

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BACKGROUND Thyroid dysfunction is common in aged people and has recently been associated to mortality. Our aims have been: (1) to assess the prevalence of thyroid dysfunction in hospitalised patients over age 60 years and (2) to study the relationship between thyroid functional status and mortality during hospitalisation. METHODS We studied a group of 447 patients (62% women), aged 61-101 yr, hospitalised during 2005. Thyroid dysfunction was assessed by measuring serum concentrations of thyrotropin (TSH), free thyroxine (FT4), and free triiodothyronine (FT3). Thyroid autoimmune status was evaluated through thyroid peroxidase (TPO) and thyroglobulin (TG) antibodies quantification. RESULTS 21 patients (4.7%, 19 women) showed previously known thyroid dysfunction. Total prevalence of thyroid dysfunction in the studied population was 74.3% (n=332). Euthyroid sick syndrome (ESS) was the type of thyroid dysfunction more frequently found (n=278, 62.2%). After excluding ESS patients, 60 (13.4%) showed thyroid dysfunction: overt hypothyroidism, 14 (3.1%); subclinical hypothyroidism, 25 (5.6%); overt hyperthyroidism, 11 (2.5%), and subclinical hyperthyroidism, 10 patients (2.2%). Thyroid autoimmunity was positive in only 4.0% and 2.3% of patients, for TPOAb and TgAb, respectively. Thyroid dysfunction was positively associated with mortality during hospital stay ( $p<0.001$ ). Serum levels of FT3 were negatively related to death during hospitalisation (OR 0.56 [CI 95%, 0.38-0.81],  $p<0.01$ ). CONCLUSIONS About three quarters of patients admitted in our geriatric unit exhibited thyroid dysfunction. Thyroid dysfunction was associated with elevated age and poor prognosis. The reduction of FT3 values was a powerful predictor for mortality during hospitalisation in elderly patients.

**PB6 398 THE EFFECTS OF CARBOHYDRATE AND FAT DIGESTION ON PLASMA GHRELIN CONCENTRATIONS IN HEALTHY YOUNG ADULTS**

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Introduction The mechanisms by which nutrient digestion suppresses ghrelin are poorly defined. It is not clear whether the presence of nutrients in the small intestine is sufficient to alter ghrelin concentrations or whether digestion and absorption is required. Methods and materials Twenty-four healthy young adults with a mean age of  $23 \pm 0.6$  (SEM) years and BMI of  $22.4 \pm 0.5$  kg/m<sup>2</sup> were examined on three separate days after an overnight fast. Twelve subjects participated in Part A of the study, and the other 12 subjects in Part B. In Part A, subjects received, in random order, one of three study drinks: 300 mL water; 300 mL high-fat drink, given with and without 120 mg orlistat (lipase inhibitor). In Part B, subjects received, in random order, one of three study drinks: 300 mL water; 300 mL sucrose, given with and without 100 mg acarbose. Results In Part A, plasma ghrelin concentrations decreased following ingestion of the high-fat drink ( $P = 0.01$ ), but did not change with the high-fat-orlistat drink or water ( $P > 0.1$ ). In Part B, there was a progressive suppression of plasma ghrelin following the sucrose drink ( $P < 0.005$ ), which was attenuated by acarbose ( $P < 0.01$ ). Sucrose, with and without acarbose, increased plasma insulin ( $P = 0.0001$ ) and glucose ( $P = 0.0001$ ) concentrations, which were both higher after the sucrose drink than sucrose-acarbose drink ( $P < 0.05$ ). Conclusion The suppression of ghrelin by fat and carbohydrate is dependent on digestion.

**PB6 399 DIABETES AND HEALTH OUTCOMES AMONG OLDER TAIWANESE WITH HIP FRACTURE**

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Introduction. This study examined how diabetes mellitus (DM) influenced mortality, service utilization, recovery in mobility and daily activities, and health-related quality of life (HRQoL) for hip-fractured elderly patients during first 12 months after hospitalized for a surgery. Methods. Secondary data analysis on 242 subjects was conducted. Among the overall sample, 61 (25.2%) of them had a diagnosis of DM. Outcomes were measured by the Chinese Barthel Index and Medical Outcomes Study Short Form-36 Taiwan version and analyzed by the generalized estimating equations approach. Results. The hip fractured elderly persons with DM had a significantly higher percentage of mortality (22.6% vs 10.3%,  $p=0.03$ ) during the first year following discharge, and significantly higher percentage of readmission rate (10.0% vs 2.5%,  $p=0.04$ ) during 1st to 3rd month following

discharge than those without DM. After controlling for covariates, hip fractured elderly patients without DM had an overall of 2.16 (CI=1.13-4.12) times greater odds of recovery in walking ability and better trajectories of general health ( $\beta=8.92$ ;  $p=0.02$ ) and physical functioning ( $\beta=7.35$ ;  $p=0.02$ ) than those with DM during the first year after discharge. Conclusion: These results may provide a reference for developing timely assessments and interventions for hip-fractured elders with DM.

**PB6 400 BODY MASS INDEX AND RISK OF NON-CARDIAC POST-OPERATIVE MEDICAL COMPLICATIONS IN ELDERLY HIP FRACTURE PATIENTS: A POPULATION-BASED STUDY**

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Background: Obese patients are thought to be at higher risk of post-operative medical complications. We determined whether body mass index (BMI) is associated with post-operative in-hospital non-cardiac complications following urgent hip fracture repair. Methods: We conducted a population-based study of Olmsted County, Minnesota residents operated for hip fracture in 1988-2002. BMI was categorized as underweight (<18.5kg/m<sup>2</sup>), normal (18.5-24.9kg/m<sup>2</sup>), overweight (25.0-29.9kg/m<sup>2</sup>) and obese ( $\geq$ 30kg/m<sup>2</sup>). Post-operative complication rates were estimated using logistic regression models. Results: There were 184 (15.6%) underweight, 640 (54.2%) normal, 251 (21.3%) overweight, and 105 (8.9%) obese hip fracture cases (mean age, 84 years; 80% female). After adjustment, the risk of developing an inpatient non-cardiac complication for each BMI category, compared to normal BMI, was: underweight (OR 1.33; 95%CI:0.95-1.88;  $p=0.10$ ), overweight (OR 1.01; 95%CI:0.74-1.38;  $p=0.95$ ), and obese (OR 1.28; 95%CI:0.82-1.98;  $p=0.27$ ). Multivariate analysis using stepwise selection demonstrated that an ASA status of III-V vs. I-II (OR 1.84, 95%CI:1.25-2.71;  $p=0.002$ ), a history of chronic obstructive pulmonary disease or asthma (OR 1.58; 95%CI:1.18-2.12;  $p=0.002$ ), male sex (OR 1.49, 95%CI:1.10-2.02;  $p=0.01$ ) and older age (OR 1.05; 95%CI:1.03-1.06;  $p<0.001$ ), significantly contributed to an increased risk of developing a post-operative complication. Conclusions: BMI has no influence on post-operative complications in hip fracture patients. These results attenuate concerns that obese or underweight patients may be at higher risk post-operatively for complications.

**PB6 401 QUALITY OF LIFE AND GLYCEMIC CONTROL OF PEOPLE WITH DIABETES AT MEDICAL OUT PATIENT UNIT, RAMATHIBODI HOSPITAL**

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BACKGROUND: Diabetes is a chronic disease threatening to quality of life. Glycemic control delays or prevents complications and improves quality of life, but many persons with diabetes do not achieve optimal glycemic control. AIM: The purpose of this descriptive study was to assess quality of life and glycemic control in people with diabetes. MATERIAL AND METHODS: Purposive sampling was used to recruit a sample of 497 adults aged 15 years or older. The instruments used in this study included a demographic data record form, physiologic parameters, and the Diabetes Quality of Life Measure (DQOL). RESULTS: Results revealed that the sample consisted of 71.4% of females and 28.6% of males. The mean duration of being diagnosed as diabetes was  $10.20 \pm 7.98$  years. Most of the sample (83%) perceived a high level of their overall quality of life. Approximately, almost half of the sample had higher levels of fasting plasma glucose (FPG) and glycosylated haemoglobin (HbA1C) than the targeted levels. However, 37% and 25% of the sample had the targeted level of FPG and HbA1C, while 27.8% had an acceptable level of HbA1C, and 7.3% had lower than the targeted level of FPG. In addition, the analysis showed that the patients with high quality of life were significantly associated with married status, low educational level, having affordable medical expense, having reimbursement scheme for medical expense, and having type 2 diabetes. Quality of life was associated with older age, lower level of FPG and lower level of HbA1C. CONCLUSIONS: This study demonstrates that about half of this sample could not control their glycemic level well, although most of them perceived good quality of life. Encouragement this population to improve their glycemic control for reducing complications by health care providers is necessary.

**PB6 402 USEFULNESS OF GERIATRIC NUTRITIONAL RISK INDEX IN ASSESSING THE NUTRITIONAL STATE OF LONG-TERM HOSPITALIZED JAPANESE FRAIL ELDERLY**

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Aim: The Geriatric Nutritional Risk Index (GNRI) is a new prognostic index of nutritional status combining serum albumin with ideal body weight. We evaluated GNRI as a

screening tool for malnutrition in the long-term hospitalized Japanese frail elderly. Methods: In total, 255 elderly patients (84 males, 171 females; mean age 82.9 years) were studied in anthropometric parameters, serum albumin concentration, activities of daily living (ADL) score and total score on GNRI. Survival analysis of mean 9.5-month mortality was conducted using Kaplan-Meier curves and multivariate Cox proportional hazards models. Results: According to the original cutoff point of GNRI, 27% of those patients were severe risk (GNRI<82), 46% were moderate risk (GNRI 82 to <92), 18% were low risk (GNRI 92-98) and 9% were no risk(GNRI>98). For 82 patients giving tube feeding, 82% of those were moderate to severe risk. GNRI correlated significantly with anthropometric parameters and ADL score. In anthropometric parameters, higher correlation coefficients were found in calf and mid-arm circumferences rather than the other parameters. All patients of no risk on GNRI survived for the follow-up period. Survival rate reduced in order of low, moderate and severe risk on GNRI. In multivariate analysis, GNRI was a most significant predictor of mortality ( $p<0.0001$ ). Conclusion: GNRI is a useful tool for predicting the risk of mortality and identifying patients suitable for nutritional support in frail elderly.

**PB6 403 THE HIGH RISK OF MALNUTRITION IN THE COMMUNITY DWELLING OLDER PEOPLE IN POLAND AND ITS DETERMINANTS\***

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Introduction The aim of the study was to evaluate prevalence of the high risk of malnutrition in the community-dwelling older people aged 75 years and over in Podlaski region of Poland and its determinants. Methods and materials The quota samples of older people based on gender and age structure (253 from the rural area and 256 from the urban one) took part in the cross-sectional questionnaire study. The survey tool included questions about the nutritional risk (the NSI DETERMINE checklist) and its potential predictors: the socio-demographic data, health status related items and the functional assessment of the respondent with geriatric functional ability scales. A multivariate logistic regression analysis was performed on high risk of malnutrition as outcome. Results 50.8% of the rural residents and 45.6% screened six or above on the checklist. The high nutritional risk was independently associated with functional disability, depression, cognitive impairment, difficulties in chewing, number of drugs taken, hospitalization within the past year and being not married. The final logistic regression model constructed with 7 above mentioned predictors, has got an overall prediction success rate of 75.8%. Conclusion The study has confirmed that nutritional risk is an increasing hazard for older people in Poland, especially for those with psycho- physical disability, chewing problems, polypharmacy, hospitalized within the past year and being not married. \*The paper was prepared within the framework of the Ministry of Science and Higher Education in Poland research project No N404 045 32/1014.

**PB6 404 ABDOMINAL CIRCUMFERENCE AND FUNCTIONAL PERFORMANCE IN ELDERLY WOMEN**

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Introduction: Aging and obesity may independently lead to functional loss, and when associated the level of impairment can be even higher. Abdominal circumference measurement (AC), an indirect predictor of abdominal adiposity, is related to physical inactivity, which is further associated to disability. Aim: To compare physical performance between two groups of elderly women by means of Six Minute Walking Test (6MWT) and Physical Performance Modified Test (PPMT). Methods and Materials : Forty-eight women were divided into groups according to AC (Group 1 AC>88 cm and Group 2 AC<88cm). They performed the 6MWT and PPMT and had their cardiovascular variables heart rate(HR) and blood pressure(BP) monitored. PPMT was composed of nine items, and a standard score was assigned according to the time elapsed to perform activities. Results: Mean age, weight and Body Mass Index (BMI) of groups 1 and 2 were, respectively,  $65.75 \pm 2.96$  and  $65.50 \pm 3.50$  years old;  $79.64 \pm 9.31$  and  $60.49 \pm 8.86$  kg;  $33.70 \pm 3.19$  and  $26.06 \pm 3.78$  kg/m<sup>2</sup>. Group 1 walked shorter distance as compared to Group 1 ( $515.28 \pm 33.07$  versus  $550.10 \pm 34.04$  meters,  $p<0.05$ ), and scored higher with the PPMT ( $27.64 \pm 2.84$  versus  $30.10 \pm 2.67$ ,  $p<0.05$ ). There was no difference between groups for both HR and BP and blood pressure across physical tests. Conclusion: Elderly women with AC above 88cm demonstrated worse performance in functional tests. These results grant further investigation on the association between abdominal fat deposit and functional impairment in aged and overweighted women.

**PB6 405 NUTRITIONAL INTERVENTION SIGNIFICANTLY DECREASED THE PROGRESSION OF DETERIORATION MENTAL FUNCTIONS OF THE PATIENTS WITH ALZHEIMER DISEASE(AD)-RESULTS OF MULTICENTRIC STUDY ON 156 PATIENTS**

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**Introduction** Sufficient data on nutritional state and intervention regarding AD progression have not yet been available. The aims of our study were:a)to describe the relation between the state of mental functions and nutritional status in patients with AD and in patients with dementia of vascular etiology(VD) b)to prove the relation between nutritional support and the improvement or the maintenance of their state of health **Methods** and materials 165 patients from 7 institutions all over the Czech Republic were included in a 3year-study. The nutritional parameters were monitored every two months using the Mini Nutritional Assessment and physical and physiological parameters related to their nutritional state. The mental state of the patients was monitored by Mini Mental State Examination and Clock Drawing Test. The spontaneous food intake of the patients was monitored in the same time intervals. After the 1st year of the study the patients with AD were randomised into two groups- 1.with supplements 600 kcal/day(proteins 24g /day, carbohydrates 74g/day,lipids 23g day,fibres 9 g/day) to their ordinary food. 2.The control group continued consuming ordinary food without nutritional supplements. **Results** The nutritional status was significantly worse in patients with AD than in the patients with VD. The patients with AD who died had been suffering from severe malnutrition during the last three months of their lives. **b)**We discovered a significant decline of the mental functions in AD patients with simultaneous malnutrition. Nutritional support significantly slowed down the deterioration of the AD patients' mental functions. **Conclusions** We observed a slowing down of the deterioration of mental functions in ADpatients who received nutritional support. Therefore we suggest that the nutritional support can have a positive influence on the mental state and can slow down the progress of AD.

**PB6 406 DIETARY PATTERNS ASSOCIATED WITH BONE FRACTURE IN JAPANESE ELDERLY: A POPULATION BASED PROSPECTIVE STUDY**  
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**Introduction:** Several studies have reported that dietary patterns may have a beneficial effect on bone mineral density (BMD). But no study has evaluated the relation between dietary patterns and risk of fracture. The aim of this study was to investigate the relations between dietary patterns and fracture in the elderly. **Methods and materials:** We designed a population based prospective survey of 1178 elderly (aged >70 years) people who are living in Japan. Dietary intake was assessed with a self-administered diet-history questionnaire, from which dietary patterns were created by factor analysis. The frequency of the fracture was investigated based on the insurance claim record since July 2002 until July 2006. **Results:** Three dietary patterns were identified. The daddy pattern, characterized by favor for strong tasted and high intakes of meats and alcohols had a tendency to reduce the risk of fracture ( $p= 0.05$ , hazard ratio (HR)=0.67) if other factors were not adjusted. The tendency could not be shown when sex and age were adjusted. Other two dietary patterns, Japanese style and ready-made cooking style, had no relation to the risk of fracture. After adjusting with gender and age, there was no significant relation between dietary patterns and fracture. **Conclusion:** Dietary patterns may weakly relate to the risk of fracture. But the impact of foods for fracture should not be exaggerated because it is far less than other fundamental factors as gender and age.

**PB6 407 IS THE ROLE OF AGE IMPORTANT FOR OCCURRENCE OF HLA DRB1\*03 AND DRB1\*04 ALLELES IN DIABETICS TYPE 1 AND LADA ?**  
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**Background:** Type 1 Diabetes Mellitus (T1D) with an onset in adulthood and Late Autoimmune Diabetes of Adults (LADA) are connected with autoimmune insulitis and the specific high-risk HLA class II genotype. The aim: Main target of the study was to assess possible role of the old age onset and compare it with diabetics with the onset in the middle age (incl. analyzing HLA-DRB1 genotype). **Patients and Methods:** In the study, we included 103 diabetics with an onset of autoimmune diabetes 35+ y. of the average age  $65.7 \pm 13.8$  y. (range 35 – 93 y.). 41 were assessed as the T1D patients and 61 as the LADA ones. As a control group we used 99 healthy individuals. **Results:** Patients of the T1D subgroup developed diabetes in the age of  $50.8 \pm 15.1$  y. and of the LADA subgroup in the age of  $52.6 \pm 12.8$  y. Its duration in the time of this study was  $10.7 \pm 11.6$  y.; respectively  $5.3 \pm 7.1$  y. Fasting and postprandial C-peptide levels were statistically higher ( $p < 0.01$ ) in the LADA subgroup vs. T1D. Obesity 1st and 2nd grade were present together only in 12.6%. BMI was not statistically significantly different between both groups. We found in our diabetic patients the predisposition alleles HLA-DRB1\*03, HLA-DRB1\*04 and particularly their combination. The occurrence of these HLA alleles is significantly higher in T1D patients in comparison to controls ( $p=0.01$ , OR=4.0). **Conclusions:** In our study, the occurrence of the susceptible HLA-DRB1\*03 and HLA-DRB1\*04 alleles in T1D patients

is higher than in LADA. The presence of these alleles identifies patients of high risk and requirement of insulin therapy.

**PB6 408 FAT MASS PROTECTS HOSPITALIZED ELDERLY PEOPLE AGAINST MORBIDITY AND MORTALITY**

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**Introduction:** It is well established that protein energy malnutrition with low body mass index (BMI) increases the risk of death, but some recent studies indicate that the risk of mortality may decrease in elderly patients with higher body weight. Our hypothesis was that body fat, measured by a reference technique, predicted malnutrition-related risks of mortality and morbidity in hospitalized elderly patients. **Methods:** This prospective study enrolled 125 elderly patients. They were evaluated at hospital admission for their body composition [BMI, fat mass (FM), lean mass (LM), appendicular skeletal muscle mass (ASMM), body cell mass (BCM) indexes, measured by X ray absorptiometry, combined to bioelectrical impedance analysis]. Outcome was assessed 6 months later, using a score taking into account complications (bedsore or infections) and 6-month mortality. **Results:** Fat mass index correlated positively ( $r = 0.19$ ,  $p = 0.038$ ) with outcome score (1: death, 2: complications, 3: no complications), independently of C-reactive protein (CRP) ( $r = 0.18$ ,  $p = 0.042$ ). No significant correlation was observed between outcome score and BMI, LM, ASMM or BCM indexes. **Conclusions:** This study clearly indicates that an established rule (namely that overweight is associated with morbi-mortality) does not apply to hospitalized elderly patients, whose fat mass is associated with a decreased risk of adverse events. This invites new thinking on adequate maintenance of body fat in these patients. Strongly advocating weight reduction to increase the life span of very elderly overweight subjects may not be justified.

**PB6 409 OBJECTIVE AND SELF-REPORTED PHYSICAL CAPACITY MEASURES AFTER AN INTERVENTION IN OBESE OLDER WOMEN.**

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**Background:** Objective and self-reported measures are two strategies to quantify improvement of physical capacity but nothing is known about whether both measurement are resulting of the same magnitude of change. **Objective:** To determine if objective and self-reported measures of physical capacity are two equivalent methods to detect changes following an intervention in obese older women. **Methods:** 36 obese women aged between 55 and 75 years participated to a 3-month study with the aim of improving physical capacity by caloric restriction and/or resistance training. Physical capacity was measured objectively with 10 different tests and self-reported with the SF-36 physical functioning score (SF-36 PF score). Then, the performance to objective tests was computed using quartiles to provide a baseline global physical capacity score. The mean percentage of change at the 10 tests as well as the SF-36 PF score were also calculated after the study. Body composition was measured by Dual energy X-ray absorptiometry. **Results:** The baseline global physical capacity score and the SF-36 PF score were significantly correlated at baseline ( $r = 0.43$ ;  $P < 0.01$ ). Eight out of the 10 objective tests of physical capacity improved after the intervention, while no improvement was observed for the SF-36 PF score. In average, percentage of change in physical capacity was  $4.1 \pm 5.9\%$  for the SF-36 PF score and  $11.1 \pm 2.9\%$  for the objective measures. However, no significant correlation was observed between percentage of changes between the two approaches after the intervention ( $r = 0.32$ ;  $P = 0.07$ ). **Conclusion:** Based on these results, the method used to quantify physical capacity after an intervention may have major implications on the outcomes. The methods used must be carefully analyzed in regard of the objective.

**PB6 410 DIABETES AND FUNCTIONAL LIMITATION IN OLDER TAIWANESE ADULTS.**

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**INTRODUCTION:** Little is known about the impact of diabetes on physical disability among older Taiwanese adults. Aims of this study were to describe the association between diabetes and physical disability in older adults, and to examine risk factors associated with disability among older adults with diabetes. **METHODS AND MATERIALS:** We analyzed data from a cross-sectional, nationally representative sample of 2,021 community-dwelling adults aged 65 or older who participated in the Taiwan Health Interview Survey in 2001.

Diabetes and comorbid conditions (heart disease, hypertension, stroke, hyperlipidemia, pain, depression, and visual impairment) were assessed by questionnaire. Physical disability was assessed by self-reported difficulty in activities of daily living (ADLs), household tasks, walking one kilometer, and climbing one flight of stairs. RESULTS: Of the study population, 48.6% were female. Mean age of the subjects was 73.4 years. Prevalence of diabetes among subjects was 16.8%. Basic demographics were not different between diabetic and non-diabetic elders. Prevalence of physical disability was higher in diabetics than non-diabetics (ADLs difficulty, 26% vs. 13%; housework difficulty, 35% vs. 19%; mobility difficulty, 66% vs. 48%). Diabetes was associated with a 2.5- fold increase in risk of physical disability. After adjustment for basic demographics and comorbidities, diabetes was associated with a 74-86% increased risk of physical disability for specific tasks. Among older adults with diabetes, multivariate analysis revealed that female gender, lower educational level, depression, chronic pain, visual impairment, and regular insulin use were independently associated with physical disability. CONCLUSION: Diabetes is associated with excessive burden of functional limitation among older adults in Taiwan. Targeted intervention to decrease risk of disability in older diabetic adults are warranted.

**PB6 411 OBSERVATIONAL STUDY OF THE EFFECT OF PROBIOTICS (LACTOBACILLUS CASEI SHIROTA) IN THE TREATMENT OF CONSTIPATION IN THE ELDERLY**

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Introduction Approximately 75% of elderly hospitalized and nursing home residents require laxatives for bowel regulation, frequently requiring two or more laxatives. Multiple prescribing of laxatives is an added cost to the healthcare system. Lactobacillus casei Shirota(Yakult)LCS is a lactic acid probiotic bacteria, has been shown to improve frequency and consistency of stools in the general population. Our aim was to evaluate the severity of constipation, bowel movements, frequency and stool consistency(using Bristol stool from scale) after the ingestion of two bottles of Yakult Light per day. Methods This was an observation study of 50 patients in long stay wards in St Mary's hospital. The patients did not consume any probiotics for 2 weeks before and during, the course of the study. All patients were assigned to drink two bottles of Yakult Light a day. All laxatives that the patients were currently taking were taken into account before start of the trial. All patients continued to take their laxatives during the course of the trial. Bowel movements, frequency and consistency were taken into account 2 weeks before the commencement of the trial and throughout the trial. If bowel movements, frequency or stool consistency improved, patients had their laxatives stopped as appropriate. All patients were kept well hydrated to remove dehydration as a cause for constipation. Results There was a 61% reduction ( $p<0.05$ ) in the use of laxatives, with an increase in stool frequency however there was no difference in consistency found. Total cost of laxatives given before commencement of the probiotic was 1189.61 euros, and the total cost after commencement of probiotic was 239.83 euros. Total cost of probiotic consumed 1288.77 euros Conclusion Thus LCS has been shown to reduce the need for laxatives and improving bowel frequency in the elderly.

**PB6 412 PROTEIN-ENERGY MALNUTRITION AMONG THE ELDERLY: IMPLICATIONS FOR NURSING PRACTICE**

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Introduction: Protein-energy malnutrition, a condition that affects many elderly individuals, consists of variety of alterations including decreased intake, increased metabolic rate, increased energy expenditure, and excess nutrient loss. Protein-energy malnutrition occurs when too few calories and protein are being supplied to the body because of malnutrition, and from acute conditions such as infection, trauma, or organ failure, which increase the protein and energy demands of the body. Methods and Materials: A comprehensive review of the literature was conducted including scholarly publications dating from 1993-2008. Results: Multiple instruments to identify protein-energy malnutrition were identified. These were categorized into several groups: dietary assessment methods, biochemical laboratory data assessment methods, anthropometric methods, and functional methods. It was concluded that prealbumin-level measurement provided a sensitive and cost-effective method of assessing for protein-energy malnutrition. However, some conditions including alcoholism and zinc-deficiency may falsely lower prealbumin levels. In addition, laboratory measurement of prealbumin may not be available in all settings. Conclusion: The nurse is uniquely qualified to identify elders at risk and to provide education to elders with the goal of decreasing or eliminating protein-energy malnutrition in this population. This presentation will explore the phenomenon of protein-energy malnutrition and how nurses working with the elderly can assess and intervene in this condition to prevent unnecessary mortality and morbidity.

**PB6 413 NUTRITIONAL STATUS AND NUTRITIONAL CARE FACTORS OF ELDERLY IN DIFFERENT CARE SETTINGS**

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Introduction: Frailty and disability are known to be risk factors for malnutrition. Our aim was to compare the nutritional status of large samples of residents in all long-term care hospitals, nursing homes and service housing as well as independently living elderly individuals in the metropolitan region of Finland. Methods and materials The cross-sectional study assessed nutritional status (The Mini Nutritional Assessment, MNA) and associated health-related factors and nutritional care (a questionnaire to ward nurses) of all residents aged 65+ years. Of the institutional residents, 73 % (N=1444) in long-term care hospitals, 84% (N=2036) in nursing homes and 67% (N=1475) in service housing, and altogether 400 home-dwelling older people participated. Results The nutritional status deteriorated linearly according to dependence status. Largest proportion of elderly people with malnutrition was found in long-term care hospitals (57%); followed by nursing homes (29%), service housing (13%) and independently living individuals (8%). Mainly patient-related internal factors predicted malnutrition like impaired functioning, comorbidities (dementia, hip fracture, Parkinson's disease, stroke), and mouth and teeth problems. In the institutional settings several factors related to nutritional care like the regular weight monitoring, the small number of meals offered and eating very little during the meals were associated with nutritional status of the residents. Conclusion Although patient-related internal factors explain most of the poor nutritional status of aged individuals in different care settings, the quality of nutritional care has also an important impact.

**PB6 414 ASSOCIATION BETWEEN METABOLIC SYNDROME AND OBESITY IN OLDER ADULTS**

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Introduction: Obesity is a risk factor for Metabolic Syndrome (MS) in young adults. Obesity seems to be also a risk for MS, morbidity, mortality and frailty in older people. Some studies suggest that changes in the distribution of body fat in older adults may condition an absence of association between obesity and morbidity evaluated on the basis of anthropometric parameters. Objective: To determine the frequency of MS and the presence of association between obesity and MS in older adults in the outpatient of the Naval Geriatric Center of Peru. Methodology: Cross-sectional and prospective study. We evaluated MS based on ATP III criteria and obesity based on body mass index (BMI), abdominal circumference index (AC) and waist hip ratio (WHR). Results: We studied 384 patients with a mean age of  $73.6\% \pm 8.3$  years; 46.1% were women. We found 58.3% patients with MS, it was more frequent in women (67.8% vs. 50%,  $p=0.01$ ). There were no differences according to age group. Based on BMI we found 46.7% and 20.4% of overweight and obesity, having association with MS (Normal weight: 42.1%, Overweight: 61.5%, Obese 76.9%,  $p<0.0001$ ). There was 46.5% of central obesity in base of AC and 41% in base of WHR. Both were associated with SM [AC (42.2% vs. 76.4%) and WHR (50.4% vs. 69.4%),  $p <0.0001$ ]. Conclusions: 58.3% of the older adults have MS. Overweight, obesity and central obesity assessed in base of anthropometric parameters are associated with the presence of MS in older adults. Recommendations: The nutritional assessment and management should be considered essential in the prevention and treatment of MS in older adults.

**PB6 415 TETRAPEPTIDE PANKRAGEN PRODUCES ADDITIONAL SUGAR-LOWERING EFFECT (SLE) IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS (DM2)**

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As shown by recent data tetrapeptide Pankragen leads to a significant SLE in rats with alloxan DM model. Lethality among animals decreased almost 2-fold compared with control. Purpose: Elucidation if Pankragen produces an additional SLE in elderly DM2 patients receiving glibenclamide (GL). Subjects: Thirty DM2 patients, aged 60 to 74 years, with HbA1c level between 7.5 and 9 % on stable doses of GL during 3 months before inclusion. After randomization, 16 patients during 3 weeks were injected intramuscularly 10 µg of Pankragen daily, as well as took orally 100µg of Pankragen and 10-20 mg of GL. Upon Pankragen cessation, the patients continued receiving the same GL dose during another 2 weeks; whereas the remaining 14 patients received stable GL doses (10-20 mg) daily during 5 weeks. Blood plasma insulin (BPI), glycolized hemoglobin (HbA1c), blood plasma glucose (BPG) at fasting and 2 hours after oral glucose tolerance test (OGTT) were used to assess treatment efficacy. Results: In elderly DM2 patients Pankragen against stable GL doses led to a significant decrease of fasting BPG by  $1.1 \pm 0.4$  mmol/l ( $p<0.05$ ) and 2h following the OGTT test by  $(1.2 \pm 0.3)$  mmol/l ( $p<0.01$ ). Additional SLE was kept 2 weeks after Pankragen cessation in 60% of patients who continued receiving GL in previous doses. In the DM2 patients receiving only GL, the BPG dropped insignificantly by  $0.3 \pm 0.2$  mmol/l at fasting and by  $0.2 \pm 0.2$  mmol/l after 2h following the OGTT test.

Pankragen produced an additional SLE in patients with high initial BPI level. No adverse events or undesirable changes in the laboratory data caused by Pankragen have been found. Conclusions: Pankragen is indicated to elderly DM2 patients with inappropriate efficacy of therapeutic GL doses.

**PB6 416 CLINICAL ASPECTS AND TREATMENT OF XEROSTOMIA**

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**Introduction:** Xerostomia is associated with increased incidence of dental caries and extensive dental and periodontal decay, infections of the tissues of the mouth like oral candidiasis, ulceration or soreness of the mouth, difficulty in speaking, eating and swallowing, an altered sense of taste, and difficulty wearing dentures. **Methods and Material:** Between 2005 and 2008, 106 patients (age range average 56.46 y) came to our department with dry mouth. We applied a protocol which key information to gather includes age, gender, number of drugs usually taken, number of teeth, state of oral mucosa and hygiene and recount of saliva and eye's tear. 42 patients were undergo minor salivary glands biopsy because their recounts were indicative of oral/ocular dryness. **Results and conclusions:** Decrease of salivary production or xerostomia is frequently in the elderly population (nearly of 30% of patients >65 years-old). The most frequently cause of xerostomia in elderly patients was side-effects of systemic medications. Other causes include high doses of radiation and certain diseases such as Sjögren's syndrome. Treatment may include ongoing dental care, possible elimination of drugs having anticholinergic effects, the use of salivary stimulant and salivary substitutes. Key words: Xerostomia. Sjögren's Syndrome.

**PB6 417 COMPARISON OF TWO MALNUTRITION SCREENING ASSESSMENTS IN RELATION TO BIOCHEMICAL PARAMETERS OF PROTEIN MALNUTRITION IN GERIATRIC HOSPITALIZED PATIENTS**

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**Introduction:** Malnutrition is a frequent condition in the elderly associated with higher morbidity, mortality, and lower quality of life. Unfortunately, the assessment of the degree of malnutrition is challenging since general accepted diagnostic criteria are not available. The Mini Nutritional Assessment (MNA) and the Nutritional Risk Score (NRS) are the most established screening tools in the geriatric literature. Evaluation of biochemical markers is an additional method to assess especially the degree of protein malnutrition. The aim of our study was to compare both assessment scores with respect to the serum markers albumin, prealbumin, and retinol-binding protein. **Methods:** 118 consecutive patients of a geriatric ward were investigated with assessments of the MNA and NRS, and measurement of anthropometric (BMI, arm and calf circumference) and biochemical (serum albumin, prealbumin, retinol-binding protein, C-reactive protein, and blood lymphocytes) parameters. **Results:** The median age was 84 years (IQR 79-89). The median BMI was 23.3 kg/m<sup>2</sup> (IQR 20-27.4). According to the MNA 24 patients were malnourished, 50 at risk for malnutrition, 31 had a normal nutritional status. The NRS showed 38 patients with moderate to severe risk for malnutrition, 47 patients with low risk and 29 patients without risk. Laboratory analysis revealed for albumin a median of 32 g/l (IQR 28-33), for prealbumin 143 mg/l (IQR 104-177), for retinol-binding protein 37.5 mg/l (IQR 32-47). Albumin, prealbumin, and retinol-binding protein gradually declined with increasing malnutrition as indicated by the NRS (0=0.03, 0.05, 0.02, resp.), the MNA in its 3 outcomes did not show any differences in the above mentioned biochemical parameters. **Conclusion:** The NRS better reflected the degree of protein malnutrition than the MNA. It seems therefore to be the preferred screening in hospitalized geriatric patients.

**PB6 418 BIOLOGICAL SCREENING OF VITAMIN D (25 OH-D3) IN THE ELDERLY PATIENT**

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The aim of this prospective longitudinal study (during 6 months) is to show the interest of biological screening of serum Vitamin D (25 OH-D3) in elderly patient aged 70 years and over (average of age = 83.3 years), admitted in acute geriatric ward. In this population the deficiency in vitamin D is very frequent and well known especially by physicians and other Scientists who deals with osteoporosis. In our daily clinical experience the serum vitamin D in this population is rarely normal, even in patients without clinical manifestations of osteoporosis and with a normal level of calcium, phosphorus and alkaline phosphatase. The biological analysis is done immediately in all patients who are admitted whatever the pathology, the sexe and other biological data. Out of 149 samples of serum Vitamin D (25

OH-D3), 120 (80.5%) showed a vitamin D deficiency (less than 30 ng/l) and among them 79 (50.3%) showed a very important vitamin D deficiency (less than 10 ng/l). The analysis of demographic and pathologic data of this population will be done. According to these findings we think that it is wise to screen these frail patients for vitamin D deficiency. The medical literature will be reviewed to compare these values with vitamin D values of the healthy elderly people and we will try to suggest a supplementation with Vitamin D according to the importance of the deficiency.

**PB6 419 PULSE PRESSURE PREDICTS MORTALITY IN ELDERLY PATIENTS**

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**Introduction:** Pulse pressure (PP) values increase with age. A high PP is a strong risk factor for cardiovascular morbidity and mortality; however, its impact on mortality in elderly patients has not been established. The aim of this retrospective clinical study has been to evaluate the effect of PP on mortality among very elderly patients. **Methods and materials:** The medical records of 420 inpatients (187 males, mean age of 81.4±7 years) hospitalized in an acute geriatric ward between 1999 and 2000 were reviewed. Blood pressure values were measured three times during a day and the average was calculated. Patients were followed-up until August 31, 2004 (mean follow up: 3.46 ± 1.87). Mortality data were extracted from death certificates. Using Relative Operating Characteristic (ROC) curves we identified PP of 62.5 mm Hg as a cut-off point. Subjects were categorized as having low PP ( $\leq$ 62.5 mm Hg; N =116), or high PP ( $>$  62.5 mmHg; N =304). **Main Results:** Mortality rate was greater in patients with high PP than in those with low PP. During the follow-up 201 patients died, 155 patients (51%) in the high PP group and 46 patients (39.7%) in the low PP group ( $p = 0.038$ ). Pulse pressure was associated with all-cause mortality even after controlling for gender, age, diabetes mellitus, atrial fibrillation and heart rate. **Conclusion:** High pulse pressure is an independent predictor of mortality among elderly hospitalized patients.

**PB6 420 METABOLIC DISORDERS IN PATIENTS OF GERIATRIC DEPARTMENT.**

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We studied 201 inpatients of our geriatric department. The aim of our interest was the presentation of an metabolic disorder, the treatment of it and conditions with influence on the metabolic disorder, resp. by the metabolic disorder caused conditions. Diabetes mellitus was presented in 27.4% of patients. Only 20% of diabetics were without antidiabetic medication. The most frequent antidiabetic treatment were monotherapy by sulfonylurea derivates (27% of diabetics) and insulin (21.3%) 20.9% of patients had lipid disorders, and 14.4 % had thyropathy. Hyperuricaemia was presented at 12.9% of patients. 8.5 % of the patients were obese and 14.4% malnourished. 12.9% patients had dehydration and 5% had hypokalaemia. We can conclude that metabolic disorders are often present in our patients, they are relatively well treated. Conditions in relationship to metabolic disorders are often present in our elderly patients to, with an influence to the treatment and the prognosis.

**PB6 421 ASSOCIATION OF LOW SERUM ALBUMIN AND HIGH CRP WITH COGNITIVE IMPAIRMENT IN ELDERLY PATIENTS WITH DIABETES MELLITUS**

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**Introduction:** Diabetes mellitus is associated with high prevalence or incidence of cognitive impairment. Although aging, stroke, hyperglycemia, and advanced glycation end products(AGE) are thought to be responsible for the cognitive impairment, the exact mechanism remains unknown. The influences of nutrition and inflammation on cognitive function have been poorly understood. Thus, we examined whether malnutrition and inflammation are associated with cognitive impairment in elderly people with diabetes. **Methods:** A total of 522 patients (206 men, 316 women; mean age: 75 years) who admitted for the assessment of diabetic complications or glycemic control participated in this study. Cognitive impairment was defined as the MMSE score  $<24$ . As nutritional indices, we assessed serum albumin and Geriatric Nutritional Risk Index (GNRI)(Bouillon et al). We also evaluated serum CRP and IL-6 levels as inflammatory markers. **Results:** 1) About 20 % of diabetic patients had the cognitive impairment (MMSE<24). 2) Those with cognitive impairment had older age, higher prevalence of women or insulin treatment, higher HbA1c and lower HDL-C levels than those without. 3) The cognitive impairment was associated with the presence of retinopathy, stroke, PVD, and low eGFR. 4) Those with cognitive impairment had significantly lower levels of serum albumin, GNRI, and BMI than those without. 5) Cognitive impairment was associated with CRP but not IL-6 levels. 6) When we performed multiple logistic regression analysis using 8 variables (age, sex, HbA1c, serum albumin, CRP, systolic blood pressure, eGFR, history of stroke), low serum albumin ( $p<0.05$ ), high CRP ( $p<0.05$ ), age ( $p<0.05$ ), sex ( $p<0.05$ ), history of stroke ( $p<0.001$ ), and HbA1c ( $p<0.001$ ) were independently associated with cognitive impairment. **Conclusion:**

Low serum albumin and high CRP levels are independently associated with cognitive impairment with elderly patients with diabetes mellitus.

**PB6 423 THE EFFECT OF A NOVEL NUTRITIONAL INTERVENTION ON RESIDENTS WITH PROTEIN ENERGY MALNUTRITION IN CARE AND ATTENTION HOMES**

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Introduction: Protein-energy malnutrition (PEM) is common in the elderly. There is little research on the impact of nutritional intervention on clinical parameters in residential care homes locally. Objectives: To examine the effectiveness of a novel nutritional intervention program for residents with PEM. Methodology: Residents with PEM living in three Care & Attention Homes were recruited. PEM was defined as having a body mass index (BMI) of below 18.5kg/m<sup>2</sup> and serum albumin level less than 35g/L. Subjects were randomized to receive either normal meals (control) or nutritional supplements on top of normal meals (intervention) for six months. The supplements comprised of 3-4 scoops of Beneprotein (an odourless protein powder sprinkled into normal meals) and 3-4 tablespoons of vegetable oil. Outcomes measures included anthropometric measures, hospitalization rate, prevalence of infections and pressure sores, activities of daily living (Barthel Index), mobility (elderly mobility score), and quality of life (WONCA). Results: Prevalence of PEM was 14.2%. There were 18 subjects in each group. After 6 months, BMI, mid arm circumference and tricep skin fold of intervention group significantly increased (38.5kg to 41.9kg, p<0.001; 16.9kg/m<sup>2</sup> to 18.4kg/m<sup>2</sup>, p<0.001; 19.7cm to 21.2cm, p<0.001; 0.65 to 0.83, p=0.004 respectively). Both groups had a higher WONCA scores after 6 months (18.3 to 21.5 in control group, p=0.001; 17.3 to 20.9 in intervention group, p<0.001), however, the increase was higher in the intervention group. There was no significant change in BI, EMS, hospitalization rate, mortality, prevalence of infection and pressure sores in both groups. Conclusions: This novel simple nutritional intervention program was effective in improving anthropometric measurements and quality of life of elderly residents with PEM.

**PB6 424 EFFECT OF VITAMIN C AND E CONSUMPTION ON INSULIN SENSITIVITY IN OLDER ADULTS ON A HIGH FAT DIET**

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Introduction: A recent study shows that antioxidants (AO) improve insulin sensitivity in rats fed a high fat diet (HFD). Objectives: To verify if AO improve insulin sensitivity in older adults on a high fat diet. Methodology: Data come from of a previous clinical trial pertaining to exercise and AO on muscle mass and insulin sensitivity conducted in 80 elderly individuals. Insulin sensitivity was measured by an IVGTT (intravenous glucose tolerance test). Daily energy intake (DEI) was estimated with the use of a 3-d dietary record. For the purpose of this study, 20 subjects were pooled in 2 groups, in function of AO or placebo intake. Dietary lipid intake was >35% of DEI. Results: There is an improvement of insulin sensitivity in AO group (+77%) while no such improvement could be observed in the placebo group (+0.03). Unfortunately, due to the small sample size, this difference did not reach statistical significance (p=0.271). Conclusion: Our results suggest that a combination of vitamin C and E could have the potential to enhance insulin sensitivity in healthy older adults consuming a high diet. However, our results could not reach statistical significance and thus have to be confirmed with a largest sample size. Financial support : Canadian diabète association

**PB6 425 DEVELOPMENT OF PREDICTIVE EQUATIONS BASED ON ANTHROPOMETRIC DATA TO ESTIMATE WEIGHT IN ELDERLY LIVING IN RIO DE JANEIRO.**

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Introduction: Body weight (BW) is an important measure both to assess the nutritional status and prescription of nutrients and drugs. One of the solutions to estimate the weight of bedridden patients is the application of predictive equations. The aim of the study was to develop predictive equations based on anthropometric data to estimate BW in elderly people residing in Rio de Janeiro - Brazil. Methods and materials: We studied 89 subjects, both sexes, aged 74.0 ± 9.2 years. Measurements include weight, height, leg length, arm length, waist and hip circumferences, calf and arm circumferences. Body weight was measured in kilograms, by balance of precision. The measures were taken as the description of Lohman et al. (1988). The prediction equations were fitted by multiple regression analysis. Results: According to the nutrition classification by body mass index (BMI), 39% of normal status, 40% of overweight and 16% of obesity. The mean BMI was 25.7 kg/m<sup>2</sup> ± 4.6. After analysis of the effect of each variable on BW two equations were prepared. Equation proposal I consider the variables: sex, arm, waist, hip and calf circumferences. The equation proposed II eliminates the waist and hip circumferences because of the difficulty of making such measures in bedridden patients. Both models had

similar values to the real weight. The equation proposed I explain 93% of the weight variability and equation proposed II explained only 84%. Conclusion: Prediction equations are presented using six or four body measurements to allow the selection of an equation based upon those measurements that are possible to collect. The equation Proposal II was easier and faster to be applied to obtain estimated weight of bedridden elderly patients.

**PB6 426 MALNUTRITION AND NUTRITIONAL CARE OF PATIENTS WITH HIP FRACTURES**

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Intoduction: Early recognition of the nutritional deficit and adequate and controlled nutritional therapy are important in the early application of medical nutritional intervention, especially in elderly patients. The aim of the study is to ascertain malnutrition and to demonstrate the effect of targeted nutritional therapeutic measures. Methods: From October 2007 to March 2008, 46 female patients over 65 years old (age 83±7 years) with hip fractures were recruited. The patients were randomly divided into a control group (21 patients) and an interventional group (25 patients). The nutritional status of both groups was determined preoperatively: Weight, height, Bioelectrical Impedance Analysis (BIA), Short Nutritional Assessment Questionnaire (SNAQ), serum albumin and total serum protein. The interventional group received a defined nutritional therapeutic regime: Compilation of the consumed nutrients by means of nutritional protocols, protein enriched food, oral and/or parenteral supplementation, weekly weight controls, BIA and blood chemistry. In the control group no defined nutritional therapeutic measures were performed. At discharge and 30 days thereafter both groups were weighed, BIA and blood chemistry were checked. Results: The SNAQ-Score showed malnutrition in both groups in 70%. From admission to discharge serum albumin dropped in the control group by 13.7% and total protein by 8.6%. In the interventional group serum albumin dropped by 7.8% and total protein by 3.6%. At discharge a significant drop in total protein was seen in the control group compared to the interventional group (p=0.028). The body's cellular component dropped in the control group from admission to discharge by 8.6% and in the interventional group by 0.5%. Conclusions: The compilation of nutritional parameters and specific nutritional intervention lead to an improvement in anthropometric data and protein synthesis parameters in elderly female patients with hip fractures.

**PB6 427 NUTRIENT DIMENSIONS IN 70-YEAR-OLD COHORTS BETWEEN 1971 AND 2000**

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The diet among elderly in Sweden change over time and some of that change may influence the intake of nutrients. As the intakes of many nutrients are inter-correlated nutrient dimensions may be used to facilitate analyses. The aim of the present study was to analyse the change of nutrient intake among 70-year-olds between 1971 and 2000 while adjusting for background variables. Results from four different dietary examinations of 70-year-olds performed 1971-72, 1981-82, 1992-93 and 2000-01 within the gerontological and geriatric studies of elderly in Göteborg were used. A total of 612 women and 532 men participated and were interviewed with the dietary history method. They also underwent a medical and dental examination. The intake of nutrients were analysed based on the food tables of the Swedish National Food Administration from year 2000. Energy, macronutrients and most micronutrients were included in the analyses. A factor analyses was used to analyse nutrient dimensions and the dimensions were later on analyses within a graphical interaction model (GIM) including background variables; gender, cohort, height, education, smoking, dental status, BMI and subjective health. Eight different nutrient dimensions were found and they included 87% of the variation in intake of the nutrients. The dimensions were firstly related to the intake of starch, monosaccharides, lactose, sucrose, cholesterol, retinol/ vitamin B12, PUFA and SFA. The GIM revealed dependences between the variables included. Differences over time were related to 7 nutrient dimensions, followed by gender and dental status which both were related to 4 dimensions. The nutrient intake was well described with the eight dimensions and included in the GIM they revealed important shifts over time and dependences on e.g. gender and dental status.

**PB6 428 ENERGY REQUIREMENT IN ACUTE HOSPITALIZED ELDERLY PEOPLE: RESULTS OF A DOUBLE LABELLED WATER STUDY**

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Introduction: Elderly patients hospitalized for acute diseases are prone to malnutrition resulting from low energy intake and catabolism. Determining energy requirement is of utmost importance in this population. However precise energy expenditure remain unknown in these patients. Our objective was to estimate precisely total energy expenditure (TEE) and

energy intake (EI) in elderly patients hospitalized for an acute illness. Methods and materials: 12 patients have been studied along a period of two weeks. Measurement of the 24 hours TEE has been realised by the gold standard double labelled water technique. Resting energy expenditure (REE) was measured by indirect calorimetry, and body composition by isotopic dilution. Energy intake was determined during a three days period at day 1 and day 12. Blood samples for inflammatory proteins, cytokines and cortisol were also performed to ensure cachexia. Results: The ratio TEE/REE was 1.27. Energy intake was slightly higher than REE by a factor of 1.065, but was clearly lower than TEE by a factor of 0.84. A mean loss of 0.85 kg of body weight was observed between day 1 and 14. Conclusion: This study provide for the first time evidence that energy intake is not sufficient to cover energy requirement in acute hospitalized elderly people. The second essential learning is that energy intake must be above 30 kcal/kg/day to cover energy expenditure in cachexia condition for all patients.

**PB6 429 LIVE MODIFY HABITS AND PHYSICAL ACTIVITY: PROMOTERS OF LONGEVITY IN THE ELDERLY**

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Introduction: The multiple diseases and obesity increases the circulatory mortality and some cancers are among the diseases that most damage to self-esteem and quality of life of the elderly, causing no family impact, however, cause death or lead to hospitalization (Lotufo, 2000). Objective: To identify the causes of morbidity and mortality more frequent and avoidable, which can be reduced by means of primary and secondary prevention, relating them to changes in living habits and physical activities, such as delayed. Methods and materials: This bibliographic review study an increased physical activity of a population contributes significantly to public health, impacting on reducing the costs of treatments, including hospitals. The reduction in deaths from cerebral-vascular disease through the control of hypertension (primary prevention) and practice of physical activities associated with a healthy diet, has given greater extension of the age to die. Already the avoidable by secondary prevention (breast cancer, uterine cervix and uterus) had the lowest mortality rates (Camarano; Cols, 2004). Fries (2002) emphasizes that healthy living habits (especially the regular practice of vigorous exercise), they could postpone the onset of diseases and disabilities, postponing them for eight years, on average, when compared to similar groups, though consisting of sedentary, obese. The style of life is the main risk factor for death from cardiovascular causes or cancer, responsible for around 60% and 34% respectively of the deaths occurred in 1996 (WHO). Burini (2005) says that lifestyle, diet and physical activity are the main determinants of obesity and this, the main risk factor for chronic degenerative diseases. Conclusion: Individuals physically able and / or trained tend to have lower incidence of most chronic degenerative diseases and resistance exercises that result in significant psychosocial disorders. If the avoidable causes were actually eliminated, would significantly increase the quality and life expectancy.

**PB6 430 TEST OF NUTRITIONAL CARE METHOD ABOUT RENUTRITION OF ELDERLY HOSPITALISED PATIENTS.**

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Introduction: Up to 60% of people in institutions, 50% at hospital and 3 to 10% at home suffered of malnutrition, consequently of lean body mass loss. Methods and materials: Objective is to determine if specific nutritional action improved nutritional status and has an impact compared to the usual care in acute care geriatric unit. Patients, aged of 75 years or more, were included during 4 months. A stimulated group with nutritional action ( $n=17$ ) and a control group ( $n=16$ ) have been compared. Nutritional action consisted to stimulate regular and at every meal the test group in order to initiate food intake or increase the calories ingested by emphasizing the importance of protein intakes. The control group received no specific stimulation other than usually implemented in the unit when malnutrition was detected. Measurements: Nutritional, cognitive, autonomy and depressive status; Albumin, transthyretin, CRP levels; Anthropometric measurements; Measures of food intake by weighing. Results: No significant difference on food intake between the groups was noted but the evolution in stimulated group was twice bigger than in the control group. There was a positive evolution for all blood criteria with significant difference for the stimulated group (albumin  $p<0.05$ , transthyretin  $p<0.001$ , CRP  $p<0.01$ ) while control just showed a difference on transthyretin ( $p<0.05$ ). Moreover, the evolution of transthyretin on stimulated group was 50 times larger than in control group. To sum up, usual care in geriatric unit had an effect on transthyretin only for 62.5%; of patients. Specific nutritional action shows an effect on 94%; of patients. Conclusion: Nutritional stimulation should be coupled with hospital conventional care to improve quickly the health status of patients when they arrive at hospital.

**PB6 431 NUTRITIONAL STATUS AND PSYCHOLOGICAL WELL-BEING AMONG ELDERLY SERVICE HOUSING RESIDENTS**

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Studies investigating the relationship of older people's nutritional status and the quality of life (QOL) or psychological well-being (PWB) are scarce. The aim of this study was to examine the relationship between the nutritional status of 65+ service housing residents and their PWB. This cross-sectional study assessed nutrition, PWB and nutritional care of all service housing residents in the cities of Helsinki and Espoo in Finland. The MNA (Mini Nutritional Assessment) and a personal interview were used to assess the residents. Nutritional care was assessed by a questionnaire to the managers of the service houses. PWB was assessed with 6 questions. The score for PWB was formed by dividing the sum of questions (min 0, max 6) by the number of questions answered (score range 0-1). Of all the residents, 67% ( $n=1475$ ) participated (mean age 83 years, 78% females). Of them, 22% were well-nourished, 13% malnourished and 65% were at risk for malnutrition. PWB was good in 41% (score >0.80) and poor in 12% (score <0.40) of the residents. Good nutritional status, good subjective health and having meals in a common dining room, larger proportion eaten of the offered food and regular weight control were associated with good PWB. On the contrary, cognition, functional status or Charlson comorbidity index were not associated with PWB. In logistic regression analysis when age, gender, subjective health and nutritional care were used as covariates malnutrition according to the MNA was an independent predictor of low PWB (OR 0.73,  $p=0.003$ , 95% CI 0.59-0.90). Nutritional status is an important dimension of service housing residents' PWB and QOL. Professionals should pay attention to nutritional care in order to ensure PWB of aged resident.

**PB6 432 ASSOCIATION OF SERUM COPPER AND CLINICAL OUTCOMES AMONG SENIOR NURSING HOME RESIDENTS IN TAIWAN**

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Background Nutritional status plays an important role in predicting clinical outcomes among nursing home residents. Body weight trend and protein-energy malnutrition are two well documented parameters to fulfill this purpose. The main purpose is to evaluate the role of serum zinc and copper in predicting clinical outcomes among nursing home residents in Taiwan. Methods In 2002, residents of two private nursing homes were invited. Serial anthropometric and laboratory measurements were performed in 3-month interval. Clinical outcomes included mortality, hospitalizations, and emergency department visits. Results In total, 66 nursing home residents were enrolled (mean age= 77.2 ± 8.8 years, 68.2% males, 71.2% Barthel index<20). Paired t-test showed body mass index, total lymphocyte count and hemoglobin remained similar, but serum levels of albumin (3.8 ± 0.3 vs. 3.7 ± 0.4 mg/dl,  $P<0.001$ ) and total cholesterol (183.9 ± 37.4 vs. 176.7 ± 37.4 mg/dl,  $P=0.018$ ) were significantly decreased where zinc (84.5 ± 15.7 vs. 106.0 ± 26.7 μmol/l,  $P<0.001$ ) and copper (94.5 ± 19.2 vs. 111.2 ± 20.5 μg/dl,  $P<0.001$ ) were significantly increased. Logistic regression showed serum copper level (OR=1.07, 95% CI: 1.01-1.15,  $P=0.035$ ) and body weight loss (OR=1.20, 95% CI: 1.03-1.39,  $P=0.017$ ) were significant independent risk factors for hospitalization in 12-month follow-up. Conclusions With longer nursing home living, both serum zinc and copper were significantly increased along with mildly deteriorated protein-energy nutritional status. An incident testing of serum copper may predict a higher chance of hospitalizations in the following 12 months. Further study is needed to confirm the prognostic role of micronutrients in long-term care settings.

**PB6 433 HYPERBARIC OXYGEN THERAPY VS. SHARP DEBRIDEMENT ON PATIENT'S WITH DIABETIC FOOT ULCERS**

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Introduction: Diabetes is a growing problem in the current modern society. Although both genetics and environmental factors such as advanced age, obesity and lack of exercise appear to play roles. Patients with diabetes develop impaired sensation which leads to trauma and foot ulcerations. Pt with diabetes exhibit prolonged wound healing which often may require lower extremity amputations. The goal in treatment patients with diabetic foot ulcers is to maximize the rate of wound healing and reduce the chance of infections. "Hyperbaric Oxygen therapy has been shown to increase transcutaneous oxygen in diabetic patient's with chronic ischemic ulcers" (Assal, 2007) and may be advantageous therapy during wound healing. Purpose: The purpose of this study is to review the effectiveness of hyperbaric oxygen therapy (HBO) on patients with diabetic foot ulcers and then compare these results with the effectiveness of sharp wound debridement. Method: Ten scholarly journal articles were collected that assessed hyperbaric oxygen therapy and ten that assessed sharp wound debridement. Five articles that assessed both hyperbaric oxygen therapy and sharp debridement together were also collected. All articles were then analyzed for the effectiveness of each treatment on patients with diabetic foot ulcers. Results: "The healing rates of wounds with hyperbaric oxygen therapy were found to be 2 to 4 times better in the treated groups when compared to the control group" (Assal, 2007). Some studies show that hyperbaric oxygen could be beneficial in Wagner grade 3 or 4

ischemic foot ulcers. Conclusion: Hyperbaric oxygen therapy is more beneficial in patients with diabetic foot ulcers and decreases the changes of lower extremity infections and possible amputation.

**PB6 434 EVALUATING THE VALIDITY OF A NUTRITIONAL SCREENING TOOL IN HOSPITALIZED OLDER ADULTS**

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**Background:** Nutrition screening is a critical antecedent step of the nutrition care process. The Tan Tock Seng Hospital Nutrition Screening Tool (TTSH NST) is a 4-item graded response tool that was developed from a younger population of hospitalized adults. It is unclear if the previously derived cutoff of 4 would apply to the elderly. We aimed to determine the diagnostic utility and predictive validity of the TTSH NST in hospitalized older adults, a high risk group for malnutrition and its sequelae. **Methods:** We prospectively screened 281 newly admitted patients aged 61 to 102 years for nutritional risk using the TTSH NST. The Subjective Global Assessment (SGA) served as the gold standard for comparison of nutritional status. Length of hospital stay (LOS), Modified Barthel Index (MBI) at discharge and six months, and 6-month mortality were analyzed in relation to NST-ascertained nutritional risk before and after adjustment for age, gender, dementia, depression, severity of illness and admission MBI using regression analysis. **Results:** The prevalence of malnutrition was 35% based upon SGA. The optimal cutoff of the TTSH NST was 4, yielding sensitivity, specificity, positive and negative predictive values of 84%, 79%, 68% and 90% respectively (AUC=0.87). The optimal cut-off remained at 4 even for patients aged >85 years (AUC=0.85). Risk of malnutrition (as determined by TTSH NST) was predictive of 6-month mortality (adjusted OR: 2.2, p=0.05), LOS (p<0.05), and MBI at discharge (p<0.05) but not at 6 months. **Conclusion:** Our findings show that using a cutoff of 4, the TTSH NST is a valid screening tool with good diagnostic utility and predictive validity for detecting malnutrition in hospitalized older adults.

**PB6 435 A NUTRITIONAL FOLLOW-UP IN MALNOURISHED ELDERLY PEOPLE LIVING AT HOME.**

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**Background:** Malnutrition is a frequent problem in the elderly people that may be related to a low protein intake. **Objectives:** To evaluate the impact of a nutritional intervention program either beginning at hospital in geriatric care unit or at home and following at home during 12 months for malnourished elderly people on nutritional and functional status. **Methods:** The inclusions have been done between July 2007 and September 2008. After evaluation on nutritional status, old individuals undertook a 12-month follow-up and we investigated whether dietary advices targeting protein consumption and use of nutrient dense-foods to improve nutritional intake, body weight and mini nutritional assessment, ADL and IADL scores. The measurements were realised at the beginning of stay of hospital for hospitalized patients and then, at home, at 1, 30, 90 days, and all 3 months for both population by visits of nutritionist. **Results:** A total of 93 old people (51 at hospital and 42 at home, 74 women, 70 to 100 years old, short-MNA&smaller than 11) had accepted the study. Until the beginning of study 17 persons going to hospital and 5 persons living at home withdrew (dead, didn't want going on, institutionalized...). During the three first months, the results indicated that nutritional advices given during each visit were generally applied, translating a weight gain or stable weight in 60.9% of old people. **Conclusion:** At this period of the study, it seems that simple strategies, like dietary advices showing the importance of protein consumption and the use of nutrient dense-foods during aging, are necessary taking in place to treat malnutrition in this vulnerable population composed of the old-elderly people, wishing living at home the longer time. **Keywords:** elderly people, MNA, body weight, nutritional advices.

**PB6 436 MALNUTRITION IS AN IMPORTANT GERIATRIC SYNDROME CONTRIBUTING TO THE SHORT TERM MORTALITY**

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**Introduction:** Comprehensive geriatric assessment has been considered to be important for the elderly in sustaining or improving physical functions and quality of life. We examined factors that contribute to the short term mortality in the elderly at our comprehensive assessment clinic. **Methods:** Between March 2005 and December 2006, 74 elderly (48 females, 81.6±5.7 years) came to our comprehensive assessment clinic for the elderly. The numbers of elderly who had chronic disease were as follows: 30 psychiatric disorder including dementia, 25 heart diseases, 9 musculoskeletal disorder, 6 cancers, 6 diabetes, 3 stroke, 3 lung disease. Various aspects of daily living functions including physical and

mental function, social mode of life were assessed comprehensively. **Results:** During the observational period, 7 elderly (2 females, average 83.0 years) died. We examined the difference of daily living functions between alive group (n=67) and dead group (n=7). A Mann-Whitney's U test was used to compare two groups. The nutrition screening initiative score ( $3.2\pm2.1$ ,  $5.2\pm1.1$ ,  $p<0.032$ ), the skinfold thickness of scapula ( $12.9\pm4.8$ mm,  $7.0\pm3.6$ mm,  $p<0.027$ ) and Vitality index ( $9.5\pm1.2$ ,  $8.3\pm1.4$ ,  $p<0.012$ ) were significantly different between two groups. By Cox's proportional hazards model, the skinfold thickness of scapula was extracted as the factor contributing to the short term mortality (n=29,  $\beta=-0.380265$ ,  $SE(\beta)=0.176973$ ,  $z=2.1487$ ,  $p=0.031657$ ). The relative risk was 0.684 (0.483-0.967) at 1.0mm increase of the skinfold thickness of scapula. **Conclusions:** Malnutrition is considered to be an important geriatric syndrome contributing to the short term mortality in the elderly. We should evaluate the nutrition status with extreme caution in the frail elderly.

**PB6 437 HOSPITAL-BASED CASE MANAGEMENT IMPROVE NUTRITION STATUS IN ELDERLY LIVING IN NURSE HOME**

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**Introduction:** People living in long-term care facilities are rapidly growing around the world, especially in elderly. Malnutrition is an important problem in caring elderly in long-term care facilities. The best caring model is still controversial. In this study, we assessed the improvement in nutrition using different care model in Taiwan. **Methods and materials:** There were 265 elderly residents living in 8 long-term care facilities were recruited (mean age= $78.8\pm7.1$  years). They were grouped into two groups (intervention and control group, each group included 4 long-term facilities) using randomized control design. Hospital-based multidisciplinary team care was used at intervention group. Usual care was used at control group. After randomization, intervention period was 6 months. We measured anthropometric index, biomedical markers, and structured questionnaire before and after intervention. **Results:** No statistical differences were observed in age, height, weight, body mass index (BMI), hemoglobin, albumin, and lipid profile between intervention group (n=83) and control group (n=182). After 6 months intervention, the increase of albumin in intervention group was greater than the control group ( $\Delta$  albumin=0.16 vs. 0.01 mg/dL,  $p<0.05$ ). After intervention, prevalence of malnutrition (Albumin < 3.5 mg/dL) decreased from 68.7% to 53.0% in intervention group and from 67.0% to 66.5% in control group. **Conclusion:** Hospital-based case management can effectively improve malnutrition in elderly living in long-term care facilities in Taiwan.

**PB6 438 A SHARED LEADERSHIP NETWORK MODEL: AN INNOVATIVE ORGANIZATIONAL STRUCTURE OF THE BC NETWORK FOR AGING RESEARCH (BCNAR)**

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The BC Network for Aging Research (BCNAR) is one of eight population health networks funded by the Michael Smith Foundation for Health Research in British Columbia Canada. Initiated in 2005, the aging research network has undergone several interim evaluations, providing an opportunity for detailing features that are most successful. The mandate of BCNAR is to increase research capacity in the area of health and aging in the province through diverse networking activities; however, it is not mandated to conduct research itself. Several unique characteristics of BCNAR's organizational and management structure that have benefited researchers will be discussed in this paper. These include: its theoretical underpinnings; distributive/sub-network leadership model; research innovation model; regional networking structure; and use of networking technologies. These structural dimensions will be examined by highlighting the functioning of the network in terms of key activities and outcome measures: leveraging funds through institutional and organizational partnerships; developing innovative student training and mentorship programs (Student Training in Aging Research Program); awarding seed and team development grants, and assessment of future grant success; providing a comprehensive website with access to a database of aging research and publications; publishing a newsletter; use of other networking technologies; offering a range of high quality conferences and workshops; and fostering national and international research networks and collaborations. BCNAR also facilitates gerontological knowledge translation and transfer between those seeking research, conducting research and the decision-makers who utilize research; with the objective of positively impacting the lives of older adults. It will be shown that the network has worked in unique ways to facilitate the collaboration of researchers from a variety of disciplines, research streams, and organizations interested in pursuing aging-related research and knowledge translation. A major conclusion is that,

compared to hierarchical leadership/management models, BCNAR is highly flexible and opportunistic.

**PB6 439 BLOOMING GERIATRICS IN MOROCCO: FIRST NATIONAL MEETING OF GERONTOLOGY IN CASABLANCA.**

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Morocco is an Arabic and French-speaking developing country that's facing a brand-new challenge: the aging of its population. The amount of Moroccans covered by the actual health-system is insignificant (7%), however there's an ongoing radical change of this system. Among the thirty million Moroccans, 2.4 millions (8%) are 60 years-old or more, and 600 000 people are more than 75 years-old. There isn't any geriatrics department in the country, but thanks to a close cooperation with some French University-Hospitals, about fifteen internists have been trained to this new specialty. These new Geriatricians have gathered in a association called "AGE" (in French "Association de Gérontologie Espoir" which means "Hope Geriatrics Association"). They take care of elderly patients in the intern-Medicine Departments they belong to, and they have organized on May 31st and June 1st 2008, a National Meeting in Casablanca aiming to promote Geriatrics and it's teaching during general medical studies in Morocco. Besides the Geriatricians, teachers of other specialties (Nephrology, Neurology, Internal-Medicine, and Oncology) have participated to this first meeting. Some government-representatives (with MDs among them), have pleaded Geriatrics' cause in Morocco. The invited speakers where from different parts of the country, as well as France. The meeting has been organized at Casablanca's Medicine School, and around 200 people have attended it for free: "Generalist" doctors ("Family doctors"), Specialist doctors, nurses, social workers, nutritionists, and kinesitherapists. The meeting has been terminated the next day with a trekking of 5 and 11 Kilometers in the area of the city of Benslimane, to which about a hundred people aged 60 years or more have happily participated, under the beautiful shiny Moroccan sun!

**PB6 440 A NOVEL MOBILE ACUTE CARE FOR THE ELDERLY (MACE) INPATIENT MODEL OF CARE**

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Introduction: As hospital occupancy rates become higher, the ability to assign patients to an ACE unit has become harder. The multidisciplinary MACE team was created to maximize the benefits of geriatric clinical care combined with enhanced communication and seamless transitions regardless of the geographic location within the hospital. Materials and Methods Setting: Urban Teaching Hospital. Design: Prospective cohort study Participants: Patients from Coffey Geriatrics Associates admitted to the Geriatrics Service, Mount Sinai Hospital (MSH), between 7/1/07 and 6/30/08. MACE team: 1. Geriatric-hospitalist; 2. Geriatric fellow; 3. Geriatric Nurse Practitioner (GNP) responsible for obtaining baseline data, communication and post-discharge phone calls to patients. 4. Social worker (SW) responsible for discharge planning and collaboration with the outpatient SW. Implementation: 1. Daily meeting to assess clinical/social/systems difficulties. 2. Family meetings early in the hospitalization 3. Transitional care adapted from The Care Transitions Program (1). 4. Patient/caregiver education on medication management. 5. Communication with primary care provider. Results: 597 discharges during this period. Mean age: 83 years old. 75% were female. The patients were frail, most of them dependent in IADLs and ADLs (57%). 46% had diagnosis of cognitive impairment or dementia and 56% walked with an assistive device prior to hospitalization. 443 patients (74.2%) were discharged home and the rest were discharged to nursing home, hospice care or expired. 38% of the phone calls to patients who were discharged home revealed difficulties with medications, services or worsening symptoms requiring intervention. Mean length of stay (6.0 days) was significantly lower than the prior year (8.3 days) with no difference in 7-day readmission rate (4.0% vs.4.9%). Conclusions: The MACE team is a novel model of multidisciplinary inpatient care with emphasis on communication and early coordination of care.

**PB6 441 LOSS OF AUTONOMY IN FRAIL ELDERLY AND CROSS NATIONAL COMPARISON IN TREATMENT APPROACH – A COMMON PROJECT OF THE EAMA**

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Introduction: As a postgraduate course of geriatricians, we were interested how a geriatric patient is treated in different countries and which the main divergences are. Methods: In the vignette case, an 82 years old woman, hospitalized in a geriatric ward for an acute previously unknown heart failure was demonstrated. She was characterized as a typically geriatric patient with a present state of "complete exhaustion" and a probable cognitive decline (MMSE 22/30). She was described as frail and getting dependent. So discharging from hospital implied a new situation to the patient. Setting took place during the postgraduate course from February to June 2008. Therefore standardised questionnaires were sent to the participants enclosing different items of assessment, acceptance of geriatricians, medication, financial source, laboratory findings and social situation. Results: 45 students from 19 countries took part in this survey. 4 claimed participation because of not working with patients. In 23% no own geriatric ward is in the hospital, in 94% there are no geriatricians at the emergency department. In over 50% complementary assessment of nutritional and psychological status is used, 30% of the hospitals have no access to a psychogerontologist. Ranking of used assessment tools in declining frequency is (I)ADL, Barthel Index, MMSE, clockdrawing test, MNA, GDS and timed up and go test. 2 departments decide implication of RAI-emergency screener. Differences were found in prescription of appropriate medication, planning of ambulatory care or organizing residential homecare, as well as problems of funding source. Conclusion: The results show a huge heterogeneity in appreciating geriatric medicine in the different countries. There is a big necessity in harmonising acute and long-term care for our geriatric patients. This is only feasible with international networking and common scientific projects.

**PB6 442 STELLAR POTENTIAL IN GERIATRIC TRAINING AND RESEARCH**

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This session will provide a model to engage medical students in geriatrics and aging research. During the next two decades, the number of older adults is growing at an enormous world wide. There is a tremendous shortage of geriatricians to take care of this older population. The session will present a model program which has been successful in the U.S. over the past several years which offers a summer stipend to medical students. The track record of this program has been tremendously successful - sensitizing future physicians and providing a basis for research in aging. The program is a public private partnership and can be replicated for very low cost in numerous countries. The program provides, research experience, hands-on-work with patients and didactic instruction.

**PB6 443 INTEGRATED MODELS OF CARE IN ONE THIRD AGE CENTER IN MANAUS- AM**

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INTRODUCTION: As much in physical aspects as social, is not easy to age in Brazil. The public system of health is precarious e, in the current context, the potential of the aged one as social agent lowermost when is not ignored. The Centers of Attendance Integrated to the Best Age have objectives to the attendance specialized to the aged; the health promotion providing the best way to promote an integral and integrated care of the health. METHODS AND MATERIALS: This is a retrospective observed by type of shelter of this population taken care of in one of them Centers (CAIMI) in Manaus, aiming at to know the reason of the search of the aged, the medical attendance, types of requested examinations, what the doctors of this Center understand the regular physical exercises for the customers CAIMI visits and the results of this attendance. Between November 2007 to February/2008, 843 aged was accompanied, amongst routine medical consultations; inclusion revisit. Excrement and blood biochemical analysis had been requested, and gauging of the arterial pressure. RESULTS: Of the 843, 87% hypertensive's, 48% had intestinal parasitism; 45% had high cholesterol, 47% anemic and 32% diabetics. The study it allowed to infer that beyond the attention, from the affection in the attendance, these persons had received orientations and emphasized practical the regular guided physical exercises by professionals in the Center to the aged possess high cholesterol and hypertension, associates to the nutritional orientation recommended by Nutritionist of the Center. CONCLUSION: Lastly, it can be concluded that the objectives of the Centers are reached by the relevance of the integration to multidiscipline in the attendance to the aged one.

**PB6 444 PREVALENCE OF INTESTINAL PARASITES AMONG GERIATRIC RESIDENCE IN GOLABCHI CENTER, KASHAN, IRAN 2006-2007**

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introduction: Intestinal Parasitic infections are the major health problems in many countries especially in developing countries. The prevalence of infection is variable in different social group. Since geriatric are high risk group, this study was carried out in order to

determine the prevalence of intestinal parasites in elderly people residence in Golabchi Center, Kashan, Iran 2006-2007. Methods & Material: In this Cross-Sectional study a total of 165 stool samples from elderly people and 54 office personals were randomly collected and examined by direct, logol stain and formalin ether concentration methods. Scotch type method was used for diagnosis Enterobiasis. The demographic data as sex and age were recorded. For statistical method X2 and confidence interval were used. Results: Of 155 elderly, 121 people (78 %) were positive for at least one intestinal parasites, (CI=78% ± 3.3). The prevalence of pathogenic protozoa were: Entamoeba histolytica/ E.dispar 16.7%, Giardia lamblia 2.6% .Dientamoeba fragilis 1.6% .The prevalence of nonpathogenic protozoa were: Entamoeba coli 46.5 %, Blastocystis hominis 31%, Chilomastix mesnili 28.4%, Entamoeba hartmanni 20.6% , Endolimax nana 16.2%, Iodamoeba butschlii 6.7% respectively. The prevalence of helminthes infection were: Taenia 2%, Hymenolepis nana 0.7% and Enterobius vermicularis 25.5% by Scotch type method. Infection rate in office personals were 49.3 %, and pathogenic protozoa were not seen. 67 of people infected with one or two parasites, 29 with 3 parasites, and 25 people with higher than 4 parasites. Conclusion: This study showed that infection with intestinal parasites especially pathogenic parasites were higher than expected in geriatric. Due to importance of intestinal parasites and some risk factors such as density of population and an immunosupress background in elderly, primary care by treatment of infection and control is emphasized. Keywords: Intestinal parasites, E.histolytica/E.dispar, Enterobius vermicularis,

**PB6 445 RECRUITING NURSING STUDENTS AND NEW GRADUATES INTO GERIATRIC MENTAL HEALTH NURSING PRACTICE IN NURSING HOMES AND RELATED RESIDENTIAL SETTINGS**

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The purpose of the planned study that is the focus of this presentation pertains to identification of effective approaches to enhance recruitment of both undergraduate nursing students for part-time employment, and new graduates for full-time employment in nursing home settings that provide care to older people with dementia. To collect such data, our research team plans to conduct a major survey of the literature, and to send out an electronic call for short narratives about: (1) the key challenges facing Geriatric Nursing in Canada (e.g., see Hogan, 2007), and, (2) innovative and traditional initiatives that have developed in Canada to address those challenges (e.g., Gerontology Nursing Initiative for New Graduates by the Vancouver Health Authority; as well as the NICE program: <http://www.nicenet.ca>) Hogan, D.B. (2007). Proceedings and recommendations of the 2007 Banff Conference on the Future of Geriatrics in Canada. Canadian Journal of Geriatrics, 10(4), 133-147.

**PB6 446 AN ELECTRONIC TRANSFER FORM FOR ADVANCE DIRECTIVE COMMUNICATION BETWEEN A SKILLED NURSING FACILITY AND THE ED**

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Introduction: Quality problems regarding communication between nursing homes and emergency departments (ED)s have been well-described. Essential patient information such as advanced directives is often missing. The objective of this study was to determine whether the implementation of a standardized electronic transfer form improves communication of patient advanced directives (ex: do not resuscitate orders) between a skilled nursing facility (SNF) and the ED during patient transitions to the ED. Methods: This was a before and after study involving the largest SNF affiliated with the ED of an urban tertiary care center. Participants were a consecutive sample of patients transferred from the SNF to the ED over a 16 month period between June 2006 and January 2008. The intervention was the implementation of a standardized electronic transfer form via closed internet connection between the SNF and ED. Communication of advanced directives was considered to be satisfactory if patient wishes regarding resuscitation were communicated by the SNF to the ED as reflected by any of the following: 1. Notation in SNF transfer documents; 2. Notation in ED chart including that the information was obtained from the SNF; 3. Notation that the patient does not currently have advance directives. Results: 234/237 pre-intervention and 276/276 post-intervention transitions were reviewed. The transfer form was used in 130/276 (48%) of patient transitions (electronic version 76 (28%), paper copy 54 (20%). Advanced directives were found in 14/234 (6%; 95%CI, 4-10) pre intervention patient transitions and 112/276 (41%; 95%CI, 35-46) post-intervention patient transitions ( $p < .0001$ ). Conclusion: Communication of patient advanced directives between a SNF and ED during transitions of care was dramatically improved after implementation of a standardized electronic transfer form.

**PB6 447 NEWSPAPER-CONFECTION GROUP: AN INTERVENTION POSSIBILITY IN LONG-TERM CARE INSTITUTIONS FOR THE ELDERLY**

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Introduction: Elderly individuals who reside in long-term care institutions and become inactive undergo a reduction in intellectual potential and their creativity and social

relationships are affected. Occupation therapy intervention has the objective of maintaining, restoring and improving functional capacity, thereby maintaining elderly individuals active and independent for the longest possible length of time. The aim of the present study was to evaluate a newspaper-confection group as a therapeutic resource for stimulating cognitive function and promoting interaction between residents in long-term care institutions. Materials and Methods: The group was made up of elderly residents of a long-term care institution in the city of Belo Horizonte (Brazil) Participants were from both genders and had a variety of conditions (depression, seeing impairment, musculoskeletal, cerebral-vascular and neurological diseases). The group was open and had an average of six participants at each weekly meeting. The 26 meetings were organized in the following manner: 1) opening, in which the interaction between participants was favored by employing the principles of reality orientation therapy; 2) reading of the day's newspaper; 3) selection of news from the paper and the institution; 4) suggestions for poetry and charades; 5) closing, organizing the material on placards and displaying the newspaper. All sessions were recorded by means of reports, which were used as the parameter for the analysis of the progress of the group and discussion of the results. Results: There was a significant increase in the interaction of the participants before, during and after the group activity as well as improvements in spatial-temporal orientation, attention and concentration in routine activities, thereby favoring autonomy as well as individual and group identity. Conclusion: The newspaper-confection group may contribute toward active ageing, with the preservation of intellectual potential as well as social and psychical skills.

**PB6 448 SHOULD DRUGS FOR PREVENTION BE PRESCRIBED IN THE CONTEXT OF ADVANCED DEMENTIA?**

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Introduction: Physicians often wonder about the appropriateness of prescribing medications for prevention in the context of advanced dementia. In this population, evidence for treatment effectiveness is lacking and existing guidelines are not helpful because they do not take into account relevant considerations such as comorbidity, immobility and life expectancy. Furthermore, in their advance directives, many patients ask for "comfort care only" if they become irreversibly incompetent and this may be interpreted as an indication to stop those medications. Objective and methods: In April 2004, 34 physicians, pharmacists and ethicists were assembled by the Sherbrooke Geriatric University Institute in order to discuss guidelines proposed by a group of clinicians and ethicists who reviewed the literature. Based on those discussions, a final series of recommendations was prepared and sent to them for final approval. Results: There was consensus about those four general recommendations: "In the context of moderate or severe dementia, the physician should · Prescribe drugs for prevention only to persons who have a long enough life expectancy to benefit from them · Avoid prescribing drugs other than for comfort when life expectancy is short or when quality of life is perceived by family members to be irreversibly poor · Avoid prescribing drugs for prevention if taking them puts too great a burden on the patient (e.g polymedication and swallowing difficulties) · In case of doubt, prescribe a potentially beneficial drug only for a limited period of time and then reassess the usefulness of continuing. A general guide for clinical reasoning was also proposed to help clinicians decide on the appropriate conduct in similar situations and specific recommendations were made for the use of statins, antiplatelet drugs and bisphosphonates. Conclusion It is the first time that clinical guidelines are presented on this topic.

**PB6 449 PROJECT HOPE: AN INTERDISCIPLINARY EDUCATION MODEL IN GERONTOLOGY**

M. PARDASANI\* (Fordham University , New York, United States)

Introduction: Project HOPE is an inter-disciplinary initiative that integrated the varied disciplines' (medicine, nursing and social work) teaching, practicum and service goals to enhance graduate student interest and expertise in gerontological practice. The population of persons age 65 and over is expected to double in size to 70 million by 2030 (US Census, 2000). As the elderly cohort grows exponentially, so does the need for competent and knowledgeable practitioners in healthcare. However, gerontological practice is not on the top of the list of professional or fieldwork choices for social work, medical or nursing students. Research in the three disciplines has noted some common themes such as lack of knowledge or interest on part of students and faculty, and limited opportunities for internship and clinical practice in aging. Methods: In 2007, the College of Health and Human Services was created at Indiana University Northwest by combining the social work, nursing and medical schools. Project HOPE, an inter-disciplinary, clinical practicum for students within a gerontological setting (nursing homes) was initiated. It has been posited that inter-disciplinary practicum initiatives create opportunities for increased understanding of varied professional roles and values, as well as increase students' knowledge of team-based interventions and patient-centered care, and prepare them for effective practice in inter-disciplinary, healthcare settings. Students from social work, nursing and medicine were required to work in teams and follow assigned elderly patients for the course of one year. In addition to joint structured supervision, they attended regular trainings and completed a course on Gerontological Healthcare. Results and Conclusion:

The project has been successful in increasing student competencies, knowledge and interest. This presentation will describe the design and implementation of the interdisciplinary project, and its impact on the students. Guidelines for replication, implications and lessons learned will be shared.

**PB6 450 MANAGEMENT OF DYSPNEA AMONG TERMINALLY-ILL NURSING HOME RESIDENTS IN THE UNITED STATES**

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**Introduction:** While dyspnea is one of the most commonly reported symptoms among terminally-ill nursing home residents, previous research has found that nearly 25% of residents receive no treatment for this distressing problem. This presentation discusses the problem of dyspnea among terminally-ill nursing home residents and describes the state of current management strategies, as well as barriers to the adequate control of this distressing problem. **Methods:** As part of a larger study that investigated end of life care, 117 residents were followed from the time they were identified as terminally ill until they died. Event analysis, participant observation, in-depth interviews with residents (n=21), their families, (n=46) nursing staff, (n=54) and physicians (n=36) were used to obtain data in two proprietary nursing homes. In addition, data were collected on the type and amount of analgesia prescribed and administered, and on the use of oxygen. **Results:** While 90% of residents had orders for oxygen, there were significant problems with oxygen delivery. Although 71% had orders for PRN sublingual morphine sulfate (MS), only 34.7% of residents with dyspnea received any MS on the day prior to death. Use of adjuvant medications was limited; only 20% of the residents had medical orders for lorazepam, and only 10% of patients received lorazepam on the day prior to death. **Conclusions:** Results suggest that the failure to utilize available pharmacologic and non-pharmacologic interventions contributed to dyspnea.

**PB6 451 USE OF PROTON PUMP INHIBITORS (PPI) AND THEIR ASSOCIATED RISKS AMONG FRAIL ELDERLY NURSING HOME RESIDENTS**

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**Introduction:** Long-term use of PPIs to reduce the risk of GI-bleeding is common among frail elderly. We aim to test the associated risks of PPI use among frail elderly people in nursing home residents. **Methods:** A cross-sectional assessment of all nursing home residents (n=1987) was performed in Helsinki, Finland during February 2003. The association between PPI use and various characteristics, symptoms such as diarrhea, use of other drugs and presence of other diseases was studied. Logistic regression analysis was used to test the independent value of PPI use on diarrhea. **Results:** The nursing home residents (mean age 84y, 80% females) were administered following PPIs: omeprazole (423 patients), pantoprazole (1 patient), esomeprazole (2 patients) and lansoprazole (7 patients). The factors associated with regular PPI use in univariate analyses were inability to move independently, higher Charlson comorbidity index, higher mean number of medications and lactose intolerance. Users had had a prior ventricular or duodenal ulcer, cancer and coronary heart disease more often than the non-users, but less often a dementia diagnosis. In accordance with our hypothesis, the users of PPIs had more often diarrhea (19.7%) than the non-users (12.9%) ( $p<0.001$ ), and they had a prior hip fracture more often than the non-users ( $p<0.001$ ). In logistic regression analysis, where age, gender, Charlson comorbidity index, lactose intolerance, celiac, use of laxatives and calcium supplements were used as covariates, the use of PPIs had an independent association with diarrhea (OR 1.51, 95% CI 1.11 - 2.05). **Conclusion:** Long-term use of PPIs has adverse effects such as small bowel bacterial overgrowth and hip fracture known from prior small studies. Our study confirms the risk in a large epidemiological material. PPIs should only be prescribed for indications where there is proven.

**PB6 452 PRESSURE ULCER DEVELOPMENT IN BED- OR CHAIR-BOUND ELDERLY RESIDENTS IN NURSING HOMES: INCIDENCE AND RISK FACTORS**

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**Introduction:** Elderly residents confined to beds or chairs in nursing homes have a comparatively higher risk of pressure ulcer development. Knowing the risk factors associated with their pressure ulcer development helps to design appropriate preventive nursing interventions. **Aim:** It aimed to identify the pressure ulcer incidence and risk factors affecting pressure ulcer development among bed- or chair-bound elderly residents in nursing homes. **Method:** The study used the secondary data from a prospective cohort study with 346 elderly residents aged 65 or above from four private nursing homes in Hong Kong. The subjects were initially collected clinical characteristics and assessed for eight pressure ulcer risk factors (sensory perception, moisture, mobility, friction and shear force, nutrition, skin type body build for height, nutrition) and skin in order to identify existing

pressure ulcers. Subsequently, they were assessed for skin every second day for 4 weeks to detect either new or first pressure ulcers. A total of 143 elderly residents who were either bed- or chair-bound were secondary analyzed for the incidence and the associated risk factors. **Results:** The pressure ulcer incidence rate was 48.3 %. In bi-variate analysis, all eight risk factors were significantly associated with pressure ulcer development ( $p=0.000-0.001$ ). The logistic regression model indicated that bed- or chair-bound residents with poorer mobility ( $\beta = -0.58$ ,  $p=0.009$ ), more severe problems of friction and shear force ( $\beta = -0.71$ ,  $p=0.014$ ) and having existing pressure ulcers ( $OR=1.681$ ,  $p=0.000$ ) tended to develop pressure ulcers. The data fit the model ( $x^2 = 7.761$ ,  $p=0.170$ ). **Conclusion:** Evidence-based interventions should be adopted to change and control body positions and minimize friction and shear force among bed- or chair-bound elderly residents in nursing homes, particularly those with existing pressure ulcers.

**PB6 453 BARRIERS TO HAND HYGIENE IN NURSING HOMES**

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**Introduction:** Individual perceptions, professional education and practical limitations of healthcare settings are known to impact on hand hygiene in hospitals and ambulatory care centers. Yet, no similar data is available for long term care facilities. **Methods and Materials:** We developed a 52-question survey to determine nursing home employees' knowledge of current hand hygiene guidelines along with their self-perceived compliance and barriers to hand hygiene. Data analysis was primarily descriptive; for categorical variables either Chi-squared or Fisher Exact tests were used; for continuous variables, either t-tests or analysis of variance, were used. **Results:** Surveys were distributed in 14 nursing homes in 5 states. Overall 947 subjects responded and were grouped in certified nursing assistants (CNAs) (33.8%), nurses (30.3%) and others (35.8%). Only 291 (31%) subjects scored >90% on knowledge of current guidelines. Half (59.8%) reported not washing hands when they just went into patient's room to talk, 21.9% when they wore gloves, 27.9% when the patient needed immediate medical attention and 13.1% when patients didn't have serious medical problems. In addition, 19.5% recognized forgetting to wash hands when busy and many blamed absence of alcohol-based product (28.1%), soaps and towels (15.9%) or sinks nearby (15.1%). Overall, the three groups were different in identifying barriers ( $p<.001$ ). Nurses were more likely than CNAs to omit washing hands if they "just" spoke to patients (70.1% v. 48.9%,  $p<.001$ ), to report lack of alcohol based rub nearby (30.4% v. 16%,  $p<.001$ ) and to forget to wash hands when busy (33.7% v. 22%,  $p=.002$ ). **Conclusions:** Our data underlines the need to facilitate practice improvement programs in long term care facilities geared towards minimizing the barriers identified by nursing home employees.

**PB6 454 EVALUATION OF COMMUNITY NURSING CARE FOR THE ELDERLY IN CYPRUS**

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**Introduction** Ageing demographic changes suggest an increased demand on health and social services and elderly prefer to be in their own homes and communities. The aim of the study is to evaluate the present situation in relation to the provision of community nursing care, particularly home nursing, the development of good practices, policies and interventions regarding the care of the elderly. **Methods and Materials:** This is a two year study, used both quantitative and qualitative methodologies: 1. In depth interviews with clients 2. Focus Groups with Community Nurses 3. In-depth interviews with key persons A semi-structured questionnaire was used to a) evaluate the clients needs b) evaluate the relationship between client and community nurse c) explore the most common interventions provided. A focus group guide as well as key person's interview guides were developed based on previous studies. The sample consisted of 100 clients that were randomly selected (aged 60+, female and male). Two focus groups with community nurses were carried out (n=11) in those. Six personal interviews were conducted with key persons such as the Head of Nursing Services and the president of the Parliamentary health committee. **Funding:** Cyprus University of Technology. **Results:** Preliminary findings showed that the majority of the participants were satisfied with care provided. However, several issues were raised, such as the need of a multidisciplinary team and the development of a legal framework for community. **Conclusions:** This study is considered as pioneer in Cyprus as it is the first time that community nursing care home services are evaluated. Policy makers, elderly organizations and the Ministry of Health should improve their collaboration and coordination aiming to provide a more holistic care, meeting the needs of the elderly and improving the quality of their care.

**PB6 455 PROFILE OF THE ELDERLY THAT REQUIRES NURSING HOME AT DISCHARGE**

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**Introduction** The main objective is to define the characteristics of elderly patients requiring admission to a nursing home after entering a ward post-acute care, and as a secondary objective to see if there are differences in mortality and readmissions to hospital three months. **Patients and methods** We evaluated all patients older than 65 who were discharged for two years (from February 2005 to January 2007) ANOVA was used for quantitative variables and the chi-square for qualitative variables and statistically significant results were entered into a binary logistic regression. Results Of the 1063 patients who were discharged 59.6% were women, 38.9% had dementia, 77.2% lived at home (20.6% sons), 77.5% came from emergencies. Mortality to 3 months was 4.7% and 22.8% of readmissions. An 8.9% required a nursing home. The factors that were associated with the move to nursing home were prolonged hospital stay (42.62 vs. 16.34), lower albumin (31.63 vs. 32.90), lower hemoglobin (110.74 vs 115.27) previously being at home rather than in a retirement home (8.4% vs 0.6%) to be entered directly from emergencies (5.6% vs 3.3%), intrahospital complications (5.6% vs 3.4%) and not have a confusional syndrome during admission (2.7% vs 6.2%). There are fewer readmissions during the first three months (1% vs 7.9%) in patients referred to nursing home. In the logistic regression model remain the prolonged hospital stay, living previously in his home and confusional syndrome. Also re-entry in less than three months. **Conclusion** The profile of the elderly patient requires nursing home is the one that has a long hospital stay, coming from his home and that does not have a confusional syndrome.

**PB6 456 BALANCING THE SCALES TO IMPROVE OLDER PEOPLES SLEEP IN CARE HOMES**

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**Introduction:** This research identifies determinants of poor sleep in care homes as part of a four year New Dynamics of Ageing Collaborative Research Project (CRP), SomnIA (Sleep in Ageing), addressing practice and policy relevant issues arising from the nature, impact and management of the sleep-wake balance in later life. This is a complex cross-disciplinary research project, especially in light of the vulnerable group of older people living in care homes. The findings indicate a need to strike a balance between meeting individual care needs and institutional routines. **Methods and material:** In 10 care homes situated in South East England quantitative and qualitative data were collated from 140 male and female residents aged 65 - 100. For a period of two weeks participants wore Actiwatches and diaries denoting sleep and activity were maintained. To contextualise the environment in which this sleep research was taking place the quantitative data is supported by 275 hours of dawn, dusk and night observations, and interviews with residents (n=40) and staff (n= 78). **Results:** Data indicates disturbed sleep of residents at night and a lack of stimulus and motivation to stay alert during the day. Causes of the disturbances are strongly linked to nursing activities and institutional routine. **Conclusion:** Conflict between meeting care needs and the facilitation of sleep has been identified. These findings provide an evidence base from which policy makers and practitioners can undertake a much needed reconfiguration of how care is delivered in order to strike a balance between facilitating sleep and meeting care needs. This in turn could improve the daily quality of life experienced by older people requiring institutional long term care. This research is supported by the New Dynamics of Ageing initiative, a multidisciplinary research programme funded by AHRC, BBSRC, EPSRC, ESRC and MRC (RES-339-25-0009)

**PB6 457 ANY WEIGHT LOSS HAS A SIGNIFICANT INFLUENCE ON FUNCTION, HOSPITALISATION AND MORTALITY OF OLD DANISH NURSING HOME RESIDENTS**

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**Introduction** A weight loss of 5 % or more per month increases the risk of death of nursing home residents by 10-fold and, at present, weight loss of this size is recommended to diagnose malnutrition. However, smaller weight loss may have a significant impact on the daily life of old residents. The purpose of this 1-year follow-up study was to assess the significance of any weight loss on function, hospitalisation, and mortality of old nursing home residents. **Methods and materials** Participants were 431 old (65+ y) residents, at 11 nursing homes in Denmark. They were assessed for (change in) weight, physical (ADL), cognitive (CPS), social (SE) function and hospitalisation by means of the Resident Assessment Instrument for nursing homes (RAI-NH) version 2.0, at baseline, and at follow-up after 6 and 12 months. Size of weight loss was defined as >1%/6 and 12 months, >5%/6 and 12 months and >10%/6 and 12 months. Statistics were analysis of variance and CHI-squared test. **Results** There was a significant association between weight loss after 6 months and loss of function (ADL ( $p=0.023$ ), SE ( $p=0.01$ )). There was a significant association between weight loss after 12 month and loss of function (ADL ( $p=0.003$ ), CPS ( $p=0.05$ ), SE ( $p=0.025$ ))). There was a significant association between hospitalisation and

loss of weight (>1%/6 months ( $p=0.004$ ), >5%/6 months ( $p=0.0000$ )). There was a significant association between death after 12 month and weight loss (>1%/6 months ( $p=0.0000$ ), >5%/6 months ( $p=0.014$ ))). **Conclusion** Weight loss - regardless of size - has a significant impact on function, hospitalisation, and mortality of nursing home residents. Preventive measures should be initiated at an earlier stage than recommended

**PB6 458 DESCRIPTIVE STUDY OF 4896 FRENCH NURSING HOMES RESIDENTS: RESULTS OF THE REHPA NETWORK ENQUIRY**

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**Introduction:** Up to date very few research is performed in Nursing Homes (NH) and recommendation for quality of care, based on actual date, can hardly be made. The "réseau de Recherche en Etablissement d'Hébergement pour Personnes Âgées" (REHPA) is a functional network established, between the Geriatric Department of the Toulouse University Hospital and 240 NH, to overcome weak evidence-based recommendations and enhance research. **Methods and materials:** A cross-sectional observational study was set up between January and March 2008 to identify major health problems in NH in order to target future research. The number of residents included (randomly selected by birth date) depended on the total number of residents of the NH. Demography, medical and drug history, the presence of disabilities, and the usual care provided was assessed. **Results:** We report the results of 4896 residents of 240 nursing homes. Residents (73.9% women, 61.9kg  $\pm$ 14.8) were 85.7 years  $\pm$  8.8 old. ADL score was 2.8  $\pm$  2.1; 43.5% were demented (of which only 50.9% were treated); 19.6% had aggressive behaviors, 10.8% had verbal vocalisation, and 10.9% were wanderers; 27.4% were treated by antipsychotics; 54.4 % had hypertension; 8.7 % had diabetes; 14.8% osteoporosis; 4.1% had fallen during the previous week; 37.9% had pain; 19.8% lost weight; mean Charlson index score was 1.6  $\pm$  1.4; and finally 13.5% had an hospital admission in the last 3 months. **Conclusion:** The enquiry highlighted the specificity of NH residents and identified specific NH issues in order to target future NH field-research.

**PB6 459 PAIN IN COMMUNICATION IMPAIRED RESIDENTS WITH DEMENTIA: ANALYSIS OF RESIDENT ASSESSMENT INSTRUMENT (RAI) DATA**

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**Introduction:** Pain is a significant and under-reported problem in the older adult and particularly in those persons with dementia faced with an impaired ability to communicate that they are in pain. Their pain, under-diagnosed and under-treated, has functional implications such as decreased ambulation, mood and sleep disturbances, impaired appetite and exacerbation of cognitive functioning. Functional and behavioral problems (like verbal and physical aggression) have also been linked to caregiver distress, inappropriate use of antipsychotic medication to manage behavior and premature institutionalization. Social myths about pain and aging, healthcare provider lack of knowledge and disproportionate fears related to pain medication and addiction compound the likelihood of unnecessary suffering in those least able to self-advocate. The Resident Assessment Instrument (RAI), widely used across North America for the collection of comparative data within healthcare settings, has been proposed as a source of longitudinal information from which profiles for chronic conditions (like pain) can be drawn. Clearer profiles will facilitate more effectively targeted interventions. This presentation will discuss the pain profile developed from such a review. **Methods and Materials** RAI data were statistically analyzed (SPSS version 14.0) in order to 1) identify a pain profile of all of the residents living in the facility across two sampling periods (Dec 2005 and Dec 2006) and 2) compare the pain profile of residents categorized into two subgroups (those with intact communication and with impaired communication). **Results:** Consistent with the literature, clear differences were demonstrated between pain reporting and management for communication impaired residents with dementia and residents with intact communication. Several incongruent findings were also demonstrated. **Conclusions:** The RAI is insufficient in itself for pain management purposes, particularly in the vulnerable group of residents with dementia and impaired communication. Pain assessment tools developed for this population must be employed.

**PB6 460 PREVALENCE OF PAIN, EFFICACY AND APPROPRIATENESS OF PAIN MANAGEMENT IN ELDERLY NURSING HOME RESIDENTS**

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**Introduction** Pain is a frequent complaint in the elderly, and as the population ages, frailty and chronic diseases associated with pain will increase. This study investigates the prevalence and causes of pain in elderly nursing home residents and the efficacy and appropriateness of pain management in that setting. **Methods** We reviewed all case notes and drug records of inpatients in long stay wards in St Mary's Hospital and in Cuan Ros (community nursing home) in July 2008. As the majority of patients assessed were cognitively impaired (mean MMSE<20), questions asked during the pain interview were limited to simple yes or no answers. If the answer was yes, further questions as to the location of the pain and the severity using the numeric rating scale (NRS) were obtained. In patients who had severe or end stage dementia (MMSE<10), pain was assessed using the

Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC). Results A total of 270 patients were assessed, 40 from the community nursing home and 230 from the hospital setting long stay wards. Patients in the longterm care hospital setting were more likely to complain of pain (27% vs 17.5%, p<0.05) and were more likely to be on more than one analgesic agent (59% vs 45%, p<0.05) compared to those in the community nursing home setting. Approximately 25% of patients experience pain to some extent despite being on treatment. Pain was found to be more common among immobile patients(27% vs 22%) in female patients. (26% vs 24%) Conclusion Pain is a frequent complaint in nursing home patients. It is important to inquire about pain and treat any complaints. Our current knowledge of pain in the elderly is incomplete and there is a need for increased research and education.

**PB6 461 A FOLLOW-UP STUDY OF HEALTH STATUS IN PATIENTS WITH CHRONIC LOW BACK PAIN BEFORE AND AFTER SPINAL SURGERY**

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**Background:** Low back pain (LBP) is commonly known as musculoskeletal disorder in adults and older adults. Spinal surgery is widely performed to improve health status and quality of life; subjective evaluations by patients, therefore, are becoming increasingly imperative for monitoring outcomes before and after surgery. **Objective:** This prospective descriptive study was to compare health status in patients with chronic low back pain before and after spinal surgery, at a 6-week follow-up. **Methods:** Sixty-eight eligible patients (mean age = 68; SD = 15.42) were as follows: 20 years of age and over; diagnosed LBP with degenerative spinal diseases; and received spinal surgery as the first treatment. Data were obtained from patients admitted to orthopaedic wards at three government tertiary care hospitals in Bangkok, from February to August 2008. Statistical analysis was performed by using paired t-test. **Results:** Findings showed that health status of the participants was significantly improved postoperatively. Moreover, approximately 20 % of patients perceived moderate or severe disability at 6-week follow-up, while nearly 80 % of those perceived severe disability at the baseline assessment. **Conclusions and recommendations:** Subjective evaluation tools which provide the benefits of general and specific health status related to spinal problems can help identify patients who will benefit from surgical treatment. Additionally, although postoperative disability seems to be decreased, the continuing care of the adult and older adult patients with chronic low back pain is needed in order to restore the functional ability that could improve their health status affecting over all their quality of life.

**PB6 462 ASSESSMENT OF CHRONIC PAIN IN ELDERLY PATIENTS WITH VERBAL COMMUNICATION DISORDERS**

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The objective of this presentation is to demonstrate the prevalence of chronic pain in elderly patients who are unable to express this symptom verbally. In this case the auto Assessment is almost impossible. In fact, in this population pain is frequent, not easy to assess (dementia, sensory impairment, cerebral accident...) A prospective transversal study is organised on 97 patients with verbal communication disorders, living in long-term units and in old people's home. The average of age is 80 years. The selection is done on medical basis; the sample is well determined and randomised. The study is done over a week. Pain is detected in 20 out of 97 patients (20.6%). The prevalence of pain in this population living in long-term units is 30% (17 out of 63 patients); on the other hand it is 8.7% (3 out of 34) in elderly living in old people's home. Visual analogue scales (VAS) are almost impossible to use it in this population. The Verbal scales (auto Assessment) is proved useful in 50% (50 patients) to define the intensity of pain meanwhile the behavioural assessment scales (Pain hetero assessment by the care givers) for elderly subjects with verbal communication disorders are a must in 47 patients (48.5%).

**PB6 463 THE PSYCHOMETRIC QUALITY OF FOUR OBSERVATIONAL PAIN TOOLS (OPTs) FOR ASSESSING PAIN IN ELDERLY PEOPLE WITH OSTEOARTHRITIC PAIN**

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J. CLOSS (2), M. BRIGGS(2) - (2) The University of Leeds (Leeds, United Kingdom)

**Introduction:** Pain in cognitively impaired elderly people (CIEP) is difficult to identify and often goes unrecognized. Observational Pain Tools (OPTs) have been designed but, the validating studies have limitations. **Methods:** The current study has taken steps to overcome these limitations to ascertain the psychometric qualities of the OPTs. The psychometric properties of four OPTs (i.e. Checklist of Nonverbal Pain Indicators [CNPI], Pain Assessment in Advanced Dementia Scale [PAINAD], Abbey Pain Scale and Discomfort Scale- Dementia of Alzheimer type [DS-DAT]), 2 self-reported scales and 2 proxy-reported scales were compared for the assessment of osteoarthritic pain (OA) among CIEP. Participants with OA pain were stratified into 2 groups (n=124) (Group 1 No/Mildly CIEP; Group 2 Moderately/Severely CIEP). They were observed by 3 raters simultaneously in 4 time periods (i.e. I: No movement of the affected joints; II: standardised exercises with movement of the affected joints). The procedures were repeated at 4 to 7 days later. The participants rated pain on the self-reported scales. Their nurses rated clients' pain on the proxy-reported scales. **Result:** Similar patterns of reliability / validity were obtained in all OPTs. Better levels of psychometric properties were consistently obtained during the exercises. In confirmatory factor analysis, a single factor (i.e. OA pain) appeared only in the PAINAD and the Abbey PS after the deletion of "Breathing" and "Physiological change" indicators, suggesting that these indicators are not sensitive for detecting OA pain. Conversely, "Facial expressions," "Body movements" and "Vocalisations and Verbalisations" were sensitive for detecting OA pain during the exercise. **Conclusion:** The results of this study provide strong evidence for the validity and reliability of the PAINAD and the Abbey PS for assessment OA pain during the standardised exercise programme among elderly people regardless of their

**PB6 464 AN ACTION-BASED APPROACH TO IMPROVING PAIN MANAGEMENT IN LONG-TERM CARE**

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**Introduction:** Pain management for older adults in long-term care (LTC) has been recognized as a national and international problem. Untreated pain can lead to depression, loneliness, impaired mobility, sleep disturbances, and decreased quality of life. The purpose of this study was to develop an interdisciplinary approach to improve pain management in long-term care (LTC) in light of the barriers and facilitators that exist within the current system. **Methods:** We used a case study approach based on a concurrent mixed model design that included both qualitative and quantitative components. Environmental scans were conducted at two LTC sites. Data was collected via focus groups and interviews with key stakeholders across all health care provider groups, and administration. In addition, a document review and a short survey were conducted to assess the perceptions of barriers related to pain management. **Results:** The environmental scan findings revealed many barriers to effective pain management in LTC, including those at the resident/family level (i.e., challenges in reporting pain, family concerns, need for individualized pain treatments); health care provider level (i.e., challenges in assessing pain, reluctance to use pain medications, lack of knowledge, lack of communication across care provider groups, lack of continuity of care); and system level (i.e., inadequate accreditation and compliance standards for governing bodies, lack of support and resources for staff in changing practice, lack of strong leadership to implement change). Based on these findings, a multi-tiered model was developed with proposed interventions to address these barriers. **Conclusions:** This model can be used to align and guide the development of innovative approaches to improving pain management in LTC settings, with the ultimate goal of improving pain management services across all levels of care.

**PB6 465 PERCEPTIONS OF THE NURSE PRACTITIONER ROLE AROUND PAIN MANAGEMENT IN LONG-TERM CARE**

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**Introduction:** Considering the high rates of pain in long-term care (LTC) settings, research is needed to explore innovations in health services delivery, including the emerging nurse practitioner (NP) role. The purpose of this study was to explore the perceptions of LTC health care providers and administrators around the NP role in pain management with an emphasis on elucidating barriers and facilitators to optimizing the use of NPs in LTC around pain management. **Methods:** This study was grounded in a qualitative approach utilizing an exploratory descriptive design. Data was collected using 5 focus groups of nurses, and 16 individual interviews with other health care providers and administration. Data was analyzed using thematic content analysis. **Findings:** Participants described the current implementation of the NP role mostly in the areas of assessing pain, prescribing some pain medications, monitoring pain levels and side effects of pain medications, advocating for both staff and patients, and providing staff education related to pain management. Factors that influenced how the role has been implemented (i.e., limited scope, lack of clarity of NP role, workload demands) and perceived outcomes of the NP role (i.e., thorough assessments, consistent care, more time spent with residents, efficient ordering of pain medications and tests, timely follow-up with resident pain concerns) were also described. Areas that were suggested for future role development related to pain management included becoming more engaged with medication reviews and completing physical assessments. **Conclusions:** The findings from this study contribute to our understanding of how the NP role is perceived by other health care professionals, particularly around pain management. Stronger interdisciplinary collaborative relationships

need to be facilitated within a model of care that includes an NP, with the ultimate goal of improving pain management services in LTC.

**PB6 466 PAIN MANAGEMENT: HOW MUCH DO HEALTHCARE PROVIDERS KNOW?**

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Introduction Pain is the fifth vital sign, and effective pain management requires accurate knowledge, attitudes and assessment skills. Methods and materials To determine the knowledge and attitudes of healthcare providers in pain management, healthcare providers working in two nursing homes were invited to join the study. There were 29 healthcare providers (2 registered nurses, 2 enrolled nurses, and 25 healthcare workers). They were asked to complete a questionnaire and attend a short interview regarding their opinions and experiences in caring for elderly people in pain. The questionnaire – The Nurses' Knowledge and Attitudes Survey Instrument questionnaire developed by McCaffery and Ferrell – was translated into Chinese and used with permission. The Chinese version of the NKASRP consists of 25 items about general pain management, pain assessment, and the use of analgesics. Higher scores indicate a better knowledge and understanding of pain management. Results The majority of the participants were healthcare workers who had more than 5 years of practical experience. Their clinical practices were primarily in medical, geriatric, and surgical units. In terms of educational level, 26% of the participants had a certificate. Only 5% of the respondents reported ever attending a pain management course. The mean score from the percentage of correct responses on the NKASRP was 8, which was considered quite low. There was statistical significance in educational preparation and clinical experience with correct scores. Participants stated that they would report to physicians regarding the pain situation of older persons, yet they would seldom use non-pharmacological strategies to relieve pain. Conclusion The findings of our study support the concern regarding inadequate knowledge and attitudes in relation to pain management. Further intensive continuing education and staff development are highly indicated for nurses and healthcare providers.

**PB6 467 STRONG OPIOIDS IN TREATMENT OF CHRONIC PAIN ON SENIORS IN PALLIATIVE CARE - CLINICAL RESEARCH**

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Introduction: St. Joseph's hospice and pain centre Rajhrad is 50-beds medical institution for specialized palliative care with pre and post-gradual educational programme. We concentrate on oncologic and non-oncologic (mostly geriatric) palliative care programme in association with chronic pain treatment. The continuous study "Strong opioids in treatment of chronic pain on seniors in palliative care" have been started (the end of 2008) with goals – treatment effectiveness, side effects, holistic treatment management. Methods and materials: Patients was divided to several groups depending on their age (75-83, 84-89, 90 and up), functional ability or handicap (ADL, MMSE, nutrition, hand grip) and clinical period of the disease (stable state, turning point period, terminal period). Parameters of evaluation – indication of opioid therapy, optimal dose and titration process, side effects, co-operation of patient and family, complications, rotation of opioids or fail therapy and their reasons. Results, conclusion Strong opioids at frail geriatric patients need clinical experience, dose titration and disponsible wide spectrum of pharmacological types for rotation possibility. Results of our study are not still disponibile, but the goal of presentation will be to release a current conclusion and evaluate how opioid drugs are using in Czech palliative care and geriatric environment.

**PB6 468 RHEUMATIC-LIKE SYNDROME REVEALING LATE-ONSET PRIMARY EMPTY SELLA IN AN ELDERLY WOMAN.**

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Introduction. Primary empty sella (PES) has been related to a congenital incomplete formation of the sellar diaphragm resulting in herniation of the subarachnoid space within the sella and increasing the intracranial pressure. Its clinical picture is often nonspecific. Case Report. A 75-year-old woman reported three weeks of severe pain and contracture in both thigh associated to progressive difficulty for walking. Response to analgesics and NSAID was limited. Her past medical history was unremarkable. Physical examination showed pronounced stiffness and pain in the aductor muscles of both thigh. Movement of lower extremities was painful. Laboratory test results: sodium 118 mEq/l, potassium 4.4 mEq/l, creatin-kinase 356 U/l (0-167), LDH 777 U/l (240-480), C-reactive protein 2.0 mg/dl (0-0.5). Thyroid function: serum level of T4 was < 0.4 ng/dl (0.93-1.70), TSH 1.31 mIU/ml (0.27-4.2). FSH 1.7 mIU/l (26.5-139.0), LH 0.4 mIU/l (20-65). At 10 AM, g/dl (5-20) and 29.4 μg/ml and plasma ACTH levels were 3.5 g (10-90). A short ACTH<sub>1-24</sub> pg/ml (0-52). 24-h urinary cortisol was 6.0 stimulation test showed low serum cortisol response. CT scan of the brain and sella revealed an empty sella. Replacement therapy was started. She has remained well since. Discussion. Most common symptoms

reported as presentation of PES were headache, visual disturbances, rhinorrhea, endocrine dysfunction and/or hypopituitarism. Endocrinological testing demonstrated in this patient secondary adrenal insufficiency and hypopituitarism related with PES. Patients with slow onset adrenal insufficiency usually complain of constitutional syndrome, abdominal pain, nausea and diarrhea. The clinical presentation of PES in this patient as pseudopolymyositis has not been reported previously.

**PB6 469 POLYMYALGIA RHEUMATICA (PMR):THE IMPACT OF NEW DATA FROM EULAR (EUROPEAN LEAGUE AGAINST RHEUMATISM)CONGRESS 2001-2008: DIAGNOSIS,RESPONSE CRITERIA, PMR ACTIVITY SCORE AND TREATMENT**

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PMR is a disorder of unknown etiology which affects people over the age of 55, the average age at onset of the disease is 70. Giant cell arteritis (GCA), is associated in 10% to 20% of patients with PMR. Diagnostic criteria and the exclusion criteria PMR was determined by the Bird/Wood criteria (sensitivity of 92%, specificity of 80%). In addition to these criteria, a rapid response to oral steroids, provided a sensitivity of 99% in diagnostic performance(EULAR 2001). With ultrasound and MRI were seen bilateral subacromial/subdeltoid bursitis, joint synovitis, and cervical interspinous bursitis. These typical clinical and imaging features make the diagnosis of PMR relatively straightforward. Connective tissue diseases may mimic the clinical picture of PMR: seronegative elderly onset rheumatoid arthritis, RS3PE syndrome, late onset systemic lupus erythematosus, proximal symptoms of myositis, systemic vasculitis (PAN). Oral steroids are the main PMR treatment. Methotrexate treatment may be an alternative to prednisone alone for those patients who are at high risk of steroid-related toxicity. In contrast, TNF-alpha antagonists are probably ineffective (EULAR 2006) PMR response criteria. The European collaborative PMR group in 2003 develop PMR response criteria, for the purpose of monitoring therapy and for comparing alternative treatment with corticosteroids. A PMR activity score (AS), an easily applicable and valid tool for monitoring disease activity, and in combination with the PMR response criteria provides a better description of response(EULAR 2004). Improved knowledge of disease activity processes, monitoring activity and treatment responses, and increased treatment benefits can improve care of patients with PMR.

**PB6 470 DEVELOPING THE ABBEY PAIN SCALE JAPANESE VERSION**

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Introduction: Pain among older persons with dementia is difficult to assess. The purpose of this study was to develop and validate the Japanese Version of the Abbey Pain Scale (APS-JV) to assess pain of older adults who are not able to verbalize their experience due to dementia. Methods and materials: The original Abbey Pain Scale (APS) was a 6-item, observational scale developed in English. In this study data were collected on demographics, the Barthel Index, the MMSE, the APS-JV, and the Verbal Descriptor Scale (VDS) of pain, from residents in two nursing homes in Japan. Two researchers independently assessed the residents' pain using the APS-JV while the residents walked or were transferred from bed to a wheel chair. Examined were intra-class correlation coefficients (ICC) for inter-rater and test-retest reliability, Chronbach's alpha of the APS-JV, and correlation between the APS-JV and other variables. The processes of research were examined and permitted by the ethical committee in the organization the nursing homes belonged, and consent from participants and/or their families was obtained before data collection. Results: Back-translated version of the APS-JV was given affirmation by the original author of the APS with minor changes. Altogether 171 residents were rated. The ICC for inter-rater and test-retest reliability were .824 and .657, respectively. Internal consistency was .645 and .719 for the total sample and for those who were 0 in the MMSE (n=58), respectively. Multiple regression analysis revealed that contractures (p<.001), previous injuries (p<.001), the MMSE (p=.003) and paralysis (p=.018) were independently associated with the APS-JV. The APS-JV and VDS were moderately correlated ( $r=.49$ ; p <.01). Conclusion: Findings show some evidence of reliability and validity of the APS-JV.

**PB6 471 RAPID EMERGENCY MEDICAL SCORE IN THE ELDERLY: PREDICTION OF MORTALITY, ADMISSION TO HOSPITAL AND RE-ATTENDANCE**

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Introduction: The Rapid Emergency Medical Score (REMS) is a 26-point score, recently developed as a research and triage tool. It has been shown to be effective in predicting in-hospital and long-term mortality in non - surgical patients. No studies to date have examined the relative prognostic value of REMS in the over-75 age group. A pilot study was conducted to examine whether REMS was predictive of admission to hospital, 30-day mortality and 30-day re-attendance in non-surgical patients aged over 75 years attending ED. Methods: A list was compiled of every patient aged over 75 who had attended the

Emergency Department in the first 14 days of April 2006. After exclusion of surgical and relatively minor presentations, records were retrieved and data collected on the physical parameters to calculate REMS (mean arterial pressure, heart rate, respiratory rate, oxygen saturation, Glasgow coma scale and age), the Carlson Comorbidity Index (CCI) and data on admission to hospital, 30-day mortality and 30-day re-attendance. Results: Data were collected on 41 patients (mean age 83). There were two deaths within 30 days, both of whom had REMS above 7, and one death after 61 days who had REMS of 11. REMS was not found to be statistically predictive of admission to hospital ( $p=0.092$ , 95% CI: -2.961 to 0.233), or 30-day re-attendance to ED ( $p = 0.134$ , 95% CI: -0.431 to 2.9660). There was no significant correlation between REMS and CCI ( $p=0.394$ ). Conclusions: In patients aged over 75 years the REMS score may act differently as a predictive tool, owing to idiosyncrasies in physiology of older patients. An important difference may well remain undetected, as this was a small pilot study. A larger study is therefore suggested.

**PB6 472 PATIENT'S PROFILE ADMITTED AT A GERIATRIC PUBLIC HOSPITAL FROM SANTIAGO-CHILE.**

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**INTRODUCTION:** The Geriatric National Institute is a public hospital that gives health attention to older adults. The evidence increase of the old population in Chile has meant an important rise in recurrent pathologies, sometimes invalidating, with difficult treatments and high costs. **METHOD:** It checks clinical 226 histories. Some items were: pathologies, geriatrics syndromes, functionality, BMI, dental, plasmatic lipids, glucose and album. All patients are evaluated by a multiprofessional staff, applying valuation instruments, doing clinical tests, diagnosis of diseases, and a therapy it is developed. **RESULTS:** The sample it is constituted by 76 males and 150 women, with an average age of 78 years old. The pathologies of more prevalence were: Hypertension in 65.93%, Diabetes Mellitus 21.68% stroke 19.48 %, anemia 11.95 % and renal insufficiency the 11.5 %. The geriatrics syndromes were: walking disorders 64.1 %, inflexibility 45.7 %, cognitive damage 29.6 %, emotional disorders 26.9%, urinary incontinence 21.5 % and falls 18.3 %. Functionality conditions: Spanish Red Cross scale, in the level 5: physic 27.43% and psychic 28.32%. FIM, Motor, less than 80 points the 70%, cognitive less than 20 points the 30.97%. Dental conditions, the 40% doesn't use prosthesis.. The cholesterol levels, 19.47% present level over 200 mg/dl, TG, 20.8 % has more than 150 mg/dl. Plasmatic glucose over 100 mg/dl, 18.58%, BMI 23-28 kg/m<sup>2</sup> are 50.8 % and plasmatic album low 3.5 mg/dl are 61.95%. **CONCLUSIONS:** 1.- Doing a valuation at the entrance of each hospitalized patient allows us get different patients profiles, candidate, at the same time, to different levels attention once their acute illness is treated. 2.-Is evident the loss of functionality, prevalence of cardio and brain vascular pathology, hight frecuence of geriatric Syndrome.

**PB6 473 RISKS MANAGEMENT – AN EFFECTIVE TOOL FOR IMPROVING QUALITY OF CARE IN SHOHAM GERIATRIC HOSPITAL , PARDES- HANNA, ISRAEL**

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Risks management is an effective tool that enables constant organizational evaluation. Staff members might be involved in the process and they should be directed toward efficient decision making, in order to improve quality of care in the facility. The workers and managers of the facility believe that risks management is an integral part of quality alignment and by using this tool there is a real opportunity to minimize damages caused by the medical system and eventually to improve processes. A special inter-professional team was gathered. The team members participated in additional training and further education sessions. The first task of the team members had been developing a sophisticated system of risks management that enables tracing errors or potential errors – everything based on reports transferred by the patients. Elderly patients are in high risk for accidents. As part of our duty, we collected information and data about dozens cases of injuries in the facility in order to develop higher standards of work and to prevent the next injury. Members of the “task force” proposed creative and innovative ideas in order to improve the situation and to prevent injuries. Examples: Higher bed panels, Anti Tipper , Safety belts, Chairs designed for bathing with safety mechanism, Changing the daily schedules/routines. In 2004, a special project was launched to prevent injuries of mentally frail patients. Hip protectors were used in order to prevent injuries of the hips. The results were outstanding: there was a decline of 85% in the injury rates. It became a standard of work in 2005, according to the Ministry of Health. I am going to present statistical data (data collected between 2000 – 2007) as well, in order to strengthen our initial hypotheses regarding injuries, reports and medical/nursing errors.

**PB6 474 GERIATRIC ORAL HEALTH INDEX (GOHAI) X CLINICAL EXAMINATION**

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Introduction: In the past the elderly population corresponded to a relatively small parcel and, as in general, most of them edentulous. Today we note, the emergence of a new

elderly class, with more education, political information and, most important having increasingly dental elements. To evaluate oral health it is evident the limitation of classical practices to measure the odontological problems and resulting treatment indication. Index as DMFT (Decayed, Missing and Filled Teeth) or the CPI (Community Periodontal Index) takes in account only the clinical dimensions. Atchison & Dolan (1990), developed the Geriatric Oral Health Index (GOHAI) as a way to measure self perceived geriatric oral health. Objectives: evaluate self perceived oral health by elderly, using the Geriatric Oral Health Index (GOHAI), identify the presence or absence of dental caries, periodontal disease, edentulous and prostheses. Methodology: This is a cross sectional epidemiological study, the sample composed by 157 individuals with 60 years or more, registered at the outpatients geriatric specialized at the Pernambuco Federal University/UFPE, where the interviews was carried out and also the oral examination. Results: most of participants were female 77.1%, dental caries absence in 72.6%, periodontal disease in 71.3%, edentulous in 65.0%, and prostheses presence in 88.5%. With respect of the Geriatric Oral Health Index (GOHAI), 53.5% classified it as very good, 40.8% as good and 5.7% as bad. Conclusion: the results lead us to conclude that clinical results, objectives, were compatible with subjective data obtained through GOHAI instrument and can be a good predictor for oral health assessment, when in combination with other indicators.

**PB6 475 SELECTED FACTORS PREDICTING OSTEOPOROSIS PREVENTIVE BEHAVIOR AMONG NURSING PERSONNEL**

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**Background:** Osteoporosis is a silent disease affecting primarily women. Consequently, postmenopausal women will suffer an osteoporotic problem during lifetime. The current approach to the assessment of several risk factors based on the osteoporosis preventive behaviors (OPPB) is needed. **Purpose:** The aims of this descriptive correlational study were: to investigate the relationship between selected factors (age, education level, income, body mass index, hormone replacement therapy, knowledge about osteoporosis, and health belief about osteoporosis) and OPPB; and to examine the power of the selected factors to mutually predict OPPB among nursing personnel. **Methods:** A total of 170 nursing personnel aged between 20-60 years working at three government tertiary care hospitals in Bangkok were recruited in the study. Data were collected from April to June 2008 using instruments including: the Demographic Questionnaire; the Osteoporosis Knowledge Test; the Osteoporosis Health Belief Scale; the Osteoporosis Self-Efficacy Scale; and the Osteoporosis Preventive Behavior Questionnaire. Statistical analysis was performed by using descriptive statistics, Pearson's product moment correlation coefficient, Spearman rank order correlation coefficient, and multiple regressions. A p value < .05 was considered statistically significant. **Results:** Findings revealed that participants have had moderate knowledge about osteoporosis, and 89.2% of those had low level OPPB. Moreover, a significant inverse relationship was noted between perceived barriers of osteoporosis preventive behavior and OPPB, yet a positive relationship was noted between self – efficacy and OPPB; and health motivation in osteoporosis prevention and OPPB. All selected variables could together explain 28% of the variance in OPPB; self – efficacy in osteoporosis prevention emerged as the strongest predictor of OPPB among participants. **Conclusions and recommendations:** This result suggests that further study needs to emphasize what interventions increase osteoporosis knowledge and promote osteoporosis preventive behavior among nursing personnel for decreasing the risk of osteoporotic fractures in later life.

**PB6 476 ADHERENCE PROFILE TO HIGHLY ACTIVE ANTIRETROVIRAL THERAPY OF THE PACIENTS OVER THE 50 YEARS OUTPATIENTS ATTENDED IN THE INFECCIONS DISEASE DEPARTMENT OF UFTM.**

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Since the introduction of highly active antiretroviral therapy (HAART), AIDS patients have been provided with the possibility of growing old with the disease. Elderly HIV (human immunodeficiency virus)-positive individuals form an emerging category in industrialized countries. We hypothesize that HIV-positive individuals over the age of 50 years would have combination of factors contributing towards worse adherence to antiretroviral treatment than among younger individuals. Patient adherence to HAART was defined as cases in which the individuals attended consultations and took their medication away with them every month for six months, or only missed one appointment and/or one dispensation of the medication (which would correspond to 80% adherence). A prospective cohort study was conducted concurrently with a cross-sectional study, for six months, with 101 individuals who were making regular use of HAART fulfilled the inclusion criteria. Adherence to the antiretrovirals was assessed according to the monthly dispensation of the medication, presence at consultations and self-reporting, in two groups: younger individuals (50 patients) and over 50 years old (51 patients). Epidemiological, neuropsychiatric and socioeconomic data were collected by means of the Mini-mental State questionnaire (to assess cognitive decline), the Geriatric Depression Scale (to assess depression) and investigations of patients' medical records, for descriptive statistical analysis, univariate and multivariate analyses and correlation tests. Among the variables

analyzed, no separate significance regarding adherence to HAART was found. However, Spearman correlation analysis showed greater adherence to HAART among the younger group, after adjusting for age. We could conclude that the older individuals presented lower adherence than did the younger ones. Furthermore, out of all the variables studied, no single factor was identified as a determinant for the level of adherence to HAART among the older group of patients. The adherence process must therefore be multifactorial.

**PB6 477** A PILOT STUDY OF BANXIA HOUPE TANG, A TRADITIONAL CHINESE MEDICINE, FOR REDUCING PNEUMONIA RISK IN OLDER ADULTS WITH DEMENTIA

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Objective: To evaluate whether the traditional Chinese herbal medicine "Banxia Houpu Tang" (BHT, formula magnolia et pinelliae) prevents aspiration pneumonia and pneumonia related mortality in the elderly. Design: A prospective, observer blinded, randomized control trial. Setting: Two long-term care hospitals for handicapped elderly patients in Japan from March 2005 to February 2006. Participants: A hundred and four elderly patients (31 men and 73 women; age  $83.5 \pm 7.8$  [mean  $\pm$  SD] years) with cerebrovascular disease, Alzheimer's disease, and/or Parkinson's disease. Measurements: The occurrence of pneumonia, mortality due to pneumonia, and the daily amount of self-feeding. Interventions: 95 participants (mean age was  $84.0 \pm 6.5$ , M:F= 28:67) were randomly assigned to the BHT treatment group ( $n = 47$ ) or the control group ( $n = 48$ , control) and took BHT or placebo for 12 months. Results: Ninety-two cases were statistically analyzed. Four patients in the BHT group developed pneumonia and 1 died as a result of pneumonia. Fourteen patients in the control group developed pneumonia and 6 of them died as a result. There was a significant difference between the two groups in pneumonia onset ( $p=.008$ ), and a tendency toward significance in pneumonia related mortality ( $p=.05$ ). The relative risk of pneumonia in the BHT group compared with the control group was 0.51 (95% C.I. 0.27-0.84,  $p=.008$ ) and that of death from pneumonia was 0.41 (95% C.I. 0.10-1.03,  $p=.06$ ) according to the Cox proportional hazards mode. No adverse events were observed by the treatment with BHT. The daily amount of self-feeding was significantly maintained in the BHT group compared to the control group ( $p=.006$ ). Conclusion: BHT reduced the risk of pneumonia and pneumonia-related mortality in elderly patients.

**PB6 478** ASSOCIATION OF SOME SPECIFIC NUTRIENTS WITH PERIODONTAL DISEASE IN OLDER ADULTS: A SYSTEMATIC LITERATURE REVIEW

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Objective: Over the past decades, the proportion of adults who have retained their teeth until late life has increased substantially, from 30% to 65%. Periodontal disease is a serious concern in older adults retaining their teeth. Deficiency of vitamin B-complex, vitamin C, vitamin D, calcium, and magnesium has been associated with periodontal disease. Study Aim: Systematically review of the current available literature on the association of vitamin B-complex, vitamin C, vitamin D, calcium, and magnesium with onset or progression of periodontal disease in adequately nourished adults aged 50 years and older. Method: Systematic review of relevant English and Dutch medical literature published between January 1990 and May 2007 with critical appraisal of those studies evaluating the association of vitamin B-complex, vitamin C, vitamin D, calcium, and magnesium with onset or progression of periodontal disease in older population groups. Results: No significant or consistent association was found of vitamin B-complex, vitamin C, vitamin D, calcium, and magnesium intake with periodontal disease onset or progression in populations of adequately nourished, non-institutionalised older adults. Although low vitamin C levels were found to be associated with periodontal disease, no conclusive evidence was found. Conclusion: There is no evidence of an association of vitamin B-complex, vitamin C, vitamin D, calcium, and magnesium with onset or progression of periodontal disease in adequately nourished older adults.

**PB6 479** INCIDENCE AND CAUSES OF ADMISSIONS DUE TO IATROGENIC REASONS IN THE ELDERLY AND THEIR PREVENTABILITY: ONE YEAR STUDY IN A GREEK UNIVERSITY HOSPITAL

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Background: New medications and invasive interventions have radically changed the causes and incidence of iatrogenic diseases (IDs). Aim: To weigh up the occurrence, severity and unavoidability of IDs in the elderly patients admitted in our hospital, from

January 2007 to January 2008. Patients and Methods: During the study period, 18073 patients were admitted in the Internal Medicine department of Patras University hospital. 1324 (7.3%) patients, all older than 65 years old, were admitted because of an iatrogenic reason. Results: Of all these admissions, 72.3% could be preventable. 799 (60.3%) patients were admitted because of a drug-related adverse event. It was noted that these patients were administered more medications than those admitted for other causes. Most of these adverse events (58%) were originated from a single agent and 27% of these incidents were reactions to multiple drugs. Amongst the drugs most commonly implicated antiplatelets ranked first (24.7%) followed by diuretics (18.7%), oral anticoagulants (15.3%), cardiovascular medications (11.8%) and sedatives (8.7%). Poor patient compliance (31.7%) inappropriate prescriptions (29.8%) and inadequate monitoring (19.7%) were predominantly associated with preventable drug-linked admissions. Most of these patients had presented with bleeding diathesis (21.2%), electrolytic disturbances 18.4%, postural hypotension and fall (15.7%), and obtundation (9.7%). Poor patients' compliance and inadequate monitoring were connected with the severity of presenting signs and symptoms. 292 (22.1%) patients were admitted after a previous surgical intervention and 233 (17.6%) were admitted after a medical invasive procedure. Conclusions: Adverse drug reactions are the most common causes of admissions in the elderly but advanced medical and surgical interventions also have a considerable share. Most of these admissions are preventable and physicians should concentrate their efforts to reducing those

**PB6 480** GERIATRIC EDUCATION FOR ALL: THE UNIVERSITY OF PUERTO RICO GERIATRIC EDUCATION CENTER EXPERIENCE (UPR-GEC)

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Introduction: The three level of training of the geriatric education program addressed to faculty leaders, health professionals/services providers and older adults is the response to the continuous changes in the Puerto Rican society: increasing of the elderly population, increasing of the health care needs for older adults, the complexity of health conditions requiring other health professional's interventions and the shortage of geriatricians. The older adults represent 15.4% of the total population according to the US Census 2000, and have lower level of health literacy. Is imminent a multi and interdisciplinary team based approach in order to allow the application of health promotion and disease prevention strategies to deal with the specific health care needs of the elderly population. Besides, there are 54,120 active health professionals who at some point provide services to older adults in diverse care settings (Puerto Rico Health Professional Register, 2006) From this total, 8,765 are physicians, and only 15 are geriatricians (Statistic Division, Department of Health, 2004-07). Methodology: The UPR-GEC, since its inception in 1986, had committed its efforts in the development of many geriatric education initiatives. For faculty leaders, 12 Credits on Basic Aspects in Geriatric, 20, 30, 40 hours seminars on geriatrics and 24 to 72 hours of clinical practice were implemented. Health professionals and services providers received 10 to 30 hours seminars on mental health, interdisciplinary teamwork, management and treatment of chronic conditions. Furthermore, older adults received education on health promotion and disease prevention. Results: Approximately, a total of 71 faculty leaders, 2,356 health professionals/services providers and 1,444 older adults have being trained 2000 to 2008. Conclusion: Through geriatric education, the trainees are exposed to increase their knowledge and skills on the special health care needs of the elderly population.

**PB6 481** LEISURE IN THE COURSE OF ACTIVE AGEING: THE EXPERIENCE OF THE OPEN UNIVERSITY FOR SENIOR CITIZENS

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INTRODUCTION: Leisure enables social interaction, creativity, personal growth and physical exercise. The choice of leisure activities among elderly individuals depends on motivation, life history and culture. An active life, including leisure and physical activity, contributes toward health and healthy ageing. The aim of the present study was to characterize leisure activities performed by participants in the Open University for Senior Citizens and identify the information demands of elderly individuals for improving the program. MATERIALS AND METHODS: A structured questionnaire was used to characterize the socio-demographic profile and activities of elderly individuals who participate in the Open University. RESULTS: Fifty-three elderly individuals participated in the University, 40 of whom answered the questionnaire. The interviewees were predominantly female, aged 61 to 85 years; 43% had a high school education; 28% had a complete university education; 43% were widowed; and 40% were married. Reading was the leisure activity indicated by 83%, followed by going out (70%) and traveling (65%). All the interviewees practiced regular physical exercise; 88% went on walks; 15% performed water aerobics; 13% performed aerobics; and 20% went on walks and performed another activity (aerobics, water aerobics, yoga or dance). Walking was the main physical activity among individuals aged 75 years or older (18% of the sample). The results revealed that the group of elderly individuals was active and performed the activities cited in the literature as those best indicated for this age group. The study also

found other activities of interest to be explored in upcoming offers of the project, such as dance, tai chi and global posture rehabilitation. CONCLUSION: The elderly individuals who attend the Open University performed regular leisure and physical activities and should be encouraged to continue doing so due to numerous benefits such activities offer to the process of active ageing.

**PB6 482 PHYSICAL ACTIVITY AND HEALTHY AGEING: THE EFFECTS OF RESIDENTIAL LOCATION.**

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Introduction: For older adults, regular participation in physical activity has the potential to improve their health and wellbeing and enable them to live independently for longer. Nonetheless, research indicates that up to 50% of older adults are insufficiently active to realise health benefits. Emerging research suggests that residential location may be an important factor influencing the activity levels of older people. Methods: Older Tasmanian adults ( $M=76+6$  years), resident in a suburban retirement village ( $n=25$ ) and a rural township ( $n=17$ ), were surveyed for their activity levels, along with their perceptions of the enjoyment, value and cost of being physically active. Semi structured interviews were conducted to explore physical activity issues within each community. Results: Preliminary survey results indicated that in both locations perceptions of enjoyment and value of physical activity were high and costs associated with being active were relatively low. Respondents in the rural township were significantly more active than those in the retirement village, and a strong correlation was detected between younger age and increased levels of physical activity in the township but not in the retirement village. Interview data revealed that retirement village residents were not required to undertake garden or house maintenance, and although many sporting activities were offered at the village, attendance at these had been steadily declining. Conversely, comments from township residents indicated that the majority of their physical activity was derived from activities of daily living. Conclusions: Preliminary results from this study indicate that ageing location can have a significant impact on physical activity levels and that while freedom from having to maintain a residence was one of the attractions of moving to a retirement village this form of energy expenditure was not necessarily replaced by increased participation in available activities.

**PB6 483 THE ADVENT OF LONGEVITY AT WORKOCCUPATIONAL MEDICINE AND THE ELDERLY WORKERS: A NEW PROPOSAL FOR MEDICAL PERIODIC EVALUATION.**

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This paper aims to characterize the need to draw up a specific program for the elderly medical assessment work taking into consideration the growing aging population in general and the consequent increase in the number of elderly in action in the labor market, thereby as the needs and demands of this group of occupational health workers. Through the formulation and implementation of an evaluation program for elderly prescription for action in the labor market, which is the differential approach on diseases commonly present in this age group, a study was conducted based on retrospective review of 50 medical records of patients elderly inserted in various activities in the labor market and undergo periodic medical examinations. It appeared that in addition to the already expected presence of several degenerative pathological changes associated with other comorbidities, the occurrence also of great importance to cognitive disturbances combined with depression, disturbance of memory and low self-esteem, and sleep disorders, which are usually not, are valued at an occupational medical examination. Taking into account the results, discusses the need for deployment and implementation of an occupational medical examination differently, using standardized tools for the detection of cognitive changes to have better health promotion and better working conditions for this new age group in action.

**PB6 484 POLYPHARMACY IN ELDERLY "A MULTICENTER STUDY"**

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Introduction: Polypharmacy is highly prevalent in the elderly secondary to the increased number of co-morbid disease states. We aimed to evaluate the polypharmacy issue and its correlations with socioeconomic variables in Turkish elderly patients. Methods and Materials: A total of 1430 elderly from outpatient clinics of the medical schools, departments of Physical Medicine and Rehabilitation from 12 provinces in different geographical regions of Turkey during January 2007-January 2008 were included in this cross-sectional study. Patients were interviewed using a questionnaire which included demographic characteristics, current medical diagnosis and pharmaceuticals that are used by elderly. Demographical parameters were gender, age, marital status, number of children, level of education, province and status of retirement. Results: The mean number of drugs was found to be higher in the females compared to males and statistically different among age groups. There was a statistically significant difference between marital status

groups and the number of children categories regarding the number of drugs used per day. The distribution of the number of drugs among education levels did not differ significantly, where the distribution of the number of drugs among the status of retirement and the presence of chronic disease differed significantly. Conclusions: The present study shows that polypharmacy is correlated with various factors including age, sex, marital status, number of children, status of retirement and presence of chronic medical conditions but not educational status in our study group. Acknowledgements: We would like to thank Professor Selcuk Kucukoglu, Professor Tiraje Tuncer, Professor Sami Hizmetli, Professor Nigar Dursun, Instructor Suzan Sen, Associate Professor Sibel Eyigor, Professor Merih Saridogan, Associate Professor Hatice Bodur, Instructor Ahmet Tutoglu, Professor Ferhan Canturk, Associate Professor Ayse Turhanoglu, Associate Professor Sule Arslan, Assistant Professor Aynur Basaran, Professor Ergun Karaagaoglu, Professor Cigdem Tuzun for their help for data acquisition & analysis.

**PB6 485 HERPES ZOSTER BURDEN OF ILLNESS: PREVENTIVE STRATEGIES**

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The burden of illness and healthcare resource utilisation associated with herpes zoster (HZ) in individual aged 50 years or above is substantial causing severe loss of quality of life (QoL). Herpes zoster (HZ) incidence varies 1.5 to 5.0 per 1000 person-years in adults of all ages, and is near 11 cases per 1000 person-years in individuals aged over 60. The most frequent and debilitating complication is post-herpetic neuralgia (PHN). In the absence of antiviral therapy, up to 45% of over 60 year-olds experience pain which persists for 6 months to a year. The importance of preventive strategies for PHN is becoming widely recognised. Several systematic reviews support the short-term benefit gained from antiviral drugs, with limited evidence for a reduction in the incidence of PHN. Thus complementary analgesic drugs are often required. However, prescription of advised medications in old, frail, co-morbid and poly-medicated patients have to be carefully considered as their use may be contraindicated. In this context, the proven efficacy of the first HZ vaccine by randomized control trials is a great achievement. By reducing the emergence of both HZ by 51% and PHN by 66%, in individuals over 50 years of age, this vaccine promotes healthy ageing and improved quality of life. Many strategies to prevent PHN are available, but vaccination appears to be the best option.

**PB6 486 THE EFFECTIVENESS OF A CONSTIPATION PREVENTION PROGRAM FOR HOSPITALIZED ELDERLY WITH HIP SURGERY**

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Background: Constipation has been reported as a health problem among hospitalized elderly, especially the elderly undergoing hip surgery. The intervention that can be prevented or decreased the incidence and severity of constipation is needed. Objective: The purpose of this quasi-experimental study is to examine the effectiveness of a constipation prevention program for hospitalized elderly patients undergoing hip surgery. Methods: The sample consisted of 60 hospitalized elderly who were admitted to an orthopaedic ward at the University Hospital, Bangkok, Thailand, from March to October 2008. The participants were assigned into two groups: the control group consisted of 30 participants who received usual care; the other 30 participants of the experimental group received a constipation prevention program. The program was composed of: the education program providing information related to a natural pattern of normal bowel evacuation; the program of dietary intake; the program of water intake; the program of physical activity and exercise; and the program of habitual defecation practice for prevention of constipation. Data collected in this study were: the demographic record form, the daily defecation record form, the bowel pattern assessment form, and the constipation risk assessment form. The statistical analysis was performed by using descriptive statistics, Chi-square, and t-test. Results: Results revealed that the experimental group had statistically significant lower incidence and less severity of constipation postoperatively than those in the control group. Conclusions and recommendations: The constipation prevention program is effective in reducing the incidence and severity of constipation among the hospitalized elderly who have undergone hip surgery; therefore, it is a useful tool for health care teams to improve quality of care for the hospitalized elderly who are at risk of developing constipation.

**PB6 487 A STUDY OF FACTORS FOR LONG HOSPITAL STAYS AND FREQUENT ADMISSIONS: SEEKING TO HELP SENIOR CITIZENS AVOID HOSPITALIZATIONS**

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Introduction: The purpose of this study was to learn, from older hospital inpatients who were frequently admitted to hospital (2+ times/year) or who had long hospital stays (35 days or more) and from others who knew these patients, what contributed to their considerable need for or use of hospitals. This study was undertaken as only a small proportion (1-6%) of hospital patients are frequently admitted to hospital or have long hospital stays, yet their use of hospital resources is disproportionately large (25-40% of total utilization). Methods:

Ethnography was employed, with patients and their caregivers asked two main questions: 1. What is making you need to be admitted frequently to hospital or stay in hospital for a long time? 2. What could be done to help you - so you could avoid being admitted to hospital or so you would not need to stay for a long time in hospital? Family members and formal care providers who were identified by the patient and who volunteered to provide additional data were similarly interviewed. Results: Three themes emerged: 1) High users are high needs patients who have complex, chronic and severe health problems. 2) Various factors that are absent within the community increase their need for hospital-based care. 3) Numerous factors within the hospital and lack of post-discharge options leave patients "trapped" in hospital. Conclusions/Implications: This study identified the relevancy of General Systems Theory, with inputs, through puts and outputs identified as important to address if seniors are to avoid considerable hospitalization. This study indicated a need for increased community-based health promotion and support for high-needs persons, additional specific attention in hospital to high users, and improved access to alternative care options such as subacute care, hospice, and home care to enable discharge from hospital.

**PB6 488 THE PERSONAL FUNCTIONAL CONDITION OF ELDERLY ADULT PACKERS IN SUPERMARKETS**  
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Introduction As in the rest of the world, Mexico is experiencing an aging process characterized by an increase in absolute and percentage numbers in the elderly population. Methods and materials The design of the study was transverse analytical. The objective was to identify social-demographical and social-economical characteristics and the analysis of the state of health. The information was obtained by means of personal standardized interviews, and the Yesavage scale was applied. Between May and July 2008, 416 voluntary packers from the SORIANA supermarkets in the Metropolitan Area of Guadalajara, were chosen from shops randomly selected from 4 regions. Results The average age was 69.4 years and the range studied from 60 to 87 years. The majority of men form part of family homes whilst the women live in extended homes and even alone. The schooling in both sexes is of primary level. With respect to occupation this differs, twice the number of males being formally employed in comparison with female employment which is often in the informal sector; hence, the men receive their respective pensions and the women do not claim a pension or retirement. The social-economic level indicates better conditions for men belonging to the medium-low class; in the case of the women, the situation shows that these are from the lower class. The self-perception of their state of health is generally satisfactory, with an existing cardiovascular risk for both sexes; however, the men do not show an important number of pathological symptoms. Illness is different in both groups being more frequent in the women. The scale of depression for the majority is normal. The reasons for their activity as packers were mainly due to economic necessity. Conclusion The results allow us to conclude that aging is different between men and women.

**PB6 489 THE IMPORTANCE OF THE ORAL HEALTH TO THE GENERAL HEALTH IN FRAIL GERIATRIC PATIENTS**  
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Poor oral hygiene is closely connected to pneumonia, atherosclerosis, infection related diseases and malnutrition. The data of the present investigation suggest that regular dental prophylaxis on a professional basis leads to an increase in quality of life as well as in the general condition and minimizes the risk of morbidity. The WHO states that in 2030 COPD is going to be the fourth common cause of death. The oral cavity is among others a definite cause for COPD. Specific mouth associated germs are verifiable in atheromas of the coronary blood vessel and cerebral vessels. Over 80 percent of elderly living in long term care institutions in Austria, Germany and Switzerland, show acute inflammatory processes located in the mouth. Quality of life among elderly is associated with analgesia and appropriate mastication. A great deal of annoyance in this area can lead to malnutrition and declines the quality of life as well as the general condition. It is a proven fact that poor dental health is closely connected to illness generally, e.g. pneumonia, atherosclerosis and infection related illnesses. Furthermore, regular oral hygiene is an important preventative mean against infection in the dental and oral region and dietary problems; it also upholds the self confidence and quality of life for senior citizens who are in care. Poor oral health affects far more than just the oral region, indeed the whole quality of life can be greatly diminished through this. One only has to consider the recurring pain caused by the pressure of ill-fitting dentures. Prevention of dental pain as well as acute inflammatory processes in the mouth leads to an increase in quality of life as well as in the general condition and minimizes the risk of morbidity.

**PB6 490 THE RELATIONSHIP BETWEEN ORAL DISORDERS AND SENSORY PERCEPTION OF TASTE, SMELL, APPETITE AND HUNGRY IN ELDERLY WOMEN**  
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**INTRODUCTION:** Oral changes associated with aging, including depressed levels of taste and smell perception could diminish appetite, consequently endangering health conditions. Oral cavity participates in an important way in these perceptions, because it is richly endowed with sensorial systems. **AIM:** To assess the relationship between oral disorders like chronic periodontitis, tongue hygiene, wearing prosthetic dentures, absent teeth and sensory perception of taste, smell, appetite and hunger. **METHODS:** Cross-sectional clinical study. **SUBJECTS:** 228 elder females, 60 years and older living in a free style form. Cognitive deterioration, depression, alcoholism, tobacco and diabetes were exclusion criterions. Assessed: age, marital status, education level and oral disorders: wearing dentures, absent teeth, chronic periodontitis (Periodontal Index in Communities), tongue hygiene (Method of Miyazaki) and showing more than two oral disorders. The Appetite Hunger Sensory Perception questionnaire, (AHSP) was used to assess appetite, hunger, smell and taste perception. **RESULTS:** Women were primarily 60-74 years old; widows, and a low-level education (56.6%), (59.2%), (79.8%). Multivariate logistic modeling was used to make control for the potential confounding effects of age, education level, marital status and co-morbidity. Among women wearing denture on both maxillaries or wearing just one were significantly ( $p<0.02$ ) more likely to have lower taste perception than those without conditions; OR 2.1, 3.1. Women wearing denture on both maxillaries or wearing just one moreover showing a bad hygiene of tongue were significantly ( $p<0.05$ ) more likely to have lower appetite perception than those women without it; OR 4.5, 4.6, 2.1 respectively. **CONCLUSIONS:** Specific oral disorders were associated with taste and appetite perception in elderly women.

**PB6 491 BEST PRACTICE IN GERIATRIC HEAR CARE - A CONCEPT BADLY NEEDED –**  
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**Background:** Due to the demographic change and the increasing life-expectancy there is an incline of hearing deficiencies among geriatric patients in Germany. In a current evaluation we were able to vindicate the need for a best-practice concept in evaluation and treatment of these patients. A multidisciplinary geriatric team, untrained in this concept, is often unable to detect and evaluate a hearing deficiency correctly. Causing false assumptions that may lead to a misinterpretation of the physical and cognitive skills of the patient and therefore to an insufficient or incorrect diagnosis and treatment of the patient. **Method:** The authors have developed and established a multimodal best-practice concept for the detection, evaluation and care for geriatric patients with hearing impairment. The „Geriatric HearCare Service“ (staff education, communicative skills, ENT and neuropsychological exam, documentation etc.) ensures a standardized procedure, for the diagnosis and care of these patients, their physical, emotional and cognitive situation and their need for assistance. More over it helps to differentiate between cognitive decline due to undetected hearing deficiency and other causes. **Result:** Within 6 month 530 geriatric patients were evaluated for hearing impairment under our concept, 170 of these were found positive for a hearing impairment and insufficient treatment, only 45 had a hearing aid, all of them had cerumen obturans and a pathological audiogram. In cognitive testing after the ENT exam and cerumen removal 65 patients had a MMST <24. **Conclusion:** The clinical pathway in the concept for Best Practice in Geriatric HearCare enables the geriatric team to ensure not only a better and resource-oriented care for geriatric patients, but also to a better differentiation of patients cognitive and emotional behaviour due a hearing deficiency and other causes like dementia and depression and provides a structure for follow up and provision of hearcare support.

**PB6 492 RELEVANCE OF PROTON PUMP INHIBITORS' PRESCRIPTION IN GERIATRICS**  
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**Introduction** The proton pump inhibitors' consumption represents a huge cost for the Health insurance, estimated over a billion euros a year in France. A great proportion of prescriptions do not agree with the French defined recommendations. We conducted a study to estimate the validity of the indications of proton pump inhibitors (PPIs) therapy in hospitalized geriatric population and to identify the main reasons for un-necessary prescriptions. **Patients and method** This was a prospective study. All the patients hospitalized in the department of geriatric medicine over a period of 9 consecutive weeks were included. The patients treated with PPIs were separated in 2 groups: in accordance or not with a valid indication, published by the French agency for the safety of health products, AFSSAPS (Agence Française de Sécurité Sanitaire des Produits de Santé) in 1999. Epidemiological data, PPIs' duration of therapy, functional status and the CIRS-G co-morbidity score were collected. **Results** Among 257 hospitalized patients, 86 were treated with PPIs (33.5%), 51 prescriptions (59.3%) were inappropriate. In 60% of the cases, the duration of treatment was over 6 months. The main non-conform indications were respectively: co-prescription with low-dose aspirin (43.1%), lack of reevaluation of

the validity of the treatment (27.4%) and a microcytic not investigated anaemia (13.7%). The probability to observe a conform prescription was significantly associated with the conjunction of: a lower functional decline, prescription in ambulatory and performance of an endoscopic procedure ( $p=0.046$ ). Conclusion This study highlights the frequent prescriptions of PPIs therapy in geriatrics and the high prevalence of inappropriate treatments. A reevaluation of the long term treatments with PPIs would easily reduce a quarter of the prescriptions. Prevention of the hemorrhagic risk of anti-platelet agent remains an interesting debate.

**PB6 493 TIME-TRENDS IN PREVENTIVE DRUG TREATMENT AFTER MYOCARDIAL INFARCTION IN COMMUNITY-DWELLING ELDERLY PATIENTS**  
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Introduction With advancing age, myocardial infarctions become highly incident and their prognosis worsens. Secondary preventive drug treatment is believed to result in a cumulative risk reduction of about 75%. Our objective was to explore time-trends in the effect of increasing age on preventive drug treatment in community-dwelling elderly patients with a history of myocardial infarction. Methods and materials A retrospective patient record study in eighteen general practices in The Netherlands, including all patients >60 years with a history of myocardial infarction (post-MI patients). At one time point in the years 2000, 2004 and 2007, respectively, complete prescription records about the preceding year were obtained for all post-MI patients. In three strata by age, the availability of antithrombotics, statins, beta-blockers and ACE-inhibitors for >50% of days in the preceding year was assessed. Results The prevalence of prior myocardial infarction in patients >60 years in the consecutive years was 234/3717 (6.3%), 266/4489 (5.9%) and 342/5995 (5.7%), respectively. Combination therapy with at least 3 out of 4 drugs increased over time, from 31% (CI 95% 26-37) of all patients in 2000 to 59% (CI 95% 53-64) of patients in 2007. This increase, particularly in treatment with statins, occurred in all age strata: from 38% to 70% (relative increase 1.8) in post-MI patients 60-69 years, from 31% to 54% (relative increase 1.7) in those aged 70-79 years, and from 19% to 48% (relative increase 2.5) in post-MI patients >80 years. Conclusion Preventive drug treatment in community-dwelling post-MI patients >60 years showed a steep increase over a recent seven-year period. Although in the oldest old (>80 years) the greatest relative increase was observed, they still have most room for improvement.

**PB6 494 ARRREST – ACTION RESEARCH TO REDUCE REPETITION OF STROKE – PHD STUDY**  
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This PhD study aims to: gather stroke survivors' and carers' knowledge and experiences of secondary stroke prevention; review best practice in a participatory action research group; and, understand the role of health workers who support stroke survivors and carers. The main approach for the study is action research which is a democratic process that can facilitate change. Action research allows the participants to bring their own meaning to the discussion. Mixed-methods were used to augment data collection resulting in triangulated output. A self-completion questionnaire was used to establish current knowledge about secondary prevention. Qualitative work followed using focus groups with stroke survivors and carers and one-to-one interviews with health workers. Sampling was purposive and ethical approval was given by the Local Research Ethics Committee. The study commenced in 2007 and is currently in the data collection phase and is planned to be completed in 2010. 85 questionnaires were distributed (71 completed – 84%). On knowledge of healthy living advice the top three rated answers were to: control blood pressure (97% said this would have a major impact); medication adherence (90%); low fat diet (83%). Only 78% of stroke survivors and carers stated that smoking cessation would have a major impact on stroke prevention. The lowest rated answer was taking a multivitamin every day (10%). The focus groups discussed these questions but were flexible to discuss topics prioritised by the participants. It is too early in the study to offer final conclusions, however, in line with the literature review, early findings have confirmed some gaps in stroke survivors' and carers' knowledge regarding secondary prevention. The focus group method has proved successful in building a supportive environment where stroke survivors and carers felt confident to share their knowledge and experiences in depth using an action research approach.

**PB6 495 LEG ELEVATION AND RISK OF RECURRENCE OF CHRONIC VENOUS LEG ULCERS – A PROSPECTIVE STUDY**  
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Introduction Chronic leg ulcers have a significant impact on resources and quality of life for older adults. Unfortunately after healing, up to 70% recur. This study aimed to determine relationships between physical and psychosocial factors, strategies to prevent recurrence and recurrence rates. Methods A prospective follow-up study was undertaken with participants who were diagnosed with a venous leg ulcer and recruited when their

ulcer healed. Data were collected via medical records and surveys at baseline, 3, 6, 9 and 12 months after healing on demographics, medical history, compression therapy, leg elevation, activity levels, psychosocial factors and ulcer recurrence. Median time to recurrence was calculated using the Kaplan-Meier method. Effects of physical and psychosocial factors on recurrence were evaluated using Cox proportional-hazards regression. Results There were 32 recurrences in a sample of 71 participants with a total of 360 months person-time follow-up. Median time to recurrence for participants who undertook at least 30 minutes/day leg elevation was 46 weeks, compared to 27 weeks for participants who undertook less than 30 minutes/day ( $p<0.001$ ). After adjustment for gender, ulcer duration and previous venous surgery, Cox regression analysis found a higher rate of recurrence remained significantly associated with less than 30 minutes/day leg elevation (RR 4.0, 95% CI 1.54–11.2,  $p=0.01$ ); and lower social support scale scores (RR 1.02, 95% CI 1.01–1.04,  $p=0.03$ ). Participants who wore Class 2 compression hosiery for at least 5 days/week were nearly 50% less likely to recur (RR 0.59, 95% CI 0.28–1.28,  $p=0.18$ ). Conclusions These results provide important information on the effectiveness of preventive strategies and the importance of social support when planning self-care activities for this population.

**PB6 496 ASSESSING THE INTEREST OF SYSTEMATIC SCREENING OF SENSORY DEAFFERENTATION IN GERIATRIC DAY CLINIC**  
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Introduction: Sensory deafferentation, in particular visual and auditory impairment in the elderly may lead to social isolation, increase of cognitive dysfunction, disorientation, visual hallucination (Charles Bonnet syndrome), depression and anxiety, decreased quality of life, reduced autonomy and falls. Material and methods: Ninety five patients consulting at our geriatric day clinic were included (age range 68-90 y; 68% women). The main reasons for consultation were cognitive decline (67%) and falls (14%). The presence of visual or auditory deficit was prospectively assessed. Far and near visual acuity was tested for each eye using a Monoyer letter chart at a distance of 3 m and by validated text reading at 33 cm, both with the person's own glasses. Auditory testing was performed for each ear using Fournier's dissyllabic word lists. Results: Visual deficits were observed in 75% (far vision) and 46% (near vision) of patients. 56% of patients showing visual deficit did not have an ophthalmologic consultation during the previous year and 12% did not wear correction glasses. Patients with visual impairment, as compared to patients with normal vision, showed higher dependency in activities of daily living (mean Lawton IADL scales 4 vs 5; and Katz ADL scale 10 vs 7). No correlation was found between visual deficit and frequency of falls reported during the previous year (26% vs 28%). Presbyacusia screening showed 35% of consulting patients had an auditory deficit – only 23% of these had a hearing-aid. Conclusion: This study identified a high frequency of visual (3/4) and auditory (1/3) dysfunction in patients consulting a geriatric day clinic. Systematic screening of sensory deafferentation permits to correct or treat underlying pathologies, and to assure ophthalmological or ENT follow-up. Aggravation of geriatric fragility caused by sensory deafferentation can be countered by offering technological aids and professional counseling.

**PB6 497 SAFE HUG: SECURITY DEVICE TO PREVENT FALLS DURING THE USE OF THE TOILET**  
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The population aging send us to think about strategies for security and comfort for aged population. OBJECTIVE: The geriatric nursing team in partnership with engineering team, developed a security device to prevent falls during the use of toilet. METHODS: This is a report of experience. A search in literature, Internet and in the market was done, and the engineering team searched for suppliers to produce the protective device for the lateral and anterior region when in use of toilet. RESULTS: The prototype was produced in the period of 06/06/2005 and 15/08/2005 and installed in an apartment of the unit of Geriatrics and it was evaluated positively. CONCLUSION: Considering the benefit gotten with the installation of this device and considering that the institution must provide conditions of better security to the patients, it is projected to install similar devices in the new apartments of the Hospital.

**PB6 498 A MODEL FOR FALL RISK REDUCTION IN COMMUNITY-DWELLING OLDER ADULTS USING SOCIAL COGNITIVE THEORY**  
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Introduction: Facilitating behavior change to encourage fall risk reduction among older adults is a necessary step to promote proactive prevention of the devastation associated with falling. Application of Social Cognitive Theory (SCT) addresses the psychosocial dynamics influencing health behavior and provides methods for promoting behavioral

**change.** Methods & Materials: Several constructs of SCT are applicable for fall risk reduction and should be considered when developing a program for community-dwelling older adults. With respect to explanatory constructs, participants may be educated to improve their behavioral capability by learning strategies to reduce risk factors. Expectancies, or values placed on the outcome, are addressed with an emphasis on the importance of prevention and overall health status. Self -control is emphasized by training the participants to make changes and track progress. Constructs that initiate behavior change include observational learning via demonstration and group interaction in a social environment. Also, reinforcements should be provided in the form of positive feedback on improved self-monitoring and prize incentives (e.g., household gadgets) as risks are reduced. Self-efficacy is enhanced as the participants gain task specific confidence by successfully reducing fall risk factors. Results: Application of a theory such as SCT is appropriate with a multi-component intervention such as fall prevention in a community-based setting. Senior Centers and high-rise buildings can offer targeted programs to provide group education and exercise classes for minimal costs by forming partnerships with local health care or academic institutions. In this manner, health care workers or faculty can provide community service in order to meet the needs of older adults who have limited resources. Conclusions: Health care professionals should take a proactive approach with the implementation of theory-driven programs that teach fall risk reduction strategies to empower older adults to make positive changes for prevention behavior.

**PB6 499 SURVIVAL OF GROUPS OF ELDERLY INDIVIDUALS CLASSIFIED ACCORDING TO LIFESTYLE IN A MEDIUM-SIZED CITY IN SÃO PAULO STATE, BRAZIL.**

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**Introduction:** Lifestyle is an unquestionable prognostic factor in survival. **Objective:** To evaluate survival in three groups of elderly individuals classified according to lifestyle. **Methodology:** By utilizing a population-based household survey applied to citizens aged 60 years and older in a city with 120,000 inhabitants in São Paulo state, Brazil, and which contained instruments for quality of life (QL) assessment (Flanagan), questions on 15-day reported morbidity and an open question on what the individuals defined as quality of life, the elderly persons were placed into 3 groups according to answer agreement (Ward's Method). Three-year follow-up survival analysis of this population is presented with results from the Cox model for the groups adjusted by age and sex. **Results:** The final Cox model adjusted for age and sex provided the following result: Group I (elderly individuals who valued keeping commitments as QL reported a larger number of diseases, the habit of smoking and drinking as well as being satisfied for balancing time between leisure and work) OR: 9.26 (1.17 – 73.24); Group II (elderly individuals who defined leisure as QL and who reported a capacity to learn new skills, to learn in courses, group activities, satisfaction with intimate relationships as well as being hypertensive) OR: 8.4 (1.01 – 69.66); Group III (elderly individuals who defined cultivating inner values and doing voluntary work as QL and reported to be satisfied about their families and the comfort of their homes) OR: 10.05 (1.21 – 83.46). **Discussion and Conclusions:** The way one leads one's life and defines QL is a prognostic factor of survival time, assuming that, for a longer period of observation, the results would be even more accurate. Acknowledgments: FAPESP and Group for Epidemiologic Research on the Elderly.

**PB6 500 PREVENTIVE HOME VISITS FOR OLDER ADULTS: A REPORT OF THE DESIGN AND FEASIBILITY OF A NEW PROTOCOL**

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**Introduction:** The search for preventive methods to mitigate functional decline and unwanted relocation by older adults is important. To that end, the preventive home visits (PHV) model uses infrequent but regular visits to older adults, in their homes, by trained practitioners. Evidence about PHV efficacy is mixed but generally supportive. Yet interventions have rarely combined a comprehensive (biopsychosocial) occupational therapy intervention protocol with a home visit to older adults. There is a particular need in the USA to create and examine such a protocol that is also cost-effective. **Methods and materials:** We present the conceptual and practical bases of an occupational therapy-based PHV intervention. The study, funded by the U.S. National Institute on Aging, is being conducted in several North Carolina counties with an effort to establish evidence of feasibility and effectiveness. Investigators are using an experimental, repeated measures design with older (75+ years) community-dwelling adults who are identified as vulnerable. The experimental group receives the PHV intervention four times across 12 months. The therapist makes recommendations to help the older participants continue or implement strategies for well-being. Researchers are collecting various function, participation, health, healthcare utilization, and quality of life measures to test the intervention's effects. **Results:** As of January 2009, 110 participants were enrolled. Feasibility in data collection and intervention delivery was very good with little missing data or attrition to date. The most frequent recommendations by therapists to participants include affirmation of healthy habits, referrals to exercise regimens, and referrals to senior center activities. **Conclusion:**

This in-progress project offers an innovative approach to preventing loss of quality of life and involuntary moves. While the intervention's effects are yet to be determined, we have learned valuable lessons about how to design and implement such a program.

**PB6 501 PREVENTING INFECTION THROUGH THE PROMOTION OF ORAL CARE, IDENTIFYING THE BARRIERS TO GOOD NURSING PRACTICES**

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Nursing interventions provided by Nursing Staff (NS) promoting oral care are essential to prevent infection in the elderly population. In a randomized study this relationships has been explored confirming that prioritizing oral care in nursing care plan reduces critically the occurrence of acquired infections (pneumonia and candidosis). This conclusion leads to engage a grounded theory study to better understand the factors influencing nurse in the performance of this nursing care intervention. The study was multicentric involving Swiss, Belgian and French healthcare settings. Data analysis of semi structured interviews According to the study design inspired by Glaser & Strauss, data were transcribed verbatim following each interview. Data analysis and data collection were conducted simultaneously. A combination of open, axial and selective coding was used and data were analysed to generate initial codes which were subsequently categorized into themes using a constant comparative, iterative approach both within and between informant. Aggressiveness, disgust and poor care planning was the three elements in the machinery leading to poor mouth care quality theory. Implication for nursing practice and nursing education •Mouth care must become a priority for NS. Nurses managers, team leaders and physicians must motivate NS regarding the importance to change their practice. NS must gain knowledge and training regarding oral hygiene and mouth care. Risks associated to poor oral hygiene should be emphasised. •The aggressiveness-disgust-poor care planning gearing theory must be explained to NS. •Quality mouth care does not mean a long intervention. Efficacy regarding mouth care is not synonymous of lengthy care. These messages must be addressed to NS. •Adequate equipment should be available to NS to perform state of the art mouth care.

**PB6 502 CAN ROUTINE PROTECT OLDER ADULTS FROM SLEEP DISTURBANCES?**

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**Introduction** Among the common problems related to age is sleep quality; over half of older adults suffer from symptoms of insomnia. One of its major factors is age related changes in circadian sleep/wake regulation. Constant and organized life style may protect from these changes in circadian rhythms. Preliminary findings have linked daily regularity to quality of sleep among healthy adults and in patients with Parkinson's disease. The current study investigated the relationships between daily routines, functional decline, and sleep quality among community dwelling elderly. **Methods and Materials** Ninety Israeli Russian speaking older adults living in a retirement community participated. Mean age was  $75 \pm 7.49$ , 72% were women, and 82% live alone. Sleep quality was assessed with the Pittsburgh Sleep Quality Index (PSQI). Daily Routines was assessed with Zisberg's Scale of Older Adults Routine. Functional status was assessed with the Lowten Instrumental Activities of Daily Living (IADL) and Bartlett's ADL. Comorbidity was measured with Charlson's comorbidity scale. Older adults' routines were evaluated by a trained interviewer at three time points two weeks apart. Sleep quality, functional status, and comorbidity were assessed during the last interview. **Results** Mean sleep efficiency was 78%, indicating poor sleep, functional status was fairly good (Mean ADL 89 out of 100 and mean IADL 44 out of 50 ), and 75% of respondents indicated fair or good subjective health. Regression analyses indicated that level of stability in daily routine was significantly related to sleep efficiency ( $B=-.627$ ,  $p=.0001$ ), sleep latency ( $B=1.87$ ,  $p=.0001$ ), and total sleep quality ( $B=.100$ ,  $p=.04$ ), beyond functional status, comorbidities and age. **Conclusion** Maintenance of daily routines may be a protective factor against insomnia for elderly. Further studies should examine these relations in broader populations with regard to health, functional status and cultural background.

**PB6 503 ASSESSMENT ON THE QUALITY OF LIFE OF AN ELDERLY POPULATION AT A TOURIST RESORT IN INNER SÃO PAULO STATE, BRAZIL: APPLICATION OF THE FLANAGAN'S SCALE**

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**Introduction:** The increase in life expectancy worldwide and particularly in developing countries such as Brazil leads to an intense demand for studies and analyses in order to better define public policies and improve the quality of life of elderly individuals. **Methods:** The Flanagan Quality of Life Scale was applied to a sample of 365 elderly persons assisted by the public health care network by means of household interviews at a tourist resort in inner São Paulo state, Brazil. The sample was obtained from an unknown

prevalence and stratified by age. Results: Among the 365 elderly persons interviewed, the mean age was 70.26 years with a SD 6.37 years; most of them were females (56.01%); 56.29% were married; 88.52% were retired; 48.53% had attended school for four years and 64.81% had an income of up to one minimum salary. As regards satisfaction about life in general, 93.69% reported to be satisfied. The application of Flanagan's quality of life scale showed Cronbach's alpha value of 0.7660, thus indicating good efficacy for the instrument. Factorial analysis of the answers applied of the scale showed that the elderly valued the following items as quality of life: physical and material well-being, personal development and fulfillment, relationships with other people, social and community activities, thus presenting some divergences with the domains proposed by Flanagan. Conclusion: Hence, in a general context, it is possible to state that the quality of life of the elderly can be considered to be good according to the Flanagan's Quality of Life Scale and its limitations. Additionally, the factors that mostly influenced general satisfaction about life were the lack of opportunities to perform leisure activities, comfort in relation to one's place of residence and financial conditions.

**PB6 504 PREVALENCE AND CAUSES OF VISION IMPAIRMENT AND BLINDNESS IN OLDER ADULT IN BRAZIL: THE SAO PAULO EYE STUDY**

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**PURPOSE:** Investigate prevalence and causes of vision impairment/blindness in older adults in a low-middle income area of São Paulo, Brazil. **METHODS:** Cluster sampling, based on geographically defined census sectors, was used in randomly selecting cross-sectionally persons 50 years of age or older. Subjects were enumerated through a door-to-door survey and invited for measurement of presenting and best-corrected visual acuity and an ocular examination. The principal cause was identified for eyes with presenting visual acuity less than 20/32. **RESULTS:** A total of 4,224 eligible persons in 2,870 households were enumerated, and 3,678 (87.1%) examined. The prevalence of presenting visual acuity > or = 20/32 in both eyes was 61.6% (95% confidence interval [CI]: 59.4%-63.9%), and 80.4% (95% CI: 78.8%-82.1%) with best correction. The prevalence of visual impairment (< 20/63 to > or = 20/200) in the better eye was 4.74% (95% CI: 3.97%-5.53%), and 2.00% (95% CI: 1.52%-2.49%) with best correction. The prevalence of presenting bilateral blindness (< 20/200) was 1.51% (95% CI: 1.20%-1.82%), and 1.07% (95% CI: 0.79%-1.35%) with best correction. Presenting blindness was associated with older age and lack of schooling. Retinal disorders (35.3%) and cataract (28.3%) were the most common causes of blind eyes. Cataract (33.2%), refractive error (32.3%), and retinal disorders (20.3%) were the main causes of vision impairment < 20/63 to > or = 20/200, with refractive error (76.8%) and cataract (12.2%) as main causes for eyes with acuity < 20/32 to > or = 20/63. **CONCLUSIONS:** Vision impairment is a significant problem in older Brazilians reinforcing the need to implement prevention of blindness programs for elderly people.

**PB6 505 GRIP STRENGTH AS A PREDICTOR OF DISABILITY IN BASIC ACTIVITIES OF DAILY LIVING AMONG ELDERLY INDIVIDUALS**

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The measurement of grip strength has been used as a predictor of mortality and loss of functionality among elderly individuals. This fast, simple measure has gained prominence for representing overall muscle strength and has been used as a screening measure in geriatric practice. The aim of the present study was to test the measurement of grip strength as a predictor of disability in basic activities of daily living (BADL) among elderly individuals. A population-based longitudinal study was carried out on 1014 elderly individuals who took part in the SABE study, with no difficulties in BADL, no reports of wrist fracture, pain, stiffness or joint swelling and with complete information regarding BADL and anthropogenic assessment during the 2000 survey. The following variables were analyzed: gender, age, schooling, marital status, Mini Mental State Examination (MMSE), self-report of cancer, heart disease, stroke, arthritis, diabetes, depression, practice of physical activity, number of diseases, body mass index and grip strength (in quartiles). In the 2006 survey, 450 remained independent, 144 had become dependent on at least one BADL and 420 had either died or were considered losses. The logistic regression analysis demonstrated an independent relationship between grip strength at baseline and the risk of disability in BADL after six years of follow up. Among men, the odd ratio for the development of some disability was 5.07 (95%CI 4.74 to 5.42) in the lowest grip strength

quartile when compared to the highest quartile (controlled for the other variables). Among women, the odds ratio of the development of some disability was 3.11 (95%CI 2.98 to 3.24) in the lowest grip strength quartile when compared to the highest quartile. Grip strength is an independent predictor of disability in BADL among elderly individuals

**PB6 506 DETECTION AND MANAGEMENT OF ELDER ABUSE AMONG HEALTH CARE PROFESSIONALS IN IRAN**

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**Introduction** According to the latest census taken in 1996 in Iran, the elderly population aged 60 and older was 6.6% of the whole population and the Census Bureau predict that the elderly age dominance will be more significant from the year 2030 on. The elderly population aged over 60 will be 8.5 million in 2020 and five years later in 2025 this will reach up to 10.5 million. This means the population of aged below 5 years will be the same as older than 60. At that time we will have an explosion in the population of the elderly in the country. Elder abuse is one of the most under-diagnosed and under-reported problems in the United States; little are known about its characteristics, causes, or consequences or about effective means of management and prevention. **Aim** The purpose of this study is to assess the knowledge of health care professionals related to barriers to the detection and strategies for the management of the elder abuse. **Method** This study is a descriptive design. The participants for this study were randomly selected from the IRIMC organization. One hundred participants were selected, included Physicians 20%, nurse 60% and others 20%. The questionnaire utilized was designed. Fisher's exact test was used when appropriate along with the chi square. **Findings** The majority of healthcare professionals reported that most important the barrier of detection is denial of abuse. Other barriers included absence of professional protocol related to elder abuse, lack of clear guidelines about confidentiality in elder abuse situation, absence of knowledge about the prevalence of elder abuse. In the other hand strategies that helpful reported included: professional guidelines or protocol for

**PB6 507 INCIDENCE AND PREDICTIVE FACTORS OF URINARY TRACT INFECTIONS AMONG THE VERY ELDERLY IN THE GENERAL POPULATION.**

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**INTRODUCTION** To target preventive strategies in old age, we investigated which very elderly are predisposed to developing urinary tract infections. **METHODS AND MATERIALS** The current study is embedded in the Leiden 85-plus Study, a population-based prospective follow-up of 589 participants aged 85 years in Leiden, the Netherlands. During a five year follow-up period, information on the development of urinary tract infections was obtained from general practitioners or nursing home physicians. Possible predictive factors of urinary tract infections included socio-demographic factors (gender, living independently, income, education, body mass index, and smoking) and aspects of functioning (cognitive function [MMSE], presence of depressive symptoms [GDS-15], disability in basic activities of daily living [ADL disability/and diagnosis of incontinence], and were assessed at baseline. Relations between predictive factors and urinary tract infections were analysed with Cox regression analysis. **RESULTS** The incidence of urinary tract infections among persons aged 85 through 90 years was 110.96 (95% CI 95.34-126.57) per 1000 person-years. After multivariate analysis gender, MMSE <19, ADL disability and diagnosis of incontinence remained independently associated with the incidence of urinary tract infections. **CONCLUSION** In the very old, declined cognitive function, disability in basic activities of daily living and incontinence of urine are associated with the incidence of urinary tract infections and provide means to target patients at risk of urinary tract infections and severe health complications.

**PB6 508 REGULAR PHYSICAL ACTIVITY AND HEALTH CONDITIONS OF ELDERLY THAT LIVES IN MANAUS-AMAZONAS, BRAZIL.**

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**Introduction:** as the sedentary life style, mainly in elderly peoples, offer higher risk to chronic-degenerative diseases, depression, immunological decrease the objective of this study was to investigate the health conditions related to regular physical activity (self-reported) in elderly inserted in the Estratégia de Saúde da Família (ESF-SUS), Manaus-AM. **Methods and material:** a case-control study was performed from subjects previously included in the project named "Projeto Idoso da Floresta" (n=1509) that investigated the health conditions of elderly inserted in the Estratégia de Saúde da Família (ESF-SUS) de Manaus-A. Data were obtained from structured interview, anthropometric, blood pressure and biochemical (lipid and glicemia) evaluations. The elderly was classified in regular physical activity (AFR) and sedentary (S). **Results:** from 1509 elderly, 1506 answered the question about regular physical activity pattern (98%). 1199 (79.6%) reported no realization of any regular physical activity

whereas 307 (20.4%) report to realize regular physical activity. Distribution of AFR elderly was similar in the four Manaus health macrorregions. 97.1% (271) elderly reported to do regular walking, 04 (1.4%) to realize force exercises and 1.1 (0.3%) other types of exercises. Widow, highest income and education level were more prevalent in AFR group. Self-care was higher in AFR group (43.7%) than S group (23.8%) ( $p=0.0001$ ). Sarcopenia was more prevalent in sedentary male elderly. AFR elderly presented best quality of life parameters and lowest depression. Conclusion AFR elderly present higher autonomy, life quality similar to previous studies performed in other Brazilian regions and other developed populations. We suggest that the health services related to ESF-SUS need to stimulate the practice of regular physical activity as preventive strategy.

**PB6 509 AN NP/CNS INTEGRATED PRACTICE, EDUCATION AND RESEARCH MODEL**

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**Title:** A New Nursing Model for Gerontological Advanced Practice, Education and Research  
**Introduction:** Nurse Practitioner (NP) and Clinical Nurse Specialist (CNS) roles have been broadly conceived in nursing literature. Separately, NPs and CNSs have made positive contributions to the health and well being of older people. These contributions are documented as specialized clinical practice, consultation, education and research. However, few models integrate the contributions of both.  
**Methods:** We describe the development of an innovative practice model where NP and CNS roles are integrated to combine individual and systems care expertise. This model incorporates a wellness, health promotion approach and autonomous nursing practice in a health care clinic located in a congregate living setting that has ties to an academic nursing faculty.  
**Results:** We create a matrix of influence that involves: 1. Mentoring and education of graduate and undergraduate nursing students; 2. A gerontological nursing care research network; 3. Research further into the NP and CNS roles in knowledge translation and exchange; 4. Advancing, promoting and participating in further development of nursing care of older adults within our faculty;  
**Conclusion:** Evaluation of the model using qualitative and quantitative approaches is currently underway. Outcome measures focus on the impact of the integrated model on individuals (clients and their families, health care team) and systems of care (cost effectiveness, use of health care services including ambulance, acute care utilization, ED visits).

**PB6 510 PROTOCOL 4S: STANDARDIZATION OF THE HEALTHY ELDERLY IN STUDIES ABOUT AGEING**

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**Introduction:** Medical literature shows several different definitions for the term “healthy elderly”. Each research uses its own classification what makes difficult a comparison of results. The aim of this protocol is to standardize this population and minimize endogenous or exogenous influences on the ageing process.  
**Methods and materials:** Based on the Senieur protocol and literature review, this protocol was developed in order to exclude situations that do not fit the natural ageing. **Results:** Exclusion criteria were hypertension, diabetes, cancer, heart failure, inflammatory conditions, depression, dementia and others that could influence or accelerate this process like smoking. The protocol also included a questionnaire concerning to social and economic aspects, dietary habits, parents' medical history and exercise practice. Since 2003, up to 120 subjects were included. This population is now being followed up on several other studies about natural ageing.  
**Conclusion:** Literature lacks of a standard definition of “healthy elderly” which leads to different concepts on the selection of samples and incomparable results. The Senieur protocol was pioneer in defining the status of healthy elderly for immunogerontological studies. However, it did not exclude situations that could influence the ageing of the other systems, such as hypertension, heart failure, endocrine diseases and smoking. In order to study the ageing process per se we believe that the use of the 4S protocol can lead to more credible results.

**PB6 511 PREDICTION OF ADVERSE OUTCOMES IN ACUTELY ILL ELDERLY PATIENTS AFTER HOSPITALIZATION**

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**Introduction:** The longitudinal outcomes of patients admitted to acute care for elders units (ACE) are mixed. We studied the associations between socio-demographic and functional measures with hospital length of stay (LOS), and which variables predicted adverse events (non-independent living, readmission, death) 3 and 6 months later. **Methods:** Prospective cohort study of community-living, medical patients age 75 or over admitted to ACE at a teaching hospital. **Results:** The population included 147 subjects, median LOS of 9 days (interquartile range 5-15 days). All returned home/community after hospitalization. Just prior to discharge, baseline timed up and go test (TUG,  $P<0.001$ ), bipedal stance balance ( $P=0.001$ ), and clinical frailty scale scores ( $P=0.02$ ) predicted LOS, with TUG as the only independent predictor ( $P<0.001$ ) in multiple regression analysis. By 3 months, 59.9% of subjects remained free of an adverse event, and by 6 months, 49.0% were event free. The 3

and 6-month mortality was 10.2% and 12.9% respectively. Almost one-third of subjects had developed an adverse event by 6 months, with the highest risk within the first 3 months post discharge. An abnormal TUG score was associated with increased adjusted hazard ratio [HR] 1.28, 95% confidence interval [CI] 1.03 to 1.59,  $P=0.03$ . A higher FMMSE score (adjusted HR 0.89, 95% CI 0.82 to 0.96,  $P=0.003$ ) and independent living before hospitalization (adjusted HR 0.42, 95% CI 0.21 to 0.84,  $P=0.01$ ) were associated with reduced risk of adverse outcome. **Conclusion:** Some ACE patients demonstrate further functional decline following hospitalization, resulting in loss of independence, repeat hospitalization, or death. Abnormal TUG is associated with prolonged LOS and future adverse outcomes.

**PB6 512 QUALITY OF SLEEP AND ITS RELATED FACTORS IN HOSPITALIZED ELDERLY PATIENTS IN KASHAN'S HOSPITALS,2007**

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**Introduction:** Sleep an important variable affecting on the humans health. Need of sleep dose not change with increase of age but its quality is undergoing some change. There are little literature about the quality and pattern of sleep of hospitalized elderly people. This study was conducted to assess the quality of sleep and its related factors in hospitalized elderly patients in kashan's hospitals. **Methods and materials:** A cross sectional study was carried out on a sequential sample of 390 hospitalized elderly patients. A two part questionnaire was used for gathering data. The first part was about personal characteristics data and the second section was the Pittsburgh Sleep Quality Index. Student t-test and ANOVA and  $\chi^2$  were applied for statistical analysis. **Result:** The sample was consisted of 55/4% male and 44/6% female. Age rang of samples were  $71/8\pm5/9$ . Of the total samples 70/8% were illiterate. The total quality of sleep was poor in hospitalized elderly patients, but it was somehow better in men ( $6/22\pm4/9$ ) than women ( $8/32\pm4/33$ ). However, significant differences were identified in all aspects of sleep except that the sleep duration and sleep efficiency for the tow sex ( $p>0/05$ ). Dyspnea ( $9/3\pm4/56$ ), change in sleep habits ( $8/77\pm4/35$ ) and light stimulators ( $10/1\pm4/74$ ) were the most important factors affecting the quality of patients sleep. The quality of sleep had also significant relationship with sleep latency ( $p=0/0001$ ) and having respiratory and blood disorders. **Conclusion:** The quality of sleep was poor in elderly hospitalized patients. This could negatively affect on the process of their treatment. Some rearrangement in the ward facilities and routines can help the elderly patients to have a better quality of sleep.

**PB6 513 HOME HEALTH CARE SERVICES FOR ELDERLY IN THE VALENCIAN COMMUNITY (SPAIN).**

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**Objectives:** to analyse patients and caregivers who receive home health care from primary health centres and hospital at home units in the Valencian Community (Spain) and referral of patients between the centres. **Methods:** For 1,622 home care patients the demographic, health and social characteristics were studied, within the home care pilot programme developed by multi-disciplinary teams in 2005. Six primary care centres (864 patients) and three hospital at home units (758 patients), in three of the 22 departments were used. **Results:** The patients attended by primary health centres compared to hospital at home patients were showed to be older, a higher proportion of women, more architectural barrier problems, a smaller dependence level and a different type of pathologies treated.. From the patients registered in hospital at home units and referrals from primary care, 86.8% were not detected by the latter. Patients' caregivers in primary health centres present less family links, bigger support of paid caregivers and bigger subjective overload. No specific interventions to support caregivers were detected in both resources. **Conclusions:** The patients cared for at home by primary health centres and hospital at home units presented different characteristics and comprise different groups. Continuity between these resources is insufficient. Consequently, both resources attend different groups and provide them with home care services in watertight compartments, with no shared care or mutual support between the organisations. We hereby confirm in our context the spontaneous trend that home care agents have of creating pools of “captive” patients and therefore, configuring parallel networks. We also detected the lack of consideration towards the caregivers as customers of the system. **KEYWORDS:** community health services; home care services; home care services hospital-based; hospital-at-home; continuity of care; caregivers; integrated care

**PB6 514 A RANDOMIZED CONTROLLED TRIAL TO IDENTIFY BIOMARKERS AND COMPRESSION SYSTEMS FOR OPTIMAL HEALING AND QUALITY OF LIFE**

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**Introduction:** Chronic leg ulcers have a significant impact on quality of life and functional ability of older adults, as up to 50% take over six months to heal and many remain

unhealed for years. This study aimed to identify biochemical changes and compression systems associated with optimal healing and quality of life in patients with chronic venous leg ulcers. Methods Eighty patients with venous leg ulcers were randomised to either a compression hosiery system (30-40mmHg) or 4-layer compression bandage system. Data on demographic, medical and ulcer characteristics were collected at baseline, wound fluid samples and data on progress in healing were collected fortnightly for 24 weeks, and quality of life data at baseline, 12 and 24 weeks. Concurrently, wound fluid samples from these patients were assessed using proteomic techniques to examine changes associated with healing. Results After 24 weeks of treatment, 81% of participants were healed. No significant differences in mean percentage reduction in ulcer area was found between groups (95% reduction for hosiery, 96% reduction for 4-layer), or in the proportion fully healed (80% of hosiery, 82% of 4-layer). However, participants in the 4-layer system were more likely to heal by 12 weeks (53% of hosiery, 74% of 4-layer, p=0.04). Proteomic analysis has identified prognostic and diagnostic indicators associated with healing. Other factors associated with poor healing were a BMI<22, ulcer duration >24 weeks, gender and higher depression scale scores. No differences in quality of life scores were found between groups. Conclusions From a clinical care perspective, findings indicate these two compression systems are equally effective in healing patients by 24 weeks, although a 4-layer system may produce a more rapid response. However, combining clinical indicators along with proteomic analysis could provide vital information resulting in customised treatments.

**PB6 515 PREDICTORS AND OUTCOMES OF OLDER PEOPLE'S HOSPITAL ADMISSIONS FOR ILL-DEFINED CONDITIONS**

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Introduction: Hospital admission rates are rising as the population ages in many countries. This is particularly the case for admissions for ill-defined conditions, which are known to be associated with frailty and geriatric syndromes. These admissions are thought to be avoidable, but averting admission is difficult because predictive factors, other than age, are not known. This study explored patient and organisational features of admissions in older people. Methods and materials: Data on all hospital admissions of people aged 65 and over in England were extracted from routine databases for the years 1995-2003 (n=2,793,653). Standardised rates were calculated for ill-defined admissions. Data were extracted from the records of one acute hospital for all medical and geriatric hospital admissions for people aged 65 and over in 2002 (n=6760). Patients with ill-defined and other diagnoses were compared on admission characteristics and outcomes. Results: Age is a driver of ill-defined admissions and the rate of such admissions increases with age, but the incidence rate within each age band has also increased over time. The increase exceeds what would be expected from population ageing alone. Patients with ill-defined conditions are more likely to be admitted to hospital out of GP working hours, via A&E and under the care of general rather than geriatric medicine and are more likely to have a high social deprivation score. Patients with ill-defined conditions are less likely to die, no less likely to be readmitted and more likely to be readmitted for ill-defined causes. Conclusion: An ageing population is likely to result in more hospital admissions for ill-defined conditions, but certain organisational factors also increase the likelihood of such admissions. There is potential to reduce these admissions in frail older patients through appropriate primary care provision.

**PB6 516 GERIATRICS, INTERPROFESSIONAL PRACTICE AND INTERORGANIZATIONAL COLLABORATION: THE GIIC INITIATIVE IN THE PROVINCE OF ONTARIO**

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Introduction: Population aging and especially frailty present significant challenges to the health care system in the Province of Ontario in Canada. Health professionals are presently being insufficiently prepared in the competencies required to care for frail seniors - clinical geriatrics, inter-professional practice and inter-organizational collaboration. Methods: To help build these competencies an inter-professional team of consultants has drawn upon the knowledge base within the co-investigators organizations, prepared an evidence-based Giic toolkit and implemented a province wide knowledge-to-practice program to train and support a resource person within 200 family health teams and community health centers the province. Results: A descriptive design informed by a blend of qualitative and quantitative methods indicates high levels of satisfaction with the knowledge to practice processes, a 75% penetration rate in eligible organizations, an increase in trainee perceptions of self-confidence, an increase in Giic practices, and enhanced linkage between regional geriatric programs, family health teams and community health centers across the province. Conclusions: The Giic initiative seems a productive approach to enhancing the distribution of Giic competencies in two kinds of primary care practice

settings. In a poster presentation an overview of the project and its results will be shared, while in an oral presentation the Giic toolkit and the design of the knowledge to practice processes will be demonstrated.

**PB6 517 HEALTH PERCEPTION, PHYSICAL ACTIVITY AND COPING STRATEGIES TO HEALTH LIMITATIONS OF OLDER ADULTS VOLUNTEERING FOR HABITAT FOR HUMANITY**

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Introduction: With the growth of seniors in the U.S comes an increase of volunteering among older adults. Volunteering improves quality of life, enhances physical and psychological well-being, and has beneficial socioeconomic effects. The purpose of this study was to examine the health perceptions, capability of physical activity, and coping strategies of older volunteers participating in a Habitat for Humanity Blitz Build. These volunteers come together each summer from eleven southern U.S. states to build a house in one week. Methods and materials: Qualitative descriptive methods were used to analyze transcripts and demographic information from 40 older adults, age 57 to 88. Results: The majority of the volunteers were males (60%), Caucasian (92.5%), and married (87.5%). Twenty percent were employed full-time. Many older volunteers had physical problems, but 95% perceived their health as being excellent or good. They remained physically active despite limitations. Physical activities reported among the older volunteers ranged from purposeful exercise such as doing aerobics, walking, or using stationary bicycles to simple stretching activity. Other activities included routine indoor household work, outdoor activities, and recreational activities such as dancing, traveling, shopping, and doing aerobics. Three main coping strategies were used during the volunteering. These strategies included learning when to stop, cutting back, and taking a break to rest. Conclusion: Volunteerism had positive effects for these older adults. It increased their health perception, enhanced physical activity, and promoted optimistic coping strategies. Limitations of the study were the cross sectional design and self-rating of physical health. Longitudinal research is needed on the coping strategies among the older volunteers to examine changes over time. The wide variety of ages participating in Habitat for Humanity activities benefits older volunteers by allowing them to safely engage in physical activity despite increasing limitations.

**PB6 518 "YOUR BODY'S NOT PERFECT AS YOU GET OLDER": A QUALITATIVE STUDY OF LAY PERCEPTIONS OF OSTEOARTHRITIS AND WELLNESS**

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Introduction Professionals have mixed views about the usefulness of the concept of 'wear and tear' to explain OA to patients. Some see an advantage of this explanation is to demedicalise mild cases of OA. Others claim that a consequence of regarding joint problems as a natural part of ageing leads to patients adopting a general attitude that nothing can be done to improve joint pain and stiffness. A qualitative study to investigate why many older people consider themselves to be well while also reporting problems with one or more joints has thrown light on the significance and consequences of the 'wear and tear' explanation. Method Twenty-seven people aged between 56 and 87, who reported having joint pain and stiffness, were sampled from a cohort study of joint pain in Staffordshire, UK. Respondents were interviewed at baseline, and are being followed up for one year - further contact with the researchers during this time is decided by the respondents themselves. Results Seeing their joint problem as a natural part of growing older helped respondents to carry on life as normal. Holding such a view did not cause respondents to avoid physical activity in order to protect their joints from further wear and tear. Indeed, some increased activity to keep mobile. Fulfilling everyday roles and tasks was important for staying well, and respondents were prepared to cope with a degree of pain to achieve this. The relationship between ageing and having 'wear and tear' arthritis was complex, with some respondents considering themselves to be young for their years despite having OA. Conclusions Perceiving joint pain and stiffness to be a result of their bodies ageing helped respondents to feel well and did not cause them to reduce physical activity. Professionals should take account of patients' explanatory model of their joint problem.

**PB6 519 COMMUNITY HEALTH NEEDS AND RESOURCES ASSESSMENT IN NEWFOUNDLAND AND LABRADOR CANADA: SENIORS ISSUES IN PRIMARY CARE**

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Community health needs and resources assessment studies are critical when planning healthy public policy and population health initiatives, especially when considering initiatives for healthy seniors in the community. This study is based on the Population Health Framework and supports the belief that partnerships between community representatives and health care professionals provide valuable information upon which to

base decisions regarding policy and program formation. The purpose of this study was to assess the community health needs and resources of five regions within the province of NL. The study used a descriptive, exploratory design to gather qualitative and quantitative data regarding health needs and resources. The research objectives included assessing health beliefs and practices, determining satisfaction with existing community health and related services and determining utilization of selected health and community services. A triangulation of methods (general public household survey, key informant telephone interviews and focus groups sessions) was built into the study in an attempt to provide both a convergent validity and a broad understanding of the data collected. A random sample of households were surveyed using the international tool "Community Health needs and Resources Assessment Guide" (CHNRG) developed by the Association of Registered Nurses of Newfoundland and the Danish Nurses Organization and modified for use in this study. The findings indicate that seniors wanted a primary health approach to community care. Issues arising included the need for improved home care, elder abuse and social isolation. This presentation will focus on recommendations for addressing senior's issues and concerns and will discuss implications for healthy public policy and population health initiatives for healthy seniors in the community.

**PB6 520 AGE DISCRIMINATION DEFIES PATIENT CENTRED CARE IN PROVISION OF ACUTE CARE OF THE OLDER PERSON: EXTENDING KNOWLEDGE THROUGH DISCOURSE ANALYSIS.**

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Person-centred care is recognised internationally as central to the care of older people. From an acute care perspective, this study revealed tensions between the needs central to older person care and discriminatory systems that govern that care. Implicit and explicit negative attitudes cognitively, affectively and behaviourally impacted the capacity of healthcare staff to contribute to positive health outcomes from acute care situations. Healthcare staff developed coping mechanisms to tolerate bureaucratic systems that perceive the older patient as burdensome and difficult. There are recognised shortages of health care staff worldwide and these shortages were shown to both affect and be affected by negative staff attitudes. Method Qualitative research extended the knowledge of healthcare staff attitudes. Previous research has predominately used questionnaires. Innovatively, this study interviewed a range of health care staff plus patients and carers at the same time. A conceptual framework was based on Foucauldian concepts of power, knowledge and governmentality. Ethics approval for research with human subjects was obtained from both the University and the Area Health Service Ethics committees. Focus groups and single interviews were employed. Results Age discrimination was evidenced through negative attitudes towards care of the older person. Health care staff did not blame, but instead rationalised, the governing systems for poor attitudes. Current systems are evidenced globally through the cost-conscious management of health care. The desire to provide higher standards of care were frustrated by perceptions of powerlessness and inequitable systems with inadequate coping mechanisms. Conclusion Healthcare staff were challenged in their roles of care providers by situations constrained by systems (power). Nationally and internationally, improvements in the care of the vulnerable older person need to be supported by developing manageable workloads, improving knowledge of the health care needs of the older person and by governing systems valuing the older person.

**PB6 521 THE ROLE AND IMPACT OF COMMUNITY MATRONS ON THE CARE OF COMMUNITY DWELLING OLDER PEOPLE LIVING WITH LONG TERM CONDITIONS IN HERTSMERE, UNITED KINGDOM (UK)**

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**INTRODUCTION** Case management is the process of planning, coordinating, managing and reviewing the care of an individual. The demography of patients we provide healthcare to is changing with an increasingly ageing population. This has implications for service delivery to older adults living in the community. In the UK, 3% of over 65 year olds account for 35% of admissions to hospital. Hertsmere has a population of 95000 people and we sought to look at the role and impact of community matrons on very high intensity users of unplanned secondary care using a case management approach to anticipate, coordinate and join up health and social care. **MATERIALS AND METHODOLOGY** All patients were identified from the Hertsmere case management database and their notes were reviewed by one reviewer. **RESULTS** 101 patients were identified. The majority were female (59%). The median age was 77 years with 10% of patients aged 90 years and above. The majority of patients had 5 or more long term conditions with the majority being cardiorespiratory in nature. Patients were identified from a variety of sources; the commonest through their General Practitioner (55%), Consultant Geriatrician (17%) and the Patient at risk scoring tool (PARR)(13%). The main tasks carried out were disease management with clinical management plans put in place for long term conditions, care coordination, medicines management and patient education. The service impacted positively on patient care through the provision of acute episodes of care in a patients home thus preventing the need for the use of secondary care services, facilitating discharge from secondary care, virtual ward rounds and direct access to a Geriatrician and therapy teams.

**CONCLUSION** Community matrons have had a positive impact on the healthcare of older people living in Hertsmere through maximising their functional independence through prevention, education, equity of access and quality care.

**PB6 522 THE ROLE OF A CLINICAL PHARMACIST IN REDUCTION OF DRUG INTERACTIONS AND POLYPHARMACY IN THE ELDERLY IN LATVIA.**

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**Introduction.** Elderly patients are often treated for several medical conditions concurrently with many drugs and thus they are potentially prone to numerous risks of drug interactions. Especially significant interactions may occur between psychoactive medications (tranquillizers, sedatives, hypnotics, antidepressants, anticonvulsants etc.) and other drugs used to treat pain, in cardiovascular, gastrointestinal, pulmonary and infectious diseases. The main objective of this investigation was to survey and evaluate the current situation of geriatric prescribing in Latvia. Methods and materials. We conducted interviews with geriatric patients in several community pharmacies in the capital city Riga, several smaller towns and rural areas. Altogether we received answers from approximately 500 patients over 65 years of age. Respondents were asked to name not only the current prescription drugs but also concurrently taken over the counter (OTC) medications. Results. Polypharmacy (more than 5 drugs at the same time) was observed in a significant number of cases (over 20%). Typical examples include concurrent use of several benzodiazepines. The most undesirable therapeutic combinations found were those of benzodiazepines with antidepressants and cardiovascular drugs (propranolol, metoprolol, verapamil etc.) acting as inhibitors of benzodiazepine metabolism. Conclusion. To secure safe and effective medication use, we see an important role for a clinical pharmacist in consulting prescribers on possible unwanted drug interactions and overprescribing as well as consulting patients on appropriate drug use.

**PB6 523 PRIMARY CARE RECRUITMENT OF GPS AND THEIR OLDER PATIENTS FOR RESEARCH WITH OLDER PEOPLE.**

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**Introduction** Recruiting older participants can be difficult. An increased understanding of processes that facilitate or constrain recruitment is needed. Complexity and variations in the recruitment process to recruit 148 general practitioners and 3800 of their older patients aged 75 plus (or 65 plus if Maori) in three areas of New Zealand are described. **Methods and Materials** The BRIGHT (Brief Risk Identification Geriatric Health Tool) Trial recruited 3800 older people to participate in a cluster randomised controlled trial (randomised by GP practice). Approaches to key stakeholders and organisations representing GPs were followed by a personal faxed invitation to each GP. Various media was used to communicate with and recruit GPs. Meetings with practices explained the research processes and consenting GPs were enrolled. Practice's patient lists were used to identify eligible patients, 75+ years, community living and the GP sent personal letters to each patient. Consent information was included in the invitation letter initially and signed consent forms returned to the research centre. Local research nurses undertook all clerical work associated with recruitment. Results 148 of 470 GPs approached were recruited (31.5%). GP response was affected by other major quality improvement projects underway, lack of support from GP organisations, heavy GP workloads, locums and seasonal workload changes. Recruitment rate of older people (46%) was lower than expected. Neither strategy adapted to increase the recruitment rate resulted in a change, including a two stage recruitment process and documentation re-written in plain English. Personal follow up of each potential participant was important to successful recruitment. Time, financial and resource costs were greater than originally expected. Conclusion A greater range of strategies, flexibility and adaptability may be needed to overcome barriers to recruitment of older patients through primary care. Individual follow up and planning are essential to ensure older adults were contacted

**PB6 524 THE INFLUENCE OF MICRONUTRIENTS DEFICITS ON COMPLEX GERIATRIC ASSESSMENT RESULTS.**

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**Introduction:** Our previous experience showed high frequency of serum micronutrients deficits in seniors. The aim of our work was to realize how these deficits influence the overall health status of seniors, their independency. **Patients and methods:** We examined in cooperation with general practitioners 161 seniors, 60 men and 101 women of average age 73,2±5,9 years living in their own environment in a rural area. These seniors underwent functional geriatric testing (MMSE, ADL, IADL, Geriatric Depression Scale). The history

of patients and their medications were considered, physical, hematological, and biochemistry including calcium, magnesium, iron, vitamin B12 and folinic acid serum levels examinations were performed. Data were analyzed by statistical methods. Results: we found deficits of any studied micronutrients in 72 of 161 patients (44.7%). Serum level of calcium below normal range was in 10 of 161 patients (6.2%), magnesium in 36 of 161 (22.4%), iron in 20 of 161 patients (12.4%), vitamin B12 in 21 of 161 patients (13.1%) and folinic acid in 23 of 161 patients (14.3%). If we divided all patients according to any micronutrient deficit appearance, we found significantly worse results in patients with deficits in comparison with patients without micronutrient deficits – ADL 94.1+13.2 vs 98.0+6.57, p=0.03, IADL 71.39+16.4 vs 77.58+7.27, p=0.004. The same trends but without statistical significance showed MMSE 27.18+2.87 vs 28.0+2.72, p=0.07 – ns, depression scale 2.88+3.26 vs 2.27+2.86, p = 0.23 – ns. Conclusions: Serum level deficits of studied micronutrients are frequent among elderly patients. Important changes were found in result of complex geriatric assessment in patients with micronutrient deficits. We will continue our follow-up.

#### **PB6 525 CARDIOVASCULAR MULTIMORBIDITY IN PATIENTS OF GERIATRIC DEPARTMENT**

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Introduction : The aim of the study was to find prevalence of cardiovascular condition and diseases in patients treated in geriatric department Methods and materials: The data were obtained from medical records of 201 inpatients treated at University Geriatric Department. The ICD10 was used for coding the diagnoses Results: Only 1% of the patients did not have cardiovascular diagnosis and cardiovascular diagnoses represented 27,55 % of all diagnoses.The average number of cardiovascular diseases present at one patient was 2,59. The most frequent dg. was hypertension (74,1% of patients) Chronic ischaemic heart disease was present at 69,7% of the patients. 13,4% of the patients had positive history of MI. 16,4% of the patients suffered from angina pectoris. 1% of the patients were after coronary bypass. 19,9% of patients were presented with heart failure. 4% of patients had aortal and 2 % mitral valvular disease. Atrial fibrillation was present in 13,9% of patients. 2% of patients had 1st. degree AV block, 2,5% 2nd. degree AV block. 7,5% of patients had pacemaker. 25,9% of the patients had symptoms of cerebrovascular diseases. 9,5% of patients had peripherals peripheral vascular disease. Varices were present at 23,8% of patients Conclusion : The cardiovascular system multimorbidity is very frequent needing comprehensive approach to diagnostics and therapy

#### **PB6 526 PREDICTING DESTINATION AFTER A VISIT AT THE EMERGENCY DEPARTMENT FROM A FUNCTIONAL STATUS ASSESSMENT**

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Introduction: When a patient presents at the emergency department (ED), the treating team must make decision about discharge within a short time. Although the assessment of functional status is viewed as helping foresee future needs of older adults, little information is available on the accuracy of its predicting value. This study sought to assess the association between the effective disposition of patients after ED visit and the recommendation reached by clinicians using the Functional Status Assessment of Seniors at the Emergency Department (FSAS-ED). Method: A sample of 150 community-living elderly individuals was recruited in three large acute-care hospitals. The recruitment and assessments were made in the ED. The FSAS-ED is a 40-item, interview-based tool addressing the person's functional status prior to and following the decision to consult in ED. Items are related to activities of daily living, domestic activities, body functions and environmental factors. A recommendation relating to discharge is reached by the evaluator. Effective disposition post ED visit was obtained via medical record. Results: Participants were categorized as ready for home discharge (positive recommendation) (n = 68, 46 %) or as to be admitted on care unit (negative recommendation) (n = 80, 54 %). The effective discharge destination yielded a sensitivity of 95% and a specificity of 95%. Items most strongly contributing to the decision reached by clinicians ( $\chi^2$  coefficients with  $p < 0.01$ ) were related to basic activities of daily living (n = 9 items/10) and to domestic activities (n = 4 items/4). The clinician's overall decision was also associated with sleep, cardio-respiratory and movement related body functions, as well as with the availability of mobility products and transportation services (environmental factors). Conclusion: The FSAS-ED provides clinically-relevant information which could facilitate the planification following the ED visit.

#### **PB6 527 FRAIL OLDER PEOPLE AT THE INTERFACE**

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There is an international move to minimise emergency hospital admissions and length of stay, by maximising care closer to home. Many acute hospitals include an acute medical admissions unit (AMU) which facilitates rapid assessments on emergency patients.

Individuals not requiring hospital admission can be identified and discharged. We followed up patients being sent home from one AMU in whom there were concerns about functional status. This population had been assessed and managed by the medical team, and then referred to a nurse/therapist led Integrated Discharge Team. The team reviewed current and prior function, social circumstances and rehabilitation needs, arranging support and interventions as required. Standardised forms were used to collect demographics, geriatric syndromes and mortality and readmission data were obtained from hospital systems. 184 patients were studied. Their mean age was 82.1 years (SD 8.0), 62 (34%) were male. The mean length of stay on the AMU was 2 days (SD 8). 67 (36%) had a fall, 43 (23%) had cognitive impairment, 42 (23%) immobility, 109 (59%) polypharmacy and 7 (4%) a pressure sore. The median (IQR) number of geriatrics syndrome per patients was 1 (1-2). 102/184 (55.4%) were readmitted and 48 (26.1%) died in the following 12 months. The readmission rate was 2.5 (95% CI 2.1-3.1) and the mortality rate 0.9 (95% CI 0.7-1.2) per 1000 person-days. These data show that patients with functional decline or other geriatric syndromes represent an especially vulnerable sub-population of those attending AMUs. Their mortality is substantial and the high readmission rates suggest on-going complexities. Our findings suggest that additional services are required, for example specialist geriatric expertise to manage these complex patients, with a greater focus on end of life care and advance care planning.

#### **PB6 528 LIMITATIONS OF THE CONCEPT OF HEALTH-RELATED QUALITY OF LIFE IN OLDER POPULATION**

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Introduction: Quality of life (QoL) has become a central interest for researchers and practitioners working in the area of health and social care. Whether or not health related QOL (HRQoL) measures can be used validly for frail older populations remains unclear, because the scales may not measure important dimensions relevant to QoL of older people. The aim of our survey was to study the relationship between psychological well-being, subjective health, and HRQoL in two culturally different samples of older population. Methods and materials: We made population-based postal surveys in a random sample of community-living older people in Helsinki (Finland; N=1380) and Tallinn (Estonia; N=900). HRQoL was assessed using the internationally validated 15D instrument consisting of 15 dimensions which can be expressed with one score. In addition, data about living conditions, loneliness, health, functioning, psychological well-being and depression were collected. The linear regression analysis was used as modelling methodology (SPSS statistical package), where step-wise selection (combination of forward and backward selection rules) of arguments and significance level 0.05 was used. Results: The mean 15D score was similar in both samples (0.792 in Tallinn and 0.793 in Helsinki; P=0.86). At the same time Estonian seniors' self-assessed subjective health, psychological well-being and depression were significantly worse than in Finnish seniors. The structure of HRQoL models was rather similar in both samples, which contained besides physical and mental health items also loneliness as an independent factor. Conclusions: Our results indicate that HRQoL measured with 15D describes identical dimensions in older population with different cultural background. At the same time HRQoL may not reflect older people's global well-being. For cross-cultural comparisons HRQoL scores should be handled with caution and against other health and well-being variables.

#### **PB6 529 INEQUALITY IN UTILIZING COMMUNITY BASED HEALTH SERVICES FOR AGING HYPERTENSION OUTPATIENTS**

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Introduction With the biggest aging population and the fastest aging speed in the world, China has moved to the issue of the elderly's health. In 1997, the central government started an initiative to establish a community health system in urban areas through which the demand of the elderly for primary health care, especially chronic and common diseases outpatient care was expected to better meet. Hypertension is the most commonly seen chronic diseases with the prevalence of above 12 percent in the population aged 65 or above, top 1 in all chronic diseases. The study aims to analyze the difference in healthcare utilization for hypertension elderly with different income. Methods Cluster random sampling method was used to survey one day's 922 hypertension outpatients aged 60 or above in 22 community health centers in the cities of Shanghai, Chengdu and Yinchuan locating in East China, Northwest China and Southwest China respectively. Range analysis was conducted to evaluate the community health care equity among the elderly with different incomes. Results The main arterial pressure of highest income group is 101.77mmHg, while in the lowest is 105.44mmHg. The richest visited community health centers by 3.24 times per month in average and their average daily expenditure was 12.6 Yuan RMB, while the poorest had 2.30 visits with an average daily expenditure of 5.0 Yuan RMB. 72.4% of the not-insured were in the lowest income group while only 4.8% in the highest one. Conclusion Inequality in healthcare utilization exists in hypertension aging patients. The poorest group has worse health status, less utilization of health resources,

while low insurance coverage. The government should formulate policies to subsidy the poor chronic disease aging patients to improve their health service utilization.

**PB6 530 PREDICTORS OF QUALITY OF LIFE IN OLDER PEOPLE FROM THE ENGLISH LONGITUDINAL STUDY OF AGING**

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**Introduction** The number of older people and life expectancy are rising in England. Cross-sectional population studies often suffer from unobserved individual heterogeneity (e.g. genetics or unobserved predisposition to adopt healthy lifestyle) contaminating the estimate of social inequalities on well-being. Therefore, longitudinal population studies that investigated quality of life in older people are sparse or lacking. We explored factors that predict quality of life in older people in England in six years follow-up. **Methods** Secondary data analysis of the three waves (2002 = 9,953; 2004= 8,411; 2006 = 8,411) of the English Longitudinal Study of Ageing. Subjects were nationally representative sample of non-institutionalized older people living in England. The study collected information on personal, economic, and social circumstances were collected. Quality of life was measured using CASP-19, a 19 item likert scale index. It has four domains: control, autonomy, self-realisation and pleasure. We used random effect Poisson model to analyse data that accounts of individual heterogeneity and non-linear scale of quality of life. It is robust to attrition if the data is missing at random. Significance was set at  $p < 0.05$ . Results Predictors of impaired quality of life using CASP-19 were: female gender (beta 1.199,  $p < 0.001$ ), older age (beta 0.596,  $p < 0.0001$ ), self reported health (beta 4.339,  $p < 0.0001$ ), active smoking (beta -0.988,  $p < 0.0001$ ), alcohol consumption (beta 0.345,  $p < 0.0001$ ), socioeconomic status (beta 0.115,  $p < 0.001$ ) and low monthly income (beta 0.913,  $p < 0.0001$ ). Conclusion Factors that impair quality of life in older people are multi-factorial. Health care providers and policy makers should be aware of the impact of financial hardships, socio-economic status, social habits (smoking and alcohol) on quality of life.

**PB6 531 DOCUMENTATION AND RESEARCH OF UNWANTED EFFECTS OF ANTI-FLU VACCINATION IN SENIOR PATIENTS (MULTI-CENTER STUDY)**

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**INTRODUCTION :** Documentation of the frequency and the types of unwanted effects occurring mostly in elderly people after anti-flu vaccination. **MATERIAL – METHOD :** A total of 367 people were studied, out of a general total of 452 senior patients > 65 years of age, who were vaccinated against the flu. All of the commercially available vaccines were used, while the unwanted effects were documented in full detail either by filling in special questionnaires in the following visit of the patient, either via telephone communication after the manifestation of symptoms, or as a result of the clinical examination. **RESULTS :** A total of 45 people (12.3% of the vaccinated) presented unwanted effects. In particular : Redness and edema at the point of inoculation was reported in 28 cases (62%), which in the general total is very low and subsided without treatment within three days. Fever ranging from 37.5 °C to 38.2 °C was reported in 7 people (16%). Paracetamol 500 mg X 3 was administered and remission of the symptoms followed in the total of the cases. Knematos at the point of inoculation was reported in 6 people (13%), while generalized knematos was reported in 2 cases where administration of oral antihistamine drugs was deemed necessary. Finally in 2 people were documented arthralgias, mainly of the upper and lower limbs, that subsided with paracetamol in one case, while in the other case non-steroidal anti-inflammatory drugs were needed. **CONCLUSIONS :** In elderly people who frequently suffer from a variety of diseases, the unwanted effects of anti-flu vaccination are relatively rare and moderate regarding their severity. And in any case easily and fully treated. Consequently, the generalized application of anti-flu vaccination in elderly people and especially in high risk groups (coronary disease patients, pulmonary disease patients, etc.) is essential.

**PB6 532 STUDY OF CLINICAL AND MICROBIOLOGICAL FINDINGS IN SENIOR PATIENTS WITH ACUTE PYELONEPHRITIS**

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**INTRODUCTION :** Scrutiny of underlying situations, clinical manifestations and lab test results in cases of elderly patients with acute pyelonephritis (AP), a common disease in elderly patients. **MATERIAL – METHOD :** 52 cases of patients with age average 74.2 +/- 7.1 years of age with AP were studied, which were documented last year in the areas of Goumenissa and Lemnos. 47 of the cases were community infections and 5 were hospital infections. In all of the cases demographic, clinical and lab: microbiological and X-ray, data were collected. **RESULTS :** The most common underlying situations were proved to be: prior urinary tract infection 34.6% (18 cases), diabetes mellitus 25% (13 cases), nephrolithiasis 17.3% (9 cases), and catheterization of the urinary bladder 13.5% (7 cases). Clinical manifestations included mainly: urethral syndrome 71.2% (37 cases),

fever 67.3% (35 cases), and low blood pressure 15.4% (8 cases). Lab tests demonstrated leukocytosis (average value 15.710+/- 1312) and an increase in creatinine levels (average value 1,9+/- 1,7 mg/dl). Furthermore, the cultures were positive for e.coli at 67.3% (35 cases), proteus and enterococcus at 7.7% (4 cases each), pseudomonas at 5.8% (3 cases) and klebsiella at 3.8% (2 cases). Correspondingly, e.coli sensitivity to gentamycine was 88.6% (31 cases in a total of 35), to amoxicillin-clavulanic acid 71.4% (25/35), trimethoprim-sulfamethoxazol 62.9% (22/35), while resistance to ampicillin was 65.7% (23/35). Finally, bacteraemia occurred in 48% (25 cases in a total of 52), while 3 deaths occurred (5.8%). **CONCLUSIONS :** 1) AP cases are common in senior patients of the community and in 1/3 of the cases there is a prior urinary tract infection. 2) Primary cause is e.coli. 3) However, special attention is required in

**PB6 533 INAPPROPRIATE DRUG PRESCRIPTION IN OLDER SUBJECTS IN DIFFERENT HEALTH CARE SETTINGS**

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**Objective:** Inappropriate prescription of drugs is frequent in older subjects, but may vary in different health care settings and with the use of different detection criteria. We wanted to compare the performance of two different tools (Beers criteria and STOPP-START) in the detection of potentially inappropriate drugs and potentially appropriate, indicated drugs in older patients cared as hospital outpatients, in primary care and in a nursing home. **Method:** STOPP-START and Beers criteria were used in 50 consecutive outpatients at a hospital geriatric clinic (HC), 50 random patients of a public primary care clinic (PC) and 50 random patients of an assisted nursing home (NH). **Results:** Age increased with the complexity of the setting (78.8 years in PC to 84.5 years in NH patients), as did the number of females (46% in PC to 76% in NH). Beers criteria detected potentially inappropriate drugs in 24% (PC), 26% (HC) and 20% (NH) of the subjects. STOPP criteria detected potentially inappropriate drugs in 36% (PC), 54% (HC) and 50% (NH) of the subjects. The number of subjects with two or more inappropriate prescriptions was higher with STOPP (12-20%) than with Beers criteria (2-10%). START criteria found that 28% (PC), 54% (HC) and 46% (NH) of the subjects were not receiving drugs indicated for some diseases. **Conclusions:** STOPP criteria detected a higher number of subjects with potentially inappropriate drug prescription than Beers criteria in all health care settings, although there are significant differences across settings. START criteria also detected many subjects who were not receiving appropriate drug treatments for their diseases.

**PB6 534 SELF-REPORTED SLEEP DURATION AND PERCEIVED HEALTH AMONG YOUNG OLD, MIDDLE OLD, AND OLD OLD POPULATIONS IN TAIWAN**

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**Introduction:** Sleep is a vital function and is associated with mortality. However, perceived health is more important than mortality on explaining quality of life. This study examined the association of self-reported sleep duration and perceived health in Taiwanese older adults. **Method and materials:** Data were from a Taiwanese national survey of the Knowledge Attitude and Performance in Health 2002. Older adults aged 65 years or more ( $n=4207$ ) were sampled from all areas of Taiwan island. Older adults were classified as young old (aged 65-74 years, mean =  $69.3 \pm 2.8$ ,  $n=2641$ ), middle old (aged 75-84 years, mean =  $78.4 \pm 2.7$ ,  $n=1303$ ), and old old (aged 85 years and over, mean =  $88.2 \pm 3.0$ ,  $n=263$ ). **Results:** Sleep duration was increased as people aged with a mean of 6.6 hours ( $SD=1.6$ ). In young old and middle old, short sleep ( $\leq 6$  hrs) was associated with increased depression ( $F=28.7$ , 17.7, respectively,  $p<.000$ ); long sleep ( $>9$  hrs) was associated with more disability days ( $F=17.7$ , 11.4, respectively,  $p<.000$ ); and short and long sleep was associated with poorer perceived health ( $F=23.4$ ,  $p<.000$ ,  $F=4.8$ ,  $p=.009$ , respectively). However, only short sleep was associated with depression in the old old ( $F=3.9$ ,  $p=.02$ ). **Conclusion:** There exists a U shape between sleep duration and perceived health in the young and middle old groups but not in the old old group. The old old group is a small portion of healthy and long-lived people in the society. Further study to examine the contributors to their healthy and longevity is needed.

**PB6 535 COMPARING CARING BURDEN AND DETERMINANTS OF CARING BURDEN IN COHABITANTS LIVING WITH PARTNERS SUFFERING FROM DEMENTIA OR CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

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**Introduction:** Dementia and chronic pulmonary disease (COPD) will increase in coming years. To meet the challenges of helping these patients stay longer in their homes, more insight into the determinants of the caring burden of their cohabitants is warranted. **Methods and materials:** This cross-sectional survey examined caring burden and

characteristics of cohabitants living at home with partners having dementia or COPD. The sample included 101 cohabitants of partners with dementia, and 105 cohabitants of COPD partners. Medical experts established the diagnoses. The severity of their diseases was assessed by the Clinical Dementia Rating (CDR) and by the Global Initiative for Chronic Obstructive Lung Disease (GOLD). Relative Stress Scale (RRS) quantified the caring burden. Medical Outcomes Study Social Support Survey Form (SSS) captured perceived social support. Response rate was 80 %. Results Caring Burden increased with severity in dementia group. In the COPD group, the caring burden was higher and more stable. 60 % of the caregivers were women. Caregivers in the dementia group were about seven years older, had longer cohabitation spans, yet the duration of their partners' illness was shorter. Perceived social support was lower, utilization of professional aid and social withdrawal was higher in the dementia group. The patients in the dementia group were less self-reliant, showed more aggressive behaviour, and could adequately be left alone shorter. In the dementia group, the patients' degree of self-care made the most difference, while in the COPD group, social withdrawal played that role. Conclusions To estimate the caring burden in future planning, consider gender, education of caregiver, degree of perceived care, social withdrawal from family and friends, and patients capacity of self-reliance, aggressive behavior, and ability to be adequately alone. These determinants explained 54 % of the variance in the dementia group and 58 % in the COPD group.

#### **PB6 536 THE NEXUS BETWEEN ALLIED HEALTH PROFESSIONALS AND NURSING CARE FOR AGED PEOPLE**

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**POSTER PRESENTATION** Demographically in Australia, there is a shortage of Allied Health professionals whilst the numbers of older people requiring these services continues to grow. One response to this is the introduction of the "Allied Health Care Assistant". This course which provides assistance for Physiotherapists, Podiatrists, Occupational Therapists, Speech Therapists and Dieticians has been introduced at the Southbank Institute of Technology in Brisbane, Queensland, Australia. In groups of 25, students of this course learn the basic techniques required for care of the aged according to an action plan provided by the professionals. When a client does not or cannot respond to the plan provided by the professional the AHC assistant will notify the professional for necessary adjustments. The assistant is aware of his/her limitations and is always under the direct or indirect supervision of the Allied Health Professional. The students of this course all have a background in nursing care of the elderly and may work in residential care or community settings. The course is short and of a practical nature. It also is not expensive, thus encouraging many applications. Students have come from all over Queensland to complete this course as it becomes recognised that it can support the allied health needs of older people, particularly in areas where an allied health worker may visit irregularly. Presently, there are 60 graduates as Podiatry assistants and 26 graduates as Physiotherapy/Occupational Therapy assistants. The Speech Therapy/Dietetics course will be introduced later this year. In caring for our aged both in residential and community care it is essential that we remember the importance of preventive medicine. Good Allied Health care is an essential part of this and will ensure that aged people are given quality care in the winter of their lives.

#### **PB6 537 THE BELGIAN GERIATRIC DAY HOSPITALS ONE YEAR AFTER IMPLEMENTATION AT THE NATIONAL LEVEL.**

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Introduction: In 2006 an evaluation project started on the Belgian geriatric day hospitals (GDH). Forty eight GDH and 2519 patients were included. In 2007 a follow up study was carried out. Methods: All included patients were contacted. Using a standardized questionnaire patients were asked about health status and degree of satisfaction about the GDH. Results: Data, often incomplete, were available for 1269 patients (46.9%). After 1 year 425 (33.5%) patients are still in follow up. The presence of a geriatric syndrome is the main motive ( $p<0.0001$ ) to provide follow up. Hundred eighteen patients (19%) died and 714 patients (66.7%) were hospitalized. In 60% of patients there was no correlation between the reason for which they visited the GDH and their hospital admission. Moreover, 31% of all patients included in 2006 had been hospitalized prior to their first visit at the GDH. Seven hundred sixteen patients (69%) were advised to start or change medication. Only 31 patients (4.4%) did not follow this advise, half of them in consultation with their general practitioner. Physiotherapy was advised for 205 patients (20.7%). Fifteen percent did not start physiotherapy, 80% on their own initiative. At the end of rehabilitation 86 patients (72%) considered themselves to be improved. Five hundred fifty one interviewees (75%) consider the GDH to provide an added value. Conclusion: The main reason for follow up in the Belgian GDH is the presence of a geriatric syndrome. The number of patients who died or were hospitalized is disproportionately high and probably due to selection bias (accessibility of information, low response rate), comorbidity and a higher risk of readmission. Most advises concern medication and compliance to this advises is high. It seems more difficult to motivate patients for rehabilitation therapy. Overall satisfaction about the GDH is high.

#### **PB6 538 FOOT PROBLEMS OF OLDER VETERANS IN A VETERANS CARE HOME**

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Background Foot problems are common in older people. Older veterans may be more susceptible to various foot problems because of their experiences of military services. However, foot problems of older people do not gain sufficient attentions in clinical practice. The main purpose of this study is to assess older veterans in a veterans care home in Taiwan to evaluate the characteristics of foot problems and the relationship between physical function. Method Senior residents of Banciao Veterans Care Home were invited for study and were enrolled when they were fully consented. Inter-RAI Minimum Data Set Nursing Home 2.0 Chinese version (MDS-NH 2.0) was implemented for all participants. Activities of daily living (ADL) of all participants were evaluated by the MDS ADL. The C1,C2 (hearing ability or aids use ), D1, D2 (visual acuity or glasses use ), JJ1g (any edema), JJ4 (any fall accident within 180 days), and MM6 section (evaluation of foot problem and care) were selected for evaluations. In addition, dermatologic conditions, orthopedic conditions, tenderness, edema and sensory loss of both feet were examined by directly by a geriatrician. Results In total, 120 senior residents (mean age: 83.3 years, all male) were examined and over 96% of all participants had certain foot problems. However, the presence of orthopedic condition, edema, tenderness and sensory loss were not significant between subjects with and without functional dependence. Moreover, independent subjects were more likely to have corns or calluses of both feet (54.9% vs. 24.1%,  $P<0.05$ ) than dependent subjects. Conclusions Foot problems are common among older veterans in Taiwan. Further study is needed to clarify the clinical impact of foot problems to older veterans.

#### **PB6 539 IMPACT OF A MULTIDISCIPLINARY GERIATRIC INTERVENTION IN THE EMERGENCY DEPARTMENT**

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Introduction: Older adults use emergency service at higher rates and frequently generate inappropriate hospitalizations, and make their care in the Emergency Department (ED) problematic. Objective: To determine the impact of multidisciplinary geriatric ED intervention on patient's outcome. Methods: During 4 years (2004 to 2008), all the patients admitted in the ED and evaluated by the multidisciplinary geriatric team, were included in the study. Data from the standardized geriatric evaluation were collected, outcome after ED was described (i.e. hospitalization, home discharge or nursing home discharge), and follow-up was carried out by the team, one month after patient's discharge for all the included patients. Statistical analyses: descriptive, unvaried and multivariate analyses were carried out. 5.9+Results: During 4 years, 2666 patients were included (mean age 86.2 years). Most of the evaluated patients were defined as frail, i.e. syndrome of falls (21.4%), delirium (18.2%), loss of one or more ADL items (72.8%), and problematic social conditions of living (40.5%). Hospitalization was decided in 1277 (52.5%) ED patients, and was statistically associated with diagnosis of delirium (OR 1.3; CI 95% 1.1-1.6;  $p=0.03$ ), fall (OR 1.6; CI 95% 1.3-1.9;  $p<0.0001$ ), ADL loss (OR 1.3; CI 95% 1.1-1.5;  $p<0.0001$ ), and social problems (OR 1.4; CI 95% 1.1-1.5;  $p<0.0001$ ). A total of 138 (5.2%) patients were re admitted one month after their discharge, and only complex social condition of living was a significant risk factor of re admission (OR 2.7; CI 95% 1.5-4.8;  $p=0.001$ ). Conclusion: The presence of specific multidisciplinary teams in ED would help to decrease the rate of inappropriate hospitalizations.

#### **PB6 540 IMPACT OF A POST EMERGENCY GERIATRIC ACUTE UNIT ON THE HOSPITAL READMISSION RATE**

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Introduction: Post emergency geriatric acute care unit provide specific geriatric multidisciplinary management, and this may decrease length of hospital stay, functional decline, and early re admission rates. Objective: The aim of this study was to evaluate risk factors of early re hospitalization in an acute geriatric unit. Patient-methods: During one year (2007), all the patients aged over 75 years, admitted in the geriatric acute unit, and discharged home were included. Socio demographic data, geriatric assessment (co morbidity, list of treatment), and gerontological assessment (ADL, IADL, cognitive and mood evaluation, (MMSE, GDS), nutrition assessment (BMI, MNA), and Timed Up and Go test) were collected for all the included patients. One month after home discharge, patients were followed-up by phone, and hospital re admission rate was carried out. Statistical analyses: descriptive, unvaried and multivariate analyses were carried out. 6±Results: A total of 476 patients were included (mean age 86.5 years, 154 men,

322 women). During one year of inclusion, the mean 2.7 days, and a length of stay in the geriatric acute unit was 6.3 total of 68 (14.3%) patients were re admitted within one month after their discharge. Univaried and multivariate analyses showed that the re admission rate was statistically associated with diagnosis of delirium (OR 1.9; CI 95% 1.1-3.3; p=0.02), a mean length of stay in the unit higher than 6 days (OR 1.9, CI 95% 1.1-3.5; p=0.02), and the decision of home discharge (OR 2.4; CI 95% 1.4-4.1; p=0.002). Conclusion: Post emergency acute geriatric unit model with very short lengths of stay seems to improve functional and clinical outcomes of frail elderly, and prevent early re admission.

**PB6 541 GENERAL PRACTITIONERS' PERCEPTIONS AND NEEDS FOR GERIATRIC DAY HOSPITALS IN BELGIUM**

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Context: The first forty-five geriatric day hospitals (GDH) were created in 2006 in Belgium and their number increases every year. They propose a multidisciplinary support to diagnosis and possibly to treatment of elderly, without hospitalisation. A first evaluation showed that few general practitioners use this new institution. The reported research is a part of a wider evaluation of the GDH. This work was financed by the Belgian Ministry of Public Health. Objective: The goal of the qualitative research was to gather general practitioners' perceptions, attitudes and expectations about the care of their old patients in this new structure. Method: Focus groups of general practitioners (GP) were organised in Flanders (Flemish-speaking part of Belgium) and in Wallonia (French-speaking part of Belgium). A common guide of questions was prepared and translated in both languages. The discussions were recorded and integrally transcribed. Coding was performed in parallel by French and Flemish-speaking researchers; the coding tree was continuously discussed and adapted. Results: The results first highlight the general context of the Belgian health system: GPs' mistrust and suspicions about the second line. In this context, GPs often see geriatric specialists as rivals for the care of the elderly. Moreover most GPs scarcely know the new institution, its functions and organisation. Those who already used the service clearly appreciate the advantages such a structure brings to their practice and to their patients. However, they also quote organisational difficulties concerning the principle of team-working. Finally, they mention ethical concerns about responsibility-sharing and decision-making. Conclusion: This research showed obstacles to the use of the GDH by the general practitioner. One of the actions of the Belgian health system will be to propose better information to the GPs about functions, organisation and goals of the local geriatric day hospital.

**PB6 542 REGIONAL GROUP OF MOBILE GERIATRIC TEAM IN THE SOUTH WEST OF FRANCE**

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Introduction: Since 2007, French Ministry decrees defined specific geriatric intervention in all sectors of the health facility, including Emergency Department (ED). Objective: To describe activities and missions of all the geriatric intervention teams in the south west of France. Methods: Since 2006, we organized a meeting, every 6 months, of all the mobile geriatric teams of the region (Aquitaine, France) in order to homogenize the functioning of the teams, and to centralize results of different indicators of efficiency and effectiveness. Different indicators were analysed: rate of interventions for each team, description of all the evaluated elderly patients (standardized gerontologic and geriatric assessments), rate of home discharge, and rate of hospital re admission. Results: A total of 8 mobile teams of geriatrics were included, 7 teams had an intra hospital functioning (ED or medico chirurgical units), and 1 had an extra hospital functioning (nursing home, home care). All the teams were composed by a geriatrician, a nurse, a social worker, and a secretary and some had an occupational therapist or a psychologist. All the mobile teams had same missions: providing medico-psycho-social assessment, planning health care and life project for geriatric patients, and participating in the organization of patient's outcomes with home support devices. Preliminary centralized results showed that the mean average interventions per month for all the teams were 42 (30 to 114 interventions per month), and that the rate of hospital re admission one month after hospital discharge was 7.8% (6.1 to 9.7%). In conclusion, the creation of this regional group of mobile geriatric teams permitted to decrease variance in care for elderly patients and to avoid unnecessary re admissions.

**PB6 543 ELDERS COMPREHENSIVE ASSESSMENT: PORTUGUESE VERSION OF THE OARS**

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INTRODUCTION The aim of this study was the creation of the Portuguese version of the OARS (Older Americans Resources and Services Program), showing its reliability and validity. The OARS methodology was developed to evaluate the functional capability in five fundamental areas of the older life quality: social resources, mental health, physical health and activities of daily living. It measures also the usage and need felt of 23 services. This instrument has been used in different studies tending to define interventions based in the gathering of information about central features of this population. METHODS AND MATERIALS For the development of the Portuguese version of OARS, we followed two directives: (1) the linguistic and cultural adaptation to Portuguese language and (2) the psychometric study of this version, comparing it with the original. The following study began with the back-translation procedures and cultural adaptation, for the Portuguese language. The Portuguese version of the OARS, was applied to the assessment of 302 older persons (randomised and stratified sample by age, gender and type of institutional support), allowing with this sample the global psychometric study of the instrument. RESULTS The results of the psychometric study done with the Portuguese version (QAFMI) tend to show that is an equivalent version to the original version and others Latin languages. CONCLUSION All the work developed with the creation of the Portuguese version (QAFMI) lead us to consider this instrument very useful to define the functional situation of the elders in the specific evaluation areas and the needs, becoming right to the planning of older care services. Study most relevant outcome, shows that we have an equivalent version of the original instrument. Therefore, we make available a measurement instrument of quality for older people providing significant information to interventions and improve adequate care strategy on this population group.

**PB6 544 STATUS EPILEPTICUS IN THE ELDERLY: A CASE-CONTROL STUDY.**

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Introduction. The aim of this case-control study was to assess mortality, morbidity and risk factors of Status Epilepticus (SE) among elderly patients hospitalized in geriatric units. Methods. 63 consecutive elderly patients ( $\geq 70$ y) with a SE were prospectively included and matched for age ( $\pm 3$ ), gender, hospital and co-morbidity score (CIRSG $\pm 3$ ). Univariate and multivariate exact logistic regression models were used to compare cases and controls, and survivors and non-survivors. Results. In univariate analysis, a history of diabetes (p=.04), stroke (.000), seizure (.000), hypocalcaemia (.003), hyper- and hyponatraemia (.000) were associated with SE. In multivariate analysis, history of stroke (OR=3.44 95%CI 1.33-8.92), seizure (OR=5.33, 1.36-20.85), hypocalcemia (OR=2.53, 1.01-6.37) and hypo- (OR=8.90, 2.75-28.79) or hyponatraemia (OR=2.99, 1.15-7.78) were independently associated with SE. Among the 63 SE cases, 17 (30.0% 95%CI 16.6-39.7%) died during the following 3 months. Non-survivors were more frequently male, younger (80.0±6.4 / 84.5±7.0, p=0.03), with a higher comorbidity index (14.2±5.7 / 10.3±3.9) and a history of coronary heart disease (p=.06), cardiac insufficiency (p=.06) or diabetes (.09). They also had more frequently hyper- or hyponatraemia (.04). In multivariate analysis, younger age (OR=0.90, 0.81-0.99), male gender (OR=6.67, 1.39-33.3) and higher comorbidity index (OR=1.20, 1.05-1.41) were independently associated with death. Conclusion. Our results showed a worse outcome in younger male SE patients with higher number of comorbidities, suggesting that SE represents a severity marker of superimposed conditions and does not directly affect prognosis.

**PB6 545 MAB: NUMERICAL UNIFORM PROFILE REPRESENTATION OF BIOPSICOSSOCIAL DATA. ELDERLY FOLLOW-UP IN A LISBON HEALTH CENTRE**

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Introduction Due to the demographic explosion in elderly age, there is the need of adequate an uniform screening, and follow-up biopsicosocial tools, manageable at multiprofessional level. We suggest the "MAB" – Método de Avaliação Biopsicosocial (Biopsicosocial Evaluation Method) which variables, categorization and numerical profile output are based on validated instruments and population studies. Methods and materials A cross-sectional survey was conducted in community dwelling older people aged 65 years, recruited by phone and interviewed at the health centre. Participants were evaluated by MAB methodology, that describes biopsicosocial item arranged in ten domains (Health State, Nutritional State, Falls, Walking Ability, Basic ADL, Instrumental ADL, Emotional State, Cognitive State, Social State and Habits), each composed by one or two variables. The domains classification, structured in four levels with the dichotomic approach unfavourable/favourable, fulfills a biopsicosocial profile. Results Of the 258 elderly, 25% were male and 8% had 80 years. The expression of favourable results was as follows: Health State 14.3%, Nutritional State 19%, Falls 67%, Walking Ability 98%, BADL 96%, IADL 85%, Emotional State 25%, Cognitive State 99%, Social State 21% (no isolation

44%, social economic status 17 %), Habits 89% (physical activity 81%, meals 97%). Conclusion Summarizing biopsicosocial information by MAB methodology gives a short and confidential report and an ease comparison of data, in the same and in groups of individuals. MAB has also useful operational properties, as a known length of application and applicability by any professional category, in different care settings, to people with diverse health states, by interview with the patient and/or a carer, part of it even by observation. We conclude that MAB is a welcome innovative method suited to biopsicosocial evaluation. For these reasons, computerized MAB is the evaluation method employed at the National Portuguese Network for Integrated Continuous Care.

**PB6 546 OLDER ADULTS LIVING WITH OSTEOARTHRITIS: THE EFFECT OF AGE AND GENDER ON MEDICATION TYPE**

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Introduction: To examine the impact of age and gender on medication use in symptomatic osteoarthritis (OA). Methods: Data were derived from the fifth year (2003) of a prospective cohort study of community-dwelling persons aged 55+ with moderate to severe hip or knee arthritis (N=1097). We constructed logistic models to examine the impact of age, gender and their interaction on use of: acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs) and opioids, adjusting for arthritis severity (WOMAC pain and physical function scores), concurrent diseases; number of physician visits; and education. Results: The study population was primarily female (N=818, 75%), mean age 75.2 (s.d. 7.8); mean WOMAC scores pain 7.7/20 (s.d. 3.2) and physical function 29.6/68 (s.d. 12.0). Adjusting for all covariates: NSAID use was negatively associated with advancing age ( $\beta = -.029$ ,  $p<.001$ ). Acetaminophen use was significantly associated with the interaction between age and gender ( $\beta = -.047$ ,  $p<.05$ ); at younger ages (< 80 years) women were more likely than men to take acetaminophen; however, the likelihood of taking acetaminophen was similar for women and men aged 80 and older. Adjusting for all covariates, opioid use was not associated with age or gender, but was positively associated with number of physician visits ( $\beta = .076$ ,  $p<.001$ ). Conclusions: Findings demonstrate that factors other than symptom severity influence choices regarding medicine use in this population, in particular, age and age in the context of gender. The relationship between age and NSAID use highlights the independent effect of advancing age on NSAID use. The relationship between acetaminophen use and age in the context of gender suggests that normative expectations regarding 'old age' and gender may impact decision-making. More study is needed to explore the interplay among age, gender and medicine use in this population.

## Track C – Behavioural and Psychological Sciences

**PC6 547 FACTORS THAT CONTRIBUTE TO HEALTHY AGING FACTORS THAT CONTRIBUTE TO HEALTHY AGING.**

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Factors that contribute to healthy aging Fuentes SAMPS<sup>1</sup>,Higa J<sup>2</sup>, Pagenotto ML<sup>3</sup>, Teixeira J<sup>4</sup>, Ferraz T<sup>5</sup> Section Theme: Behavioural and Social Sciences Introduction: Whilst the population in the world is aging; a higher proportion of the population is in the elderly phase of their life and experiencing a longer life span. Considering the detailed gaps that exist in regards to this "elderly population", it is compulsory to conduct a more accurate research in this field in order to disseminate more information that would aid the "healthy aging process". Therefore, with this effort we aim to contribute to acknowledge these gaps and provide a new direction and vision for future studies. Aim: To investigate what factors elders believe that might contribute for their healthily ageing. Method: We conducted and recorded some open-ended interviews with 22 elders (aged above 70 years old), which they answered the following open question: "In your opinion, what do you believe are the main factors that contribute for your healthy aging?" After that interview, all the answers were qualitatively analyzed. In conclusion, we also compared these answers with a similar study made by health researchers in Colorado, Denver in USA. Results: The factors that contributed for their healthy aging are: adequate eating habits, family closeness, religion, work, optimism, maintenance of interests, physical activity, capacity to adapt to any change, friendship, desire to live, and adequate medical control. Conclusion: This study, point out that the main factor that elders described as the most important for health aging are associated with an optimistic attitude and interest for something such as have a particular hobby, work, or a study. The previous studies have shown that elders who carry out activities, which they believe to be worth-while tend to be happier than those that don't do anything.

**PC6 548 COMMUNICATION ABOUT INCONTINENCE – THE VIEW OF AFFECTED INDIVIDUALS AND HEALTH CARE PROVIDERS**

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Introduction: Incontinence is a highly prevalent phenomenon that is surrounded by a medical and social "taboo". The aim of this study was to analyse the communication

behaviours of doctors and nurses with incontinent patients focussing on perceptions, expectations and wishes of patients addressing the professionals. It was of interest, what meaning patients and professionals attribute to incontinence. Methods: In a qualitative design (method triangulation) 22 structured interviews were conducted with 16 female and 6 male patients (age > 60 years, mean: 81 years), supplemented by 12 interviews with doctors and nurses within the setting of a geriatric rehabilitation hospital. Furthermore it was observed how doctors took the medical history and performed assessments for 20 patients. Content analysis was applied to the empirical material. Results: Patients have distinct expectations regarding the communication with doctors and nurses. In this context physicians are perceived as professionals while nurses are seen more as partners in a caring relationship. The analysed medical history took 46 minutes in median (min = 30', max = 70'). If incontinence is addressed, it is mostly by doctors, not by patients. Nevertheless the symptoms of incontinence seem to be of little importance for physicians and hardly lead to specific interventions. However, there are three phenomena that trigger further medical investigation, e.g. neurological disorders. For nurses, dealing with the excrements (e.g. changing diapers) is a more prominent task than more therapeutic nursing functions (e.g. continence training). But most of the interviewed nurses were able to take the view of the patients with incontinence. Conclusion: The preliminary results show that (1) there is room for improvement for a better communication regarding incontinence and (2) more attention for incontinence on the part of medical and nursing professionals is essential. Findings result in recommendations for health care professionals.

**PC6 549 OLDER PEOPLES' EXPERIENCES OF A FLOOD DISASTER: MAKING SENSE OF AN EXTRAORDINARY EVENT.**

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Introduction This research focuses on the experiences of older people in a flood disaster. In July 2007, a number of older people in Kaitaia, New Zealand were evacuated from their homes because of flooding. This qualitative study explores older peoples' experiences of the disaster to gain a broader understanding of how they responded to and recovered from the flood. Methods This narrative research is based on semi-structured interviews with nine older people who were evacuated from the flood. These interviews were conducted with four residents living in a rest home and five pensioners living independently. Thematic analysis was used to describe how older people accounted for their experiences of the flood. Results The narratives were influenced by the participants' identity as either rest home residents or pensioners living independently. The analysis showed that their accounts of the disaster were incorporated and integrated into the personal and social context of each person's life story. The two groups differed in the levels of evacuation and post disaster assistance received. The rest home residents experienced little disruption and did not require relocation, whereas the pensioners experienced major disruption and relocation. Narrative themes that emerged from the analysis for the pensioner group were coping alone, the importance of treasured possessions, social support and community, while themes for the rest home residents were protection and care. Conclusion The narrative findings suggest that older people integrated the disaster into their lives by linking the event to their life story. The themes reflected the dependent world of the rest home residents and the security of being cared for. The themes for the pensioners revealed their vulnerability to a disaster and the challenges they faced during the post disaster recovery phase. These findings are important for planning emergency support for this age group.

**PC6 550 DISASTER OUTCOMES: SOCIAL CONSTRUCTIONS BY HURRICANE KATRINA SURVIVORS**

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Introduction: In 2005, Hurricane Katrina hit landfall in the United States causing catastrophic damages that resulted in enormous costs, the mass displacement of over a half million people, and lost lives. Many of these displaced survivors were high-risk: African American, poor, and elderly. Our understanding of disaster outcomes on older African Americans is vastly limited. This study explores those conditions and contributing factors influencing outcomes as perceived by Katrina survivors following disaster. Methods: A qualitative paradigm was used to highlight the uniqueness of the survivor's perspective and to promote attention to culture, social class, and race. In-depth, semi-structured interviews were conducted with African Americans, aged 55 years and older, who relocated as a result of Hurricane Katrina (n=30). Grounded theory, using constant comparison methods was employed to analyze data. Interviews with participants were transcribed verbatim using inductive processes to code and identify salient themes. Results: The major themes highlight three primary processes that influenced perceived outcomes. 1) Prominent internal processes attributed to outcomes by way of individual level characteristics (age, gender, physical /mental health) and cognitive meanings were adopted by Katrina survivors about their experiences. 2) Key alliances were employed to shape interactional support and social participation. 3) Finally, structural components reflected the significance of access, quality of social or economic status, and stability. Conclusion: The complex nature of processes influencing outcomes as perceived by Katrina survivors was explored. The experiences and factors contributing to these perceptions have important implications for research and geriatric practice. This study informs our understanding of the risk factors and vulnerability facing diverse older populations; underscoring central dynamics in the context of a cultural perspective. It is important that this knowledge base is

applied to more effectively guide practice approaches that are flexible and targeted to these identified contributing factors.

**PC6 551 STARTING PROBLEM SOLVING WITH SORTING CARDS - A DIAGNOSTIC APPROACH FOR FAMILY CAREGIVERS IN CHRONIC STROKE CARE**  
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Defining and analysing the specific problem areas are fundamental steps for an effective problem-solving in caregiver counselling. To facilitate this crucial process a specific set of cards has been developed in several steps using different sources. The final version consists of 40 cards, with each card displaying one specific problem identified as important for family caregivers in chronic stroke care. Additional blank cards can be labelled as individually needed. After selection of the relevant cards by the caregiver two methods of sorting are used. In a first step the caregiver has to rank the individual cards according to the perceived burden. Second the caregiver is asked to build groups and to label and characterize them. This card sorting task helps caregivers to consider issues that may be outside their immediate awareness and allows them to talk about problems that they may have been previously unwilling or unprepared to discuss. In practice it has proven to be an effective and well accepted way to focus on relevant problem constellations and to convey to the caregiver a first understanding of problem interaction. The development of the cards and data of 40 participants of an ongoing intervention study are presented. The assessment of problem areas at two different points and the topics that have been actually focussed during the first 3 months of the intervention are presented and future perspectives for different target groups are discussed.

**PC6 552 MAPPING EMOTION PROCESSING DISTURBANCE IN FRONTOTEMPORAL DEMENTIA SUBTYPES**  
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Introduction: Emotion processing is significantly disrupted in frontotemporal dementia (FTD), particularly in patients with behavioural presentation (bvFTD) or with semantic dementia (SD), but less so in patients presenting with progressive nonfluent aphasia (PNA). Existing literature reports greater emotion recognition impairment for negative (e.g., anger, disgust) than for positive emotions. It remains unclear, however, which of the processes required for optimal emotion processing and recognition are disrupted (e.g., face detection, affect recognition, emotion labelling). Methods: Fifty-one FTD patients (bvFTD = 28, SD = 13, PNA = 10) and aged-matched healthy controls participated in four tasks of emotion processing involving static visual stimuli: face perception, identification discrimination, affect discrimination and affect selection. Results: Overall, FTD patients were significantly impaired on all tasks compared to healthy controls. Analyses on the FTD subgroups, however, revealed that the reduced performance was almost exclusively mediated by the bvFTD group. Within this group, ≥ 50% of patients scored at least 2 standard deviations below the mean score of healthy controls on each task. In contrast, most SD and PNA patients performed within normal limits. Conclusions: These results indicate that within FTD, bvFTD patients appear most sensitive to emotion processing disturbance. In addition, the deficits in emotion processing may be caused by a breakdown in processing visuospatial information, as much as by a deficit in high-level emotion integration. Future research will examine the relations among these components involved in the recognition of facial emotions and their biological correlates.

**PC6 553 NEUROPSYCHOLOGY OF THE YOUNG-OLD AND OLD-OLD IN COLOMBIAN AD PATIENTS AND CONTROLS**  
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A range of neuropsychological measures were compared across two groups of patients diagnosed with Alzheimer's Disease (AD). Patients classified as Young-Old (YO,  $\leq 70$  years) and as Old-Old (OO,  $\geq 80$  years) according to the NINCDS-ADRDA criteria for Probable Alzheimer's Disease. Patients were matched for age with a group of normal controls, also without evidence of depression (Yesavage Geriatric Depression Scale  $\leq 5$ ) and MMSE  $\geq 24$ . In one study, raw scores were compared between YO and OO normal controls, between patients and normal controls, and between YO and OO patients. Then, raw scores were standardized with the mean and standard deviation of matched normal controls and the z-scores were compared. Although the four groups were matched for gender and education, and patients were at the same stage of illness, and comparable in years of disorder evolution and on level of functionality, comparison of the raw scores underestimated the performance of OO patients, while the use of standardized scores showed that the cognitive profile of the OO group was superior to the YO profile on

measures of attention, language, memory, and executive functioning. The clinical and research implications of these findings for the neuropsychology of the old-old in normal and AD populations are discussed.

**PC6 554 THE TNM STUDY: IMPORTANCE OF THE STAFF / RESIDENT RATIO FOR MANAGEMENT OF BEHAVIOURAL SYMPTOMS**  
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The TNM study (Traitement Non Médicamenteux) demonstrated the effectiveness of a staff education intervention to manage Behavioural and psychological symptoms of dementia (BPSD) in people with a diagnosis of dementia. Objective: To evaluate the impact of the staff/resident ratio for management of behavioural symptoms in nursing home. Methods: The TNM study was conducted in 16 nursing homes into two French regions. Nursing homes were randomly allocated to an intervention group or a control group. An eight-week staff education programme was conducted in intervention group. The main outcome measure was the Cohen-Mansfield Agitation Inventory (CMAI). Assessments were done at baseline (W0) and at the end of the 'intervention' period (W8). For each nursing home 3 staff / resident ratio were calculated: a) including nurses and Health care auxiliaries; b) including psychologists, speech therapists and activity coordinators; c) corresponding to the sum of a) and b) staff. For the entire ratios "residents" correspond to the total number of residents living in the nursing homes. Results: 306 (22%) patients with BPSD were selected for the study among the 1369 residents. The staff/resident ratio (c) ranged from 0.12 to 0.46. The ratios were a) 0.23; b) 0.02; c) 0.25 in the control group and a) 0.28; b) 0.02; c) 0.30 in the intervention group. Ratios were not statistically different between the two groups. There was a significant decrease in the global CMAI score between baseline and W8 (-7.8; p > 0.01) in the intervention group but not in the control group. Using Spearman rho we found that there was no significant correlation between the CMAI total score change (base line - W8) and the staff resident ratio a), b) or c) in the two groups. Conclusion: The total number of staff members was not associated with behavioural changes in an eight-week follow up period of BPSD.

**PC6 555 SAVING ELDERLY OR PROTECTION OF SCIENCE AND EXPERIENCE**  
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Human resource management has determinant effect in development. Education and experience are gathered by time and it has to be considered as a valuable asset in organizations. It is pity to say that in most of the developing countries this factor is not properly recognized and for development especial attention on other factors are focused. Normally in the developed countries the work force enjoys from good life and enough payment and when they retire they have satisfactory income and there are good plans to spent time in active life and to enjoy from holidays. In the mean while they have the chance of to be as a consultant or work in part time as an advisor. This situation in the developing countries normally is not the same. Occasionally some of the organizations for creating jobs for unemployed, they force the man power to retire in early stages and this means that when the work force still is fully active has to leave the work and from other side when they are not mentally prepared they have to stay at home. By taking this action the fully Knowledge and experienced manpower feel being useless and normally in short time they get sick and their behavior dramatically change. Developing countries normally are suffering from the lack of enough knowledge and experienced of work force. By early retirement they lose the experts and in the mean while they create mental disorders to their healthy population. Due to the cultural differences our study showed that, the rate of depression in elderly house for both men and women are higher than dwelling house.

**PC6 556 FACTORS UNDERLYING CAREGIVER STRESS IN FRONTOTEMPORAL DEMENTIA AND ALZHEIMER'S DISEASE**  
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Introduction: Frontotemporal dementia (FTD) has devastating effects on patients and caregivers, yet the factors underlying caregiver stress are poorly understood. Methods and materials: 108 caregivers (79 = FTD, 29 = Alzheimer's disease) participated in a postal survey. Self-report measures of perceived stress, depression, social networks, as well as patient-based measures of behaviour change and activities of daily living were completed. Results: Depression was a cardinal feature in FTD caregivers, and it accounted for more than 58% of stress scores. Both depression and stress were significantly higher than in AD. Neither the severity of behaviour changes nor functional disability explained caregiver stress. Conclusion: Caregiver stress is a multidimensional construct, and FTD caregivers

should receive more support than it is currently available. Depression plays a key role in coping ability.

**PC6 557 THE DARK SIDE OF THE FRONTOTEMPORAL LOBAR DEMENTIA IN AN OLD MAN**

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**Introduction:** In the frontotemporal lobar degeneration, the atrophy is localized in frontal or temporal lobes, especially anterior area. 3 syndromes occur in FTLD: frontotemporal dementia [FTD], semantic dementia [SD] and progressive primary aphasia. Methods: We studied a 72 years old man underwent Geriatric Consultation for behavioral (fixed and mystical ideas, logorrhea, impulsiveness and self-centered) and cognitive impairment. To identify the diagnosis, a standard cognitive assessment was been realized (anamnesis, previous history, neuropsychological tests, clinical and psychiatric examination, standard serum parameters, cerebral MRI and Functional Brain Imaging [SPECT]). Results: Even if the neurological assessment and serum parameters were normal, either a hypomania or a frontal disease was suspected. Neuropsychological testing showed abnormalities such as "puzzle" and "igloo" non recognition while the patient had a high socio-cultural level. In a second exploration, there were a prosopagnosia and associative agnosia were noted. Cerebral MRI showed a right temporal atrophy and the SPECT, a low tracer uptake in both frontal and posterior space. Conclusions: The first hypothesis was FTD because of the behavioral symptoms were obvious on a first view. But, the cerebral MRI and the cognitive assessment were more in favor of SD. Even if in the majority of the SD, the right temporal atrophy is uncommon.

**PC6 558 MALNUTRITION AND BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA.**

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**Introduction** Malnutrition is often observed in people with dementia and is primarily studied by its physiological aspects. However, some studies indicate the important role of Behavioural and Psychological Symptoms of Dementia (BPSD) (Brocker et al., 2003). Indeed, they show that there is a link between the deterioration in the nutritional status of the demented elderly and the severity of BPSD, without specifying which (Guerin et al., 2005). Therefore, our work focuses on the identification of BPSD specifically associated with malnutrition. Method and materials 19 seniors suffering from dementia and living at home were included. The survey was conducted in a Local Information and Coordination Center in rural areas. Nutritional status was assessed through the MNA score (Mini Nutritional Assessment, Guigoz et al., 1994), and different types of BPSD were evaluated by the scores for each of the 12 sections of the NPI (Neuropsychiatric Inventory, Cummings et al., 1994). Results The results confirmed the involvement of BPSD in the deterioration of nutritional status, and highlighted two BPSD that are particularly associated: hallucinations and aberrant motor behaviour. Conclusion The question remains as to what extent these two BPSD are not interrelated. Indeed, hallucinations, which could cause a false perception of food, could cause other BPSD, including aberrant motor behaviour. Furthermore, aberrant motor behavior, repetitive and ceremonial activities, could cause an increase in energy expenditure that is not compensated by food intake (Roland et al., 2003). Thus, it would be interesting to study the issue of the consecutive comorbidity of these BPSD in altering the nutritional status, and their fluctuating association during the course of the disease.

**PC6 559 CAN PROGRESSIVE AND NON-PROGRESSIVE BEHAVIORAL VARIANT FRONTOTEMPORAL DEMENTIA BE DISTINGUISHED AT PRESENTATION?**

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**Introduction:** Recent findings suggest that behavioral variant frontotemporal dementia (bv-FTD) patients differ in their disease progression (progressive vs. non-progressive patients). The current study investigates whether the two groups can be discriminated by their clinical features at first presentation. Methods and materials: Archival clinical data of the Early Onset Dementia Clinic, Cambridge, UK were analyzed of ninety bv-FTD patients: 53 progressive and 30 non-progressive cases with more than 3 years follow-up. Results: The subgroups were largely indistinguishable on the basis of the presenting clinical features but could be distinguished on general cognitive (ACE-R) and selected supportive

diagnostic features (distractibility, stereotypic speech, impaired activities of daily living (ADLs) and current depression). Conclusion: Progressive and non-progressive bv-FTD patients are difficult to differentiate on the basis of current clinical diagnostic criteria for FTD but a combination of general cognitive, executive dysfunction and impaired ADL measures appear to be the most promising discriminators.

**PC6 560 RESOURCES NEEDED TO PROVIDE EFFECTIVE RESPONSES TO BEHAVIORAL CHALLENGES IN LONG TERM CARE FACILITIES**

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**Introduction**In Ontario, Canada, the most common concern reported by long-term care (LTC) healthcare providers in dealing with residents' challenging behaviours was the accessibility and availability of resources, especially during crisis situations (MOHLTC, 2007). Moreover, lack of knowledge of appropriate responses, existing resources, and poor linkages between health care sectors were also noted as barriers to optimal care for LTC residents. The purpose of this study was to gain a deeper understanding of healthcare providers' needs for appropriately responding to residents' challenging behaviours in LTC facilities in South West Ontario, Canada. MethodsThe research design used a Qualitative Interpretive Descriptive approach (Thorne et al., 2004). Data were collected during 18 focus groups with LTC front-line health care providers (e.g., nursing aides, personal support workers, nurses, physiotherapists, recreational therapists). Data analysis encompassed a transcript-based analysis using a thematic approach. ResultsThe overarching Context included themes identified as 'place', 'organizational structure', and 'resources'. These themes described the context within which the front-line practitioners conducted their daily dementia care. 'Place' included rural/urban and the structural lay-out of the ward. 'Organizational structure' included concepts such as hierarchy, consistency of care, boundaries and rules, and knowing how to work the system. 'Resources' included time, team members, experiential knowledge, and support system. At the centre of Context, two overlapping themes were identified: 'relationships' (e.g., power, roles, boundaries, recognition) and 'information communication technology' (e.g., standardized assessment tools, access to the internet, who communicates what). Lastly, 'Consequences' (e.g., helplessness, fear, desensitization, the need to be heard, empathy, and thirst for knowledge) were revealed by the participants. ConclusionThe knowledge gained from this study is being shared with the participants and senior LTC administrators. The aim is to change the 'Context' within which care is provided to facilitate evidence-

**PC6 561 VIRTUAL REALITY AND LIFE REVIEW THERAPY: TOWARD A NEW FORM OF PSYCHOAFFECTIVE CARE IN ALZHEIMER'S DISEASE?**

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This research's aim was to assess the effects of a virtual version of life review therapy on cognitive functioning, autobiographical memory, mood states and self-identity, for subjects at the early to intermediate stage of Alzheimer's dementia. Exposure was achieved through an Evocative Virtual Environment (EVE), consisting in a virtual museum viewed through a head mounted display, where one can roam at leisure using a physical driving wheel interface, and in which are displayed enlarged photographs related to the subject's life. A multi-case (n=5) ABA design was used in order to establish proof of concept for the EVE. Baseline for various measures was established during a 2-week pre-test, followed by a 4-week test period where subjects, comfortably seated in an armchair, were driven in the EVE three times a week for an hour. Post-test consisted in a 2-week period where control measurements were taken. Results reflected the heterogeneous nature of the Alzheimer's patient population, as no clear regular pattern of effect did stand out. Process chart analysis did not yield statistically significant differences between the three phases of the experiment when considering all subjects. However, a clear pattern of improvement (t-tests only) does emerge when considering as a subgroup the three subjects where data indicates efficacy of treatment, corroborating non-systematic observations to the effect that exposure in the EVE did lead to clinically significant and positive results. Of the two subjects that didn't benefit from the treatment, one was moved to a long-term care facility and medication was changed during the time of the experiment. The other presented an overall decline in most aspects measured, pointing toward the possibility that either EVE exposure has its limits and cannot counterbalance the effect of a degeneration bout, or that the EVE may in some cases have a deleterious effect.

**PC6 562 THE CASE-SPECIFIC NATURE OF INTERVENTIONS FOR MANAGING CHALLENGING BEHAVIOURS IN NURSING HOMES**

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**Introduction.** The behavioural and psychological symptoms of dementia (BPSD) pose a significant clinical problem in long term care. Research evidence supports the efficacy of non-pharmacological interventions in the management of BPSD. Bird et al (2002) showed

that case-specific, primarily psycho-social interventions in nursing homes resulted in the reduction of challenging behaviours and improvements in staff attitudes. Additionally, increased staff education and clinical supervision has been found to reduce challenging behaviours and to positively alter staff perceptions of the problem. This paper aims to canvas the broad range of interventions available for individuals presenting with challenging behaviours in nursing homes, with an emphasis on the necessity of addressing the specific causative factors in each case. Some of the complexities of providing psychological services in the nursing home environment are discussed. Method. A review of 24 cases from a recently established Behaviour Assessment and Intervention Service was conducted, using a content analysis of behavioural care plans to categorise the interventions. Results. There were a total of 20 categories of interventions, incorporating a wide variety of specific applications within each category. The categories are discussed and a small sample of case studies is presented to demonstrate the case-specific nature within intervention category. Conclusion. The key message derived from the analysis is that although some broad categories of interventions are used consistently across cases, the complexity of each case requires that the interventions be individualised in their application to suit the needs of the person, and to address the specific causative factors of the challenging behaviour.

#### **PC6 563 ARE THERE SPECIFIC PSYCHOLOGICAL AND BEHAVIOURAL SYMPTOMS OF DEPRESSION IN DEMENTIA PATIENTS ?**

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Background. Psychological and behavioural symptoms in dementia (BPSD) are very frequent, so that 95% of patients have at least one. Third of persons with dementia have depressive symptoms, and concomitant BPSD are very frequent. Objective. The study aimed to characterize these psychological and behavioural manifestations of depression in patients with dementia. Methods. We recruited 331 patients with dementia from several nursing homes of Limousin-France. The depression was diagnosed by the Cornell Scale for depression in dementia (CSDD) with a cut-off of 7, and the BPSD were assessed using Neuropsychiatric inventory (NPI). Results. Of 331 individuals with dementia, 42.9% (n=142) had depression and 75.8% (n= 251) had BPSD. All BPSD were significantly ( $p<0.0001$ ) more present in depressed patients. But we did not have significantly difference for sex and age. The most common NPI symptoms in depressed patients other than depression were agitation (43.7%), anxiety (42.9%), apathy (41.5%) and irritability (40.8%). Four NPI-based factors were indentified (60.8% of the common variance): environmental factor (irritability, disinhibition, agitation), positive factors (elation, hallucination, delirium), emotional factor (anxiety, apathy, appetite disturbance) and circadian factor (aberrant motor behavior, sleep disturbance). The depression in dementia patients was significantly associated with environmental, positive and emotional factors. Conclusion. BPSD are a common and major problem. Before to consider them as isolated symptoms, this is important to assess co-morbidity with depression in order to have better therapeutic attitudes.

#### **PC6 564 \$RESULTS FROM THE LONGITUDINAL DEMENTIA CAREGIVER STRESS STUDY (LEANDER)**

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Introduction. The study assessed objective and subjective burden of Dementia caregivers over three years within a stress theoretical framework. Methods Initially, 888 caregivers participated in the study. These subjects completed the Berlin Inventory of Caregivers' Burden at five measurement points. The inventory consists of 20 subscales with 88 items. Complete longitudinal data were gathered from 226 participants. Results Results show that the intensity of burden varies considerably in different dimensions and changes over time. The loss of a beloved person seems to be the greatest burden for all caregivers. The study proves positive intervention effects of day care facilities and social services.

#### **PC6 565 HIGH PREVALENCE OF NEUROLEPTIC DRUG USE IN ELDERLY PEOPLE WITH DEMENTIA.**

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INTRODUCTION: The management of the psychological and behavioural symptoms associated with dementia frequently requires the use of neuroleptic drugs. The objective of this study was to determine the prevalence, characteristics and possible differential factors of people aged  $\geq 65$  years diagnosed with dementia taking or not taking neuroleptic drugs. MATERIAL AND METHODS: Five-hundred and fifteen patients aged  $\geq 65$  years with

dementia were retrospectively evaluated. Data were collected on sociodemographic variables, type of dementia, the Barthel Index (BI), the Lawton Index (LI), the Mini Mental State Exam (MMSE), the Charlson Index, treatment with psychoactive drugs (neuroleptic drugs, antidepressants, benzodiazepines and non-benzodiazepine hypnotic-sedatives), specific dementia treatments, vascular risk factors and comorbidities. The stage and severity of dementia were evaluated by the Global Deterioration Scale (GDS), stratifying patients into two groups: Mild-moderate (GDS 3, 4 and 5) and severe (GDS 6 and 7) disease. RESULTS: There were 364 women (70%) and 151 men, with a mean age of  $81 \pm 6$  years, of whom 10.1% were institutionalized. A total of 270 patients (52.5%) had GDS 3-5 and 245 had GDS 6-7 (47.5%). Neuroleptic drugs were being taken by 233 (45.2%) patients. In the multivariate analysis, neuroleptic drug use was associated with male gender, institutionalization, worse LI scores, more severe dementia and not having heart failure. CONCLUSION: A high percentage of elderly patients with dementia are treated with neuroleptic drugs. There are significant differences in the prescription of neuroleptic drugs according to patient sociodemographic characteristics, the severity of dementia and comorbidities.

#### **PC6 566 MANAGING CHALLENGING BEHAVIOUR OF PEOPLE WITH DEMENTIA THROUGH INTERDISCIPLINARY IMPLEMENTATION OF QUALITY INSTRUMENTS IN LONG-TERM CARE**

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Introduction: Challenging behaviour of residents with dementia has been identified as one of the primary concerns caregivers and nurses face in long term care. A German guideline was developed containing seven recommendations for managing the care of people with dementia showing challenging behaviour. The first recommendation refers to "understanding diagnostics". Nurses first have to understand the reasons why a person with dementia behaves in a specific way before they decide to initiate or to omit interventions. Case conferences are an important method for implementing "understanding diagnostics". Moreover, a standardized assessment tool (IdA) was developed which can help nurses to structure and guide these case conferences. Nurses, family members and the resident's general practitioner should attend these meetings. Besides implementing the guideline for nurses, a dementia guideline for GPs will be implemented in the project as general practitioners medicating residents in nursing homes often lack special evidence-based knowledge of dementia care. Aim of the study: The current study aims at improving the quality of life (QoL) of residents with dementia and challenging behaviour through implementation of the "understanding diagnostic" in the field of nursing, a dementia guideline for general practitioners and an improved cooperation between both professional groups. Furthermore case conferences are realized. Methods: The study uses a pre-post-test design. The resident's QoL (Qualidem), challenging behaviour (NPI-NH), physical maintenance (PSMS) and psychotropic medication is assessed before and 9 months after the interventions (trainings and case conferences). There is a total of 158 residents with dementia (MMSE< 24) who complete the pre-intervention measures in 15 nursing homes in two regions of North Rhine Westphalia (Germany). Results: Preliminary results of the study will be presented. Furthermore, supporting and impeding factors of the trainings and case conferences will be discussed.

#### **PC6 567 PRIMARY CAREGIVERS IN CRISIS: CARING A FAMILY MEMBER WITH DEMENTIA AT HOME**

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INTRODUCTION: There is much quantitative research focus on caregiver burden caring for demented people. However, the current reports show that there are still criminal cases related to care for people with dementia at home in Japan. The purpose of this qualitative study explores experiences of primary caregiver in crises that cared for people with dementia at home. METHODS and MATERIALS: Ten primary caregivers initially interviewed in their homes for 90 to 180 minutes. They were asked about their perceptions and experiences, from the onset of symptoms of dementia to the death. Interviews were IC recorded and transcribed verbatim. Two cases were analyzed to identify characteristics of the primary caregiver in crises in the qualitative descriptive method. Analysis of data was assisted by NUDIST NVivo, a software package for qualitative research. RESULTS: Major themes emerged from elements of crises were evident among primary caregivers in the process. In crisis mediator was in conjunction with physical and psychological "exhaustion" due to deterioration of BPSD and lack of family supports, "isolation". As a result, primary caregivers were attempted murder to demented people with aggressive behavior, caused by "resisting care" them. Furthermore, along with the primary caregivers failed attempts to keep their relative at home caused the crisis process, "conflict". At last, primary caregivers got themselves out of the crisis situation, because they felt themselves "family in crisis". Therefore, the family sent a person with dementia to a nursing home. CONCLUSION: This study indicates that isolated primary caregivers living with demented people are the high risk group in the crises. Therefore, promote welfare and health care

services in community levels to find out people with isolation, and participation in neighborhood.

**PC6 568 RELATIONSHIP BETWEEN THE BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS AND THE BURDEN OF CAREGIVER OF PATIENT WITH DEMENTIA**

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**Objective:** The purpose of this study is to identify the principal factors associated with the burden of caregivers of patients with dementia. To date, the results of the literature do not clearly underline the specificity of the link between the Behavioral and psychological symptoms (BPS) and the burden of caregiver. This study aims them to study association between the BPS and the burden of caregiver, within the particularly framework of a Local Center of Information and Coordination (CLIC), touching a population socially not very favoured, alive mainly in residence in rural environment and far away from the expert centers. **Methods:** The evaluations were carried out in the residence of the patients. The BPS were evaluated by using the NPI among 100 patients with dementia. The burden of caregiver was evaluated by using the scale of burden of Zarit. **Results:** The results of the linear regression analyses show a significant association between the total score obtained with the NPI and the score of burden. This association continues, even after the adjustment of this score with other known explanatory variables. In addition, the univariated analyses enabled us to highlight an association between almost all the BPS and the burden of caregiver (only the euphoria did not present significant association). Lastly, into multivariate, the principal variables associated with the burden are the disinhibition and the sleep disorders. **Conclusions:** This study reinforces the idea of the need for a specific accompaniment of caregiver of patients with dementia. Within the framework of the CLIC, a pilot study thus could be initiated with an intervention structured near caregiver since April 2007. It is precisely centered on the taking into account of the strategies of adjustment facing BPS.

**PC6 569 INSIGHT AND ALZHEIMER'S TYPE DEMENTIA.**

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**Introduction:** The study of insight (awareness of the disease) in patients affected by Alzheimer disease (AD) has been relatively neglected in literature due to both definition problems and lack of evaluation instruments. The aim of this study is to evaluate the insight in a group of demented patients characterized by degree of cognitive impairment from mild to mild-moderate. **Methods and materials:** Since January 2008, 100 consecutive patients, were enrolled in the study according to NINCDS-ADRDA Work Group criteria. Degree of cognitive and functional impairment was analyzed using MMSE, ADL and IADL. Severity of dementia was assessed using the Clinical Dementia Rating Scale (CDR). Insight was evaluated using the Guidelines for the rating of awareness deficits (GRAD) and the Clinical Insight Rating Scale (CIR). **Results:** The mean age of the patients was  $76.9 \pm 6.9$ . The age didn't appear significantly related to GRAD ( $R=0.17$ ;  $p= NS$ ) and CIR ( $R= -0.18$ ;  $p= NS$ ). Scores. There was a statistically significant relationship between GRAD and CIR scores and severity of dementia evaluated by CDR ( $R= -0.78$ ,  $p<0.01$ ;  $R= 0.74$ ,  $p< 0.01$  respectively) and between GRAD and CIR scores and severity of cognitive impairment evaluated by MMSE ( $R= 0.73$ ,  $p<0.01$ ;  $R= -0.81$ ,  $p<0.01$  respectively). The linear regression coefficient between insight(GRAD-CIR ), and severity of dementia and cognitive impairment shows that the degree of awareness of cognitive deficits calculated with both scales is significantly related to severity of dementia evaluated using CDR (GRAD  $-1.01 \pm 0.92 \beta \pm es$ ;  $r= 0.78$ ,  $p< 0.001$ ; CIR  $2.08 \pm 0.22 \beta \pm es$ ,  $r= 0.74$ ,  $p< 0.001$ ) and MMSE (GRAD  $0.13 \pm 0.01 \beta \pm es$ ,  $r= 0.74$ ,  $p< 0.001$ ; CIR  $-0.25 \pm 0.31 \beta \pm es$ ,  $r= 0.69$ ,  $p< 0.001$  ) scores. **Conclusion:** Insight decreases with worsening of cognitive impairment and degree of dementia.

**PC6 570 INCOME, EDUCATION, AND HEALTH-RELATED BIOMARKERS: EVIDENCE FROM A U.S. NATIONAL SAMPLE OF MIDLIFE AND OLDER ADULTS**

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**INTRODUCTION:** Lower socioeconomic status (SES) has been consistently linked to higher rates of morbidity and mortality. Yet less research from population samples has explored how lower income and lower education are linked to an accumulation of biological risk factors that may help explain this linkage. **METHOD:** This study used survey and biomarker data from 887 participants in the National Survey of Midlife in the U.S. (MIDUS) 1995-2005 (1) to examine how variation in education and household income among adults aged 32-84 in 2005 were linked to 15 biological risk factors and

composite scales assessing overall allostatic load (a cumulative assessment of biological risks: 15-item total scale), cardiovascular dysregulation (6-item subscale), inflammatory dysregulation (5-item subscale), and hypothalamic-pituitary-adrenal axis (HPA)/hormone dysregulation (4-item subscale); and (2) to examine gender differences in biological risks and linkages to SES. **RESULTS:** Multivariate regression models (adjusting for age) revealed that lower education and lower income both independently predicted higher levels of allostatic load. Lower income was a stronger predictor of allostatic load among women; lower education was a stronger predictor of allostatic load among men. Relatively similar patterns of gender differences were also observed across the subscales. Women and men did not differ in levels of overall allostatic load, but women reported higher levels of hormone dysregulation than men and men reported higher levels of cardiovascular dysregulation than women. **CONCLUSIONS:** Results from a U.S. population sample confirm that both lower education and lower income are independently linked to health-related biological risk factors—including cumulative allostatic load—in a problematic way. Biological risks and links between education, income, and biological risks vary somewhat for men in contrast to women, suggesting that future work needs to take gender differences into account, and also explore multiple biological subsystems (e.g., inflammatory factors and cardiovascular factors as well as HPA/hormone factors).

**PC6 571 SOCIOECONOMIC FACTORS, FUNCTIONAL DISABILITY AND NUMBER OF DISEASES AMONG ELDERLY**

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**Introduction:** Thinking in the quality life of elderly people, several factors must be considered, as age, sex, family arrangement, marital status, education, income, chronic diseases and functional capacity. So, relationship among diseases and income, education, use of health services and disability is focus of interest of numerous research. **Objective:** Compare diseases with aged, sex, education, income, use of health services and number of functional impairments. **Methodology:** The study integrated 2912 elderly people of Uberaba city, Minas Gerais, Brazil, who were interviewed in their home. The sampling technique was the systematic stratified proportional, considering the districts as strata. Data were entered into double entry in the electronic program EpilInfo3.2. and were submitted to descriptive analysis and the chi-square test ( $p <0.05$ ). The project was approved by the Research Ethics Committee. **Results:** The majority of respondents are women, is at the age of 60 I-70 anos; has 3 I-8 years of study; receives from 1 I-3 minimum wages; sought the health service over the past twelve months; were not hospitalized; examination done in the past twelve months, took care of the problem in the health service, especially for the long wait, displays 1 I-3 functional disability and has, on average, four morbidities. The analysis showed that the largest number of diseases is, proportionately, more women, among older people without education, with lower individual income, with the increased demand by the health service, with the greatest frequency of hospitalization and higher occurrence in the number of disabilities functional. **Conclusion:** The results, obtained in this study, can help the planning of health care for elderly people.

**PC6 572 THE EFFECTS OF MUSIC THERAPY ON ANXIETY IN PATIENTS WITH ALZHEIMERS DISEASE; A CONTROLLED, RANDOMISED STUDY**

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**Introduction:** Numerous studies have indicated the value of music therapy in the management of patients with Alzheimers disease [1]. A recent pilot study demonstrated the feasibility and usefulness of a new music therapy technique [2]. The aim of this controlled, randomised study was to assess the effects of this new music therapy technique on anxiety and depression in patients with mild to moderate Alzheimer-type dementia. **Methods and Materials:** This was a single-centre, comparative, controlled, randomised study, with blinded assessment of its results. The duration of follow-up was 24 weeks. The treated group (n=15) participated in weekly sessions of individual, receptive music therapy. The musical style of the session was chosen by the patient. The validated "U" technique was employed. [2]. The control group (n=15), participated under the same conditions in reading sessions. The principal end-point, measured at W1, W4, W8, W16 and W24, was the level of anxiety (Hamilton scale). Changes to the depression score (GDS) were also analyzed as a secondary end-point. **Results:** Significant improvements in anxiety ( $p<0.01$ ) and depression ( $p<0.01$ ) were observed in the music therapy group as from W4 and until W16. The effect of music therapy was sustained for up to 8 weeks after the discontinuation of sessions between W16 and W24 ( $p<0.01$ ). **Conclusion:** These results confirm the valuable effect of music therapy on anxiety and depression in patients with mild to moderate Alzheimers disease. This new music therapy technique is simple to implement and can easily be integrated in a multidisciplinary programme for the management of Alzheimers

disease. [1] Sherratt K et al. Aging Ment Health 2004; 8: 3-12. [2] Guetin s et al. L'Encephale 2008; In press.

**PC6 573 THE EFFECTS OF VISUAL ACUITY (I.E., BLURRING) ON AUDIOVISUAL SPEECH-PERCEPTION: A COMPARISON OF YOUNGER AND OLDER ADULTS.**

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Introduction: Everyday listening situations contain varying degrees of background noise. Many studies have shown that speech-perception is improved when the interlocutor can both see as well as hear the talker. In other words, visual speech cues (lipreading) contribute to improve communication particularly when the auditory signal is distorted. The purpose of this study was to assess the effects of visual acuity (i.e., visual blurring) on audio-visual (AV) speech-perception performances among younger and older adults. Methods & Materials: Two groups of participants performed a closed-set sentence recognition task in a background of noise. The task was completed in one auditory-alone (A-alone) condition as well as under three AV conditions. In the first AV condition, all participants had normal or (corrected normal) visual acuity (20/20). In the other two AV conditions, visual acuity was blurred to simulate a moderate visual impairment (acuity 20/100) or a severe visual impairment (20/200). Results: The results obtained in younger and older adults showed that (1) the addition of visual-speech cues significantly improved speech-perception relative to the A-alone condition, (2) under the AV conditions, performance declined as the level of blurring increased,(3) even in the AV condition in which visual acuity was severely distorted the speech recognition scores were significantly higher than those obtained in the A-alone condition, and (4) generally, older adults obtained lower scores than younger adults in all conditions; however, the pattern of results observed was similar for both groups of participants. Conclusions: Our results illustrate the importance of lipreading even when visual acuity is not optimal. To optimize communication with older adults (even those with poor visual acuity) the interlocutor should face his communication partner in order to allow that person to make use of visual speech cues.

**PC6 574 PRELIMINARY RESULTS OF A STUDY MEASURING THE EFFICIENCY OF ECOSYSTEMIC THERAPY FOR THE COMMUNICATION DISORDERS OF ALZHEIMER**

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In 2006 and 2007 in 22 regions of France, 1016 speech therapists were trained to use ecosystemic therapy for treating communication disorders associated with Alzheimer's disease. The outcome of this therapy was studied; these professionals agreed to implement therapy with their patients, and to send the results of communication and cognitive assessments carried out, using a protocol they were given, to UNADREO (French association promoting Evaluation and Information in Speech and Language Therapy). A questionnaire was also to be filled in by each family. Assessments were to be carried out every 6 months for a total duration of 18 months. Some intermediate results have already been analysed. They show, in particular 6 months after the beginning of therapy, the efficiency of this type of therapy when comparing these patients with a control group. These results will be presented, thus proving the value of speech and language therapy based on an ecosystemic approach, which maintains communication between the patients and their family, reduces behavioural disorders of patients and eases some of the suffering for people close to them.

**PC6 575 TO BE A CENTENARIAN 160 YEARS AGO: BETWEEN HISTORY AND STORY**

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In the XXth century, some historians of medicine approached the old age. We can mention Luigi Belloni (1914-1989) and Mirko Dražen Grmek (1924-2000). Grmek gave (Grmek, 1965) a basic contribution to the history of ageing and old age. Simone de Beauvoir (1908-1986) (de Beauvoir, 1970) or George Minois (Minois, 1987) can be mentioned too. We can also point out some publications due to psychologists and medical historians from Brescia and Milan Universities (Porro 2008). In this presentation, we point out a publication, that appeared in 1887 (Corradi, 1887). The author, Alfonso Corradi (1833-1892), was full professor of materia medica (pharmacology) in Pavia University, and an esteemed medical historian too. In his speech, delivered in Vienna during the 6th International Congress of Hygiene, he discussed the problem of longevity. He made an exhaustive study of this subject (from a positivist point of view), and gives us some records, regarding a Sardinian centenary. He was a priest, and died at 104, in 1857. He led an active life, psychologically too. Studying the centenaries is a topical subject, and the history of old age can be used as a didactic unit. REFERENCES de Beauvoir S. (1970), La vieillesse, Gallimard Paris. Corradi A. (1887), Della longevità in relazione alla storia, all'antropologia ed all'igiene, Annali Universali di Medicina e Chirurgia. Parte Originale, 281, 843, 161-199. Grmek M. D. (1965), Le vieillissement et la mort, In: Encyclopédie de la Pléiade, Biologie, ,

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**PC6 576 EVALUATION OF AN INTERPROFESSIONAL EDUCATION (IPE) MODULE IN CARE OF THE ELDERLY AND ELDER ABUSE.**

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Introduction An educational module of 2 hours E-learning followed by 2 hours face-to-face learning introduced medical, nursing, and pharmacy students to principles and concepts of interprofessional teamwork in geriatric care and elder abuse. Methods Students participated in a web-based tutorial involving review of online instructional materials and small-group discussion activity. They completed an evaluation questionnaire regarding the role of their own as well as other professions in collaborative management of geriatric patients. Student activity was tracked by the WebCT learning management system. Facilitators of small group sessions completed an evaluation based on their observations of small group dynamics and functioning. Results N=113 students participated in this module: 55 medical, 8 pharmacy, 50 nursing. Majority of respondents (64.2%) reported the learning experience enhanced understanding of interprofessional teamwork. Significant differences in ratings between professions were found for items related to confidence in the role of one's profession on the team, dependence on the skills of others, ability to serve the patient/client, and level of contribution from interprofessional team members. Overall, medical students reported significantly lower scores than students from other professions. Medical students were less inclined to feel that interprofessional teams are effective in developing solutions to problems than their counterparts from nursing and pharmacy. Students reported a greater preference for face-to-face small group learning activities for interprofessional learning in comparison to e-learning and panel discussion activities. Students and facilitators felt that students from social work should have been involved in this module. Conclusions These findings suggest exposure to IPE is important for undergraduate medical education. Timing of learning about roles of different professionals in the undergraduate curriculum is yet to be resolved and requires further investigation. Other areas of curriculum in geriatric medicine may benefit from an IPE model.

**PC6 577 WORK TO RETIREMENT: DOES CULTURE MATTER?**

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L. MATTHEWS

Introduction: Research indicates that moving into retirement may increase levels of psychological symptoms for older people who retire out of their country of origin. Little is known about the transition from work to retirement process in Australia from a broad cultural perspective. The aim of the study was to explore psychological health from work to retirement for an overseas born population living in Australia in comparison to an Australian born population living in Australia to inform evidence-based practice for health professionals Method: The study utilised Internet Research Methodology. A purposive (non-probability) sample of people 50 years or older was recruited through web search engine links and online community interest groups. The dependent variables assessed were, depression, stress, anxiety, post-traumatic stress, life satisfaction, social support and social interaction. Two-way analysis of variance was conducted for each of the above stated dependent variables against: (1) being born in Australia Yes/No (country of origin), and (2) Retired Yes/No (work/retired). Results: Online data was collected from 286 participants. The findings indicate that there were no significant differences in psychological symptoms between groups for depression, stress, anxiety, post-traumatic disorder or social support. Only life satisfaction and social interaction showed significant differences, with retired people indicating that they were more satisfied than pre-retired people. This was more pronounced for those born in Australia than those born overseas. The only effect seen in social interaction was that retired people scored significantly higher than people not retired. Conclusion: Our sample reported no significant negative effects in retirement on a multicultural population when looking at increased symptoms of depression, anxiety, stress or post-traumatic stress disorder. Findings suggest that health professionals may need to continue to work with older working populations to help improve their overall life satisfaction.

**PC6 578 TAKING ACTION ON AGEING AND PHYSICAL ACTIVITY FOR OLDER PERSONS: THE EUNAAPA NETWORK**

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Introduction European nations face increasing numbers of older people. Promotion of physical activity (PA) in this group will contribute to maintaining and improving the

quality of life and to reducing the (economic) burden of disease and disability. Currently, there is no integration of health policies related to PA and ageing across Europe. From 2005, 20 European countries worked together to improve health, wellbeing and independence of older people throughout Europe by the promotion of evidence based PA. This was achieved by the foundation of a EUropean Network for Action on Ageing and Physical Activity (EUNAAPA). Methods The EUNAAPA network is a thematic, collaborative action network which incorporates scientists, providers, policy makers and elderly representatives. The objectives are: 1) to establish a self sustaining network, 2) to foster an intersectoral approach to the promotion of PA among older people by engaging in a dialogue with different policy sectors, 3) to identify evidence-based, cost-effective and acceptable ways to promote PA and 4) to facilitate the contribution of European scientists to the development and implementation of evidence based PA promotion policies. During its first project (funded by EU DG Sanco) inventories were carried out in all participating countries on PA promotion. Results Inventories and best practice reports have been published on assessment instruments on PA and physical functioning, successful PA programmes and promotion strategies and implementation and dissemination strategies. People can approach all the reports and join the network on: [www.eunaapa.org](http://www.eunaapa.org). A second project called PASEO (Building policy capacities for health promotion through Physical Activity among Sedentary Older people) has been awarded by EU DG Sanco. Conclusion EUNAAPA aims to bring science, practice and policy making together by fostering a sustained dialogue between all EU member states on the implementation of evidence based recommendations on ageing and PA.

#### **PC6 579 EFFECTIVENESS OF A HOME PROGRAM INTERVENTION FOR CAREGIVERS AND DEPENDENT OLDER PEOPLE**

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Introduction: Current policies emphasise the importance of taking care of dependent older people in their own homes as long as possible. To provide care for a dependent relative has been identified as a demanding and stressful situation associated with physical, mental health and socio-economic problems in the caregiver. Therefore, it is necessary the development of specialist home care services in order to provide Quality of Life for both caregivers and care recipients. The purpose of this study was to observe the effectiveness of a home program intervention for dependent older people. Methods and materials: 43 pairs of caregivers and old people were involved. Besides the social status of both, the cognitive and functional status of older people, and the overload of the main caregivers were also evaluated. This intervention lasted one month during which mental, functional and social functions were worked in older people. Also psychological attention and formation were given to caregivers. At the end, participants were re-evaluated to observe the possible effects of the program. Results: Main data showed that 12.2% of all caregivers had higher level of burden which was reduced after home program intervention. Moreover, those without burden increased from 61.0% to 74.4%. According to care recipients, Barthel Index mean score improved in 10.7 points, whereas the cognitive functions evaluated by MMSE did it in 5.8 points. Conclusion: This program was effective to reduce the level of burden in main caregivers, moreover, improvements in cognitive and functional status of dependent older people were observed. Reduction of burden could result from these improvements or from program intervention. More research is needed to consider this possibility, besides it is necessary to extend the time of intervention to observe if its effectiveness is maintained in samples with different characteristics.

#### **PC6 580 MANAGING FEAR OF FALLING: THE DEVELOPMENT OF AN IN-HOME INTERVENTION FOR FRAIL OLDER PEOPLE**

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Introduction Fear of falling in old age is considered a concern that may lead to decreased physical, mental and social functioning. A cognitive-behavioral group intervention has shown to reduce fear of falling and avoidance of activities in community-living older people. However, up to 42% of the older persons did not start or complete this group intervention, mainly due to health problems. The current study aims to develop a tailored in-home intervention guided by public health nurses for older people in poor health. Methods and materials For the development of the in-home intervention, the suitability of the 8 sessions of 2 hours of the group intervention was examined. For this purpose all components and techniques of the group intervention were assessed on their appropriateness for the targeted population and the in-home setting, and experts (n=7) in the domain of intervention development and behavioral change were consulted. Additionally, a pilot study was conducted to test the feasibility of the newly developed intervention. Results Compared to the group intervention, overcoming specific (fear-related) problems in daily life ('exposure-in-vivo') and formulating behavioral contracts were added to the newly developed in-home intervention, the physical exercises were skipped for practical reasons. To encourage participants to change their behavior,

motivational interviewing was added as discussion technique in the in-home intervention. The experiences of 6 nurses and 6 participants in the pilot show that this in-home intervention consisting of 3 home-visits of 1 hour each and 4 telephone contacts of 35 minutes each seems to be feasible. Conclusion An in-home intervention to reduce fear of falling and avoidance of activity in frail elderly has been developed and is promising. Currently a randomized controlled trial is conducted to test the effectiveness and feasibility of the intervention.

#### **PC6 581 PERCEPTION OF PATIENTS WITH DIABETES REGARDING TYPE 2 WITHIN THE RANGE OF A BASIC HEALTHCARE UNIT (SPONSORED BY FAPESP 06/54424-2)**

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Introduction: Chronic diseases such as Diabetes Mellitus cause great concern in the field of health due to the economical and social burden they represent to individuals and society, their frequency and increase in life expectancy requiring constant and appropriate care. Objective: To identify the perception of patients with insulin-dependent and non-insulin-dependent diabetes within the range of BHU-CECAP in Botucatu, São Paulo. Methods: Two-stage exploratory survey: quantitative, using a data collection instrument in 79 insulin-dependent and 61 non-insulin dependent individuals; and qualitative, using a semi-structured form in 19 insulin-dependent and 18 non-insulin dependent patients. A saturation sampling technique was used to determine sample size and discourse analysis to assess representations of the disease. Results: In both groups, there was a greater concentrations of older patients, especially between 70 and 74 years; the presence of females was relatively more frequent; low schooling level; knowledge of the different treatment modalities; the majority received guidance from physicians with just a few mentioning other professionals; 68% of the insulin-dependent and 44% of the non-insulin dependent patients sought for further information; 31% of the insulin-dependent and 23% of the non-insulin dependent individuals reported difficulty in complying to treatment and 61% of the non-insulin dependent vs 26% of the insulin-dependent performed physical exercises. In both groups, perceptions presented three meaning structures: "disordered life", "life threat" and "biological meaning". The remarkable aspects within these structures were: food restriction, the idea of control, prohibition, strangeness, danger and malignancy. In the approach to biological, there was influence of profession or relatives in the health field. Conclusion: Acknowledging the existence and influence of cultural and social as well as subjective and symbolic elements that give meaning to individual experience challenges the health sector to develop interventions sensitive to the specificities of different social groups.

#### **PC6 582 FACTORS RELATED TO THE CAREGIVING SATISFACTION OF FAMILY CAREGIVERS OF EDLDERS WITH STROKE IN KOREA**

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Introduction: The purpose of this study was to identify the factors affecting caregiving satisfaction of family caregivers of community-dwelling elders with stroke in South Korea. Methods and materials: The study design was a cross-sectional descriptive survey. A total of 104 primary family caregivers and their care recipients who were noninstitutionalized and community-dwelling elders with stroke agreed to participate. The data were collected from June, 2008 to January, 2009 using a survey including Korean-Revised Caregiving Satisfaction Scale (Son, Zaiszniewski, Wykle & Fultton Picot, 2000). Results: The mean score for caregiving satisfaction was 40.02. There were significant differences in the degree of caregiving satisfaction by living arrangement, type of relationship with the elder, and family income. Caregiving satisfaction showed significantly negative correlation with level of paralysis, and a significant positive correlation with previous relationship between the primary family caregivers and their care recipient. The most powerful predictor of caregiving satisfaction was the relationship between caregiver and elder. Conclusion: Findings indicate that primary family caregivers of elders with stroke need family-focused nursing intervention as supported care to improve relationship between elder and family caregiver and to increase the caregiving satisfaction of caregivers by culturally tailoring to Korean. And replication of the study with a larger sample needs to be considered the further enrich specific knowledge regarding caregiving satisfaction experienced by korean family caregivers of elders with stroke.

#### **PC6 583 DISTANCE EDUCATION IN GERONTOLOGY FOR DENTAL HYGIENISTS**

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BODY Oral health is the biggest unmet health care need of elderly in long-term care. Despite this, many oral health professionals are unwilling to work with the elderly. Health

providers' lack of geriatric knowledge and skills, and ageism, are significant barriers to quality elder care. INTRODUCTION Education socializes health professionals to their future roles in health care. Research shows that geriatric education is a stronger predictor of positive attitudes toward older adults than is daily contact. The University of Alberta developed an online course for dental hygiene management of elderly in long-term care. This presentation describes the course components designed to enhance knowledge, skills and positive attitudes. METHODS AND MATERIALS A 14-week distance education course was piloted to 29 post diploma dental hygiene professionals in 2008. Students were orientated to the technology and received a manual with the relevant readings. Each unit applied distance education teaching and learning pedagogy. Interactive meta-cognitive exercises enabled students to monitor and reflect on their attitudes and advance their knowledge of elder care. Guided activities emphasized the complexities of the multidisciplinary care environment. Case studies were provided and students analyzed scenarios relevant to weekly topics. Frequent formative feedback was provided. Interaction, collaboration and sharing were encouraged. RESULTS Students increased their knowledge of the continuing care system, the funding of institutions and health policies. The course aided students in identifying their misperceptions of the elderly and in developing positive attitudes toward them. Students expressed a higher level of confidence and willingness to work with the elderly. CONCLUSIONS Gerontology education advanced dental hygiene students' knowledge and skills, and increased their willingness and confidence to work with the elderly. Use of distance education increased accessibility for practicing professionals.

#### **PC6 584 THE EFFECTS OF HEALTH EDUCATION INTEGRATED EXERCISE PROGRAM FOR COMMUNITY DWELLING OLDER ADULTS WITH HYPERTENSION IN SOUTH KOREA**

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Introduction. The aim of this study was to indentify the effects of a randomized controlled trial involving health education integrated exercise program for older adults with hypertension. Methods and materials. Older adults with hypertension from a senior center in South Korea completed a baseline assessment and were randomly allocated to either experimental (n=18) or control group (n=22). Older adults in experimental group received the health education and tailored exercise program bi-weekly for 12 weeks from December 2007 to March 2008. The intervention program developed by multidisciplinary collaboration of nursing, medicine, and exercise physiology based on the program evaluation method. Results. The mean age of subject were 71years (experimental group) and 69 years (control group). There were no significant differences in socio-demographic characteristics between two groups. All baseline data were homogeneity. After intervention, systolic blood pressure of experimental group was statistically decreased than that of control group ( $F=9.6$ ,  $p=.004$ ). Exercise self efficacy ( $F=8.3$ ,  $p=.006$ ) and general health ( $F=13.6$ ,  $p=.001$ ), vitality ( $F=6.4$ ,  $p=.016$ ), social functioning ( $F=4.8$ ,  $p=.034$ ), mental health ( $F=5.0$ ,  $p=.031$ ) among SF-36 were statistically increased than those of control group. Conclusion. Health education integrated exercise based on the needs of older adults with hypertension is effective to achieve blood pressure control, and ultimately a reduction in adverse outcomes. Further research is needed to develop and testify the long term effects of intervention to enhance patient adherence, health status, and quality of life for this prevalent chronic condition. Key words: health education, exercise, older adults, hypertension, randomized controlled trial

#### **PC6 585 THE ASSOCIATION BETWEEN SOCIAL SUPPORT AND EMOTIONS AMONG ALZHEIMER'S CAREGIVERS**

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Introduction: Research shows that Alzheimer's disease caregiving can generate emotional and psychological distress, impact on the physical health and isolation. A big amount of research has set up that social support positively influence resilience and reduces the psychological and emotional distress. But few studies have attempted to study the relationship between social support and emotions. As a result, the aim of this study was to analyze the relationship between the frequency of negative and positive emotions and its association with the perceived social support among Alzheimer's caregivers. Methods and Materials: A cross-sectional analysis of self-reported data was conducted. Measures of demographics, perceived social support and positive and negative affect were administered to 51 Spanish community dwelling Alzheimer's patients informal caregivers. Social Support was evaluated through the Psychosocial Support Questionnaire (PSQ, Ribera & Miquel, 1991) and the Positive and Negative Affect was measured by the Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988). Results: Results show significant statistical association between perceived social support and negative emotions. The results addressed a negative association between perceived social support and distressed [ $r(49) = -.392$ ;  $p<.01$ ], upset [ $r(49) = -.396$ ;  $p<.01$ ], hostile [ $r(49) = -.386$ ;  $p<.01$ ], and irritable [ $r(49) = -.344$ ;  $p<.05$ ]. These results outline that those caregivers that

perceived a low social support presented more distress, upset, hostile and irritable feelings. On the other hand, to have positive emotions like enthusiastic feelings [ $r(49) = -.368$ ;  $p<.01$ ] showed a positive association with perceived social support, which means that the more enthusiastic a caregiver is the more perceived social support has. Conclusions: This data show that caregiver's emotions are directly related to the perceived social support. This should be considered when developing therapeutic intervention programmes for Alzheimer's caregivers and also in clinical practice.

#### **PC6 586 SMOKING CESSATION AND LIFESTYLE CHANGES IN LATER LIFE**

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Background: It is a well established fact that smoking greatly increases the risk for different types of cancer, heart diseases and respiratory diseases. In Norway, smoking policies have mainly targeted younger smokers, but smoking cessation can be of substantial benefit also for elderly people who have smoked for many years. Health related behaviour, such as smoking, physical activity and diet, follows distinct social patterns in the population. Yet few studies focus on how change in smoking behaviour is related to change in other types of health-related behaviour in later life. Objective: To explore the extent to which self-reported changes in smoking behaviour are related to changes in overall lifestyle. Methods and materials: Cross-sectional survey data from the Norwegian Lifecourse Generation and Gender study (LOGG). The analyses in the present paper are based on 9 592 respondents in age range 18 to 79 years, with valid answers to the postal part of the survey. Results: Ten percent reported that they had stopped smoking during the past 5 years. Selfreported smoking cessation is strongly related to other health-related behaviours such as eating healthier and increased exercise. It is also related to more structural life changes such as change of work status/ retirement, family life and onset of health problems. Associations are stronger for those aged 67+ compared to younger age groups. Conclusions: In addition to targeting smoking behaviour separately, the findings underline the importance of taking overall lifestyle into account in health promoting interventions in later life.

#### **PC6 587 A EUROPE-USA EXCHANGE PROGRAM FOR GERONTOLOGY STUDENTS AND CURRICULA: BEST PRACTICES IN THE INTERGERO PROGRAM**

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Introduction With support from the European Commission, Directorate General for Education and Culture (EU), and the US Department of Education (FIPSE), this project was designed to exchange both ideas and students between six universities in Europe and the United States. A consortium of six universities specializing in Gerontology has been formed to help train the next generation of leading professionals in this field. Methods and materials The Intergero project includes several components: the development and dissemination of an innovative international curriculum on Gerontology; the integration of the curriculum within existing programs of study; the development of language and cultural preparation and assessment; the development of an organizational framework for student mobility; the promotion of internships in gerontological institutions included in the curriculum; the pursuit of structured exchanges and teaching assignments; the joint development and dissemination of web-based information; the reporting of products, outcomes and results; and the development of a thorough project evaluation plan. Students participating in the exchange are assessed through a pre and post survey. Surveys are conducted focusing on preparation and logistical areas, comparative social policy, and personal growth and experiences. Results The presentation will emphasize the outcomes of the exchange for both students and faculty. Identification will be made of the "best practices" of the Intergero program providing appropriate social support for the visiting students, arranging interesting programs of study and, at the same time, building in flexibility. Conclusion Providing an opportunity to truly understand comparative social programs and policies developed across Europe and the United States constitutes a critical opportunity for both students and faculty in the field of Gerontology.

#### **PC6 588 TRAINING DIVIDED ATTENTION IN HEALTHY AGING: EFFECT OF PRACTICE AND MODULATION**

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Divided attention is a cognitive function known to decline with age. The goal of this study was to assess the task conditions that improve divided attention and the ability to modulate

attention in older adults. Twenty-four participants (60-85 y.o.) were recruited. Participants were randomly assigned to three conditions of training: 1) practice on each task in the condition of focused attention; 2) practice in divided attention with fixed task priorities; 3) practice in divided attention with variable task priorities. Training was provided in six one-hour sessions over a two-week period. To assess the effects of the training format, divided attention was compared prior to and after the intervention in a dual-task paradigm that combined a visual detection task and an alphanumerical equation judgment task. In addition, attention modulation was assessed by asking participants to complete the task with varying task priorities (20-80%; 50-50% and 80-20%). Results indicated that the global cost for divided attention was not improved after training in the condition of focused practice. There was, however, a global improvement in divided attention capacities in the conditions of both fixed and variable task priorities. When looking at the participants' ability to modulate their attention as a function of task instructions, it was found that only the group trained in variable priorities modulated its attention as a function of the task instruction. Overall, this study showed that older adults can improve their dual tasking capacity, but that the condition of training has differential effects on the observed improvement. In particular, simple practice of individual tasks has no effect on the participants' ability to combine them. Practicing divided attention does affect the ability to divide, but not to modulate, attention; the latter being improved only by specific training on modulation.

**PC6 589 AGEING AND NEUROPSYCHOLOGICAL TREATMENT: A PILOT STUDY IN PATIENTS WITH NEGLECT.**

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Introduction: Unilateral spatial neglect (USN) is a neuropsychological disorder whereby patients fail to detect objects, or execute movements in the portion of space contralateral to the side of brain lesion. Our aim is to describe the response, in relation to age, of a selected USN affected sample to a Neuropsychological Treatment. Methods and materials: In this pilot study we collected data regarding the performances of a group of 20 USN patients (13 females, 7 males, age 53-91 y.o.), admitted to our Rehabilitation Unit about 15 days after stroke, collected during one year (January-December 2008). Four neuropsychological tests were administrated, both at admission and at discharge, in order to classify patients in non-severe USN (failed in 1 or 2 tests) and severe USN (failed in 3 or all tests). The sample underwent to visuo-spatial cognitive training (VSCT) consisted of a two months one-hour daily sessions. Results: The performances of patients were analyzed in relation to the age of subjects: the sample was divided in three groups (<65, 65-80, >80 y.o.). Younger patients (<65 y.o.) had the worst performance at admission; all of them showed a severe USN; whereas in the group 65-80 y.o. the 42% had non severe and 58% severe USN, while in the >80 y.o. category 50% had non severe and 50% severe USN. Concerning rehabilitation response, we observed that still the younger group had a worst response to treatment: only 25% of them showed an improvement. In the second group the 43% of severe USN, and the 100% of the non severe ameliorate. In the oldest, all the severe patient improved as well as half of the non-severe ones. Conclusion: Data of this pilot study demonstrate that old subjects with USN seem to cope better and to have a better response to VSCT.

**PC6 590 PROFESSIONAL COMPETENCE FOR OLDER PEOPLE CARE IN PRIMARY HEALTH CARE**

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This project takes part of a wider initiative named 'Healthy aging in the south of Brazil: addressing challenges and developing opportunities for health professionals and older people' which have been developed with a partnership of the Nursing School of the Federal University of Rio Grande do Sul/Brazil and the IAPI Health Care Centre of the Health Secretary of Porto Alegre/Rio Grande do Sul. Related to the World Health Organization's Age Friendly proposal of preparing health care professionals for practice on Primary Health Care (WHO, 2004), the proponents of this project adopted the competence concept of the Pan American Health Organization (PAHO, 1998). The investigation has the objective of developing a professional competence referential for primary health care practice with older people. General competences will be studied, since the objective of this project is to develop a framework for the multidisciplinary team. The research project has been approved by the Ethics Committee of the Porto Alegre Health Secretary. The Delphi Technique has been used for data collection. Thirty health care professionals participated of the first round which resulted on 57 competences. These competences will be compared with those which resulted from a Nurses Primary Health Care Competences Project (Witt, 2005). After that, the development of the competence structure will follow the International Council of Nurses proposal (ICN, 2003) with the creation of a local multiprofessional committee which will validate these competences. The structure resulted from these phases will be submitted to health care professionals of the Northeast Health

District of Porto Alegre. These competencies will constitute a reference for health professional practice and education allowing the improvement of health care providers attitudes, education and training so that they can assess and treat conditions that afflict older persons and empower them to remain healthy.

**PC6 591 IMPACT OF A PROGRAM OF ATTENTION: BURDEN AND THE QUALITY OF LIFE FOR FORMAL CAREGIVERS OF ELDERLY**

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Introduction: Epidemiological studies show an increasing elderly population in Brazil. This scenario has increased the demand for caregivers, especially due to functional impairment and the elderly's dependence. The objective is to evaluate the effectiveness of a support program to the caregiver, related to work burden and quality of life on a long-stay institution. Material and methods: We evaluated 10 female formal caregivers (100%), with an average age of 35.9 years, average schooling of 8.7 years and average of 27.7 months of professional activity with the elderly. Instruments used: Quality of Life Questionnaire of WHOQOL-brief, Burden Scale (Zarit Burden Interview) and Functional Independence Measure. After such assessments, a "support Program for the caregiver" was done with ten weekly meetings. In the group, there were dynamic exercises and reflections on the activity of care taking and to determine strategies for overcoming any possible difficulties. Next, they were re-evaluated with the same tools used at the beginning of the search. Results: There was an increase on the independence of the elderly, reported by the caretaker, in the Functional Independence Measure evaluation, in every aspect. The total average rose from 32.45 to 35.82. The overload average score fell from 25.36 to 24.27. There was no association between the caregiver's quality of life and the degree of functional independence, but the higher the burden, the lower quality of life rates. Conclusion: Deployment of the Program for Attention to the Caregiver was effective in reducing the level of overload and the promotion of conduct which increased the autonomy of the elderly thus reducing the degree of dependence. Such programs, that offer support to these professionals, are essential to reduce the burden on caregivers, improve their quality of life and also to the elderly assisted by them.

**PC6 592 "ADD LIFE TO YOUR YEARS": EDUCATING FOR LIFE IN THE DOMINICAN REPUBLIC**

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Introduction: With the objective of educating the elderly population of the Dominican Republic, was developed the educational campaign for the health, from march to december 2008. This consisted in the launching of the web page [www.ceite.com](http://www.ceite.com) and the publication of ten educational brochures. Methods and Materials: The most frequent reasons for consultation and diagnoses at CEITE during the last years, were determined statistically: 1. Home Care 2. Burnout Syndrome 3. Dementia 4. Insomnia 5. Malnutrition 6. Osteoporosis 7. CVA's 8. Constipation 9. Infections 10. Arthritis and Joint Pain The material was distributed, free of charge, through the web page, ten illustrated brochures and the mass media. Results: 250,000 persons read the brochures. For the first time, the elderly in the Dom. Rep. had a web site. Thousands of people got information about aging from mass media. Conclusion: Educating the population provoked consciousness of aging, more people taking care of their own relatives and more elderly accepted their aging process. The long term objective of this campaign provides behavioral changes that contribute to a more dignified quality of life and psychological welfare in elderly Dominicans.

**PC6 593 EVALUATIVE RESEARCH ON REMINISCENCE PARTNERSHIP PROGRAM FOR ELDERLY PERSONS IN COMMUNITY**

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I.Introduction The history of Reminiscence approach in Japan started in 1980s with the introduction of R. Butler's work. Butler's concept of life review soon found its place with the cultural tradition to value life stories of the elderly as socio-culturally shared knowledge. The purpose of the study is to examine the effect of group reminiscence for elderly persons living in community and to develop a community-based educational program. II.Methods The study is built on Reminiscence Partnership Program, which frames the reminiscence group and the training of the staff members. The participants are 16 elderly persons living in community, university students and professionals of health and social division. The elderly are divided into two groups. They attend an hour-long group session once every two weeks over three months. The themes of the group are chronological and non-chronological, using prompts of local community. The examination into the effect on the elderly includes pre and post comparison by MMSE, LSIK, and Baum Test. It also involves descriptive analysis of records and videos taken every session. The evaluation of educational effect on the students includes analysis of the pre and post questionnaire along with the result of the focus group interview. III.Results The study shows group reminiscence is effective for the elderly participants to bring out a sense of

confidence towards the continuity of self. It also suggests the framework of valuing social interaction across generations encouraged their active participation. As for the students, it enhances their understanding for possibility in aging and their reflection on themselves as future career. IV. Conclusion There is growing need for evaluative research with active involvement of members of a community. Collaboration and communication among the elderly people and younger generation as in this study can bridge the past, present and future of the community.

#### **PC6 594 STIGMA AND DEMENTIA**

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Starting in the 1990s, a conceptual change towards a more humanistic approach to dementia care has occurred in Europe: from the person with dementia to the person with dementia, popularly speaking. Cultural images of dementia have been constructed throughout history, often creating quite negative expectations of the mental and emotional capacities of older people. Both medical and public focus on the 'severely demented' has resulted in a discourse equating all dementia with severe dementia. This has changed somewhat during the last two decades where earlier 'stages' of dementia, and younger people with dementia, have come to the attention of medicine as well as the public, e.g. ministerial development projects and in the media. This attention creates a more nuanced image of dementia. But still we categorize – and stigmatize – people with dementia as 'the demented', with a 'changed personality'. People with dementia are often unable to conform to the standards of social behaviour that we call normal. Their thoughts and communications can be difficult or at times impossible to understand. Their needs and demands can be hard to meet. They become disqualified from full social acceptance because they make 'the non-demented' insecure, our sense of Normality is challenged. There is no way out of the basic paradox of labelling. We use language to describe dementia. In doing so, we categorize persons with dementia as a distinct group. Language is a two-sided sword. While talking about people with dementia in order to break taboos and make their needs visible, we also categorize each person with dementia by the categories of the 'demented' or the 'Alzheimer patient'. Hence we risk missing the opportunity to emphasise the social and human similarities between people with and without dementia: We all live in a social world.

#### **PC6 595 COMPARISON OF PERCEIVED AUTONOMY AMONG COMMUNITY-DWELLING OLDER ADULTS IN THE US AND JAPAN**

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Introduction: Perceived enactment of autonomy is sensing the ability to choose courses of action for ones self in accordance with ones goals to meet needs for both dependence and independence. This study examines perceived autonomy among older adults between the United States and Japan. Methods: Cross-sectional study was conducted using a questionnaire. Three hundred and forty older adults consisting of 220 Japanese and 120 Americans recruited from Senior Center participated in this study. Perceived autonomy was quantified with the Hertz Perceived Enactment of Autonomy Scale (HPEAS). The HPEAS contains 31 positively and negatively worded statements and total scores can range from 31 to 124, with higher scores indicating a higher level of PEAS. There are 3 subscales: Voluntariness, Individuality and Self-Direction. Results: The mean age of Japanese was 74.2 (SD 6.2) and 149 (67.7%) were male, whereas 76.4 (SD 8.7) and 48 (40.3%) for Americans. Japanese showed perceived autonomy with low score on the HPEAS scale (mean 86.9, SD 9.4) compared to Americans (mean 109.5, SD 10.2). Additionally, Japanese demonstrated lower score on 3 subscales and 29 of 31 items than Americans. Although significant differences were observed regarding HPEAS scale, age and gender were not related to perceived autonomy in each group. Conclusion: Sociocultural background for differences between these two groups of Japanese and Americans are suggested.

#### **PC6 596 ELDER ABUSE IN HIP FRACTURE PATIENTS**

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OBJECTIVE: To study the prevalence and risk factors of elder abuse in older adults admitted to an Orthopedic Department for the surgical treatment of a hip fracture. METHODS: All subjects aged 70 years or older who were admitted for a hip fracture in a one year period were included. Patients and caregivers were carefully assessed by a multidisciplinary team looking for signs of elder abuse, based on agreed standard criteria. Age, gender, functional status (basic ADL, gait), cognitive impairment and social variables were recorded, to assess risk factors of abuse. RESULTS: 392 patients were included, mean age 84.7±5.8 years (range 70-101), 72.3% women. The prevalence of abuse was 12%. The major type of abuse was abandonment (67% of cases), followed by financial exploitation (17%) and other types of neglect (10%); physical abuse was infrequent (4% of cases). Abuse was unrelated with age, gender, and functional status. Abused subjects had more children. Living at home was also a risk factor for abuse: none of the nursing home patients in our group were abused. Abuse was significantly more frequent in those

admitted in summertime (August, September) and in December. All the 7 caregivers who suffered schizophrenia or alcohol dependency were abusers. CONCLUSIONS: The prevalence of abuse in this cohort of frail older people was slightly higher than in other settings (12%). Some risk factors (more children, living at home, time of admission and mental problems of caregiver) may help detection of abuse in this population.

#### **PC6 597 ARE MEDICAL STUDENTS WELL PREPARED FOR CARE FOR ELDERLY ?**

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Introduction: Main task of effective medical and social care is to promote quality of life with respect of dignity, identity and needs of everybody, the insurance of not only their basic biological needs. What is legal is not always ethical. Methods and materials : Anonymous questionnaire was filled in 1996/7 and 2006/7 by 2 ndcourse and 5th and 6thcourses medical students. It was concerning main ethical problems in medical care. 1996/7 were in 2 ndcourse 116 students , in final courses 162 students, in 2006/7 were in 2 ndcourse 186 students and in final 169 students. Results : Current students (2006/7) are more open to legalization of euthanasia than the students before ten years, especially in final courses. They feel more often lost of human dignity in dying, more missing communication now. Concerning students' preparation: the best are their ethical skills (despite no subject medical ethics). Only 16 % feel well prepared for care in final courses. Half of them can communicate well, 40% are satisfied with their psychological skills. Only 36% students are prepared well for care for elderly (no geriatrics in education). Half of students finds some discrimination of elderly in medical care, mainly in communication, attitudes and availability of care for seniors. Elder abuse (EAN) syndrome saw 14% students. Majority of them can react. Conclusion: Students in 2nd courses are more optimistic, they have not enough information about professional demands in science, ethics, psychology, practical skills and communication. Current students are more sceptic and more critical than ten years ago despite many positive changes in educational and medical institutions. To educate ethics, communication, professional and psychological skills is task of faculty of medicine. Good models of moral, educated and humanistic professionals, tutors is the most important for students.

#### **PC6 598 AGE PREDILECTIONS FOR PERSONALITY FACETS: INCONSISTENCIES AND POSSIBLE THREATS TO HEALTH RESEARCH**

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Introduction The debate over whether longitudinal changes in personality exist continues with no true consensus. It is likely that personality changes with age may depend largely on what aspects of a personality variable are measured. Methods & Materials We administered Costa's & McCrae's (1992) NEO-PI-R to a sample of 56 men and 61 women from the Long Beach Longitudinal Study who completed the measure two times (in 1994 and 2000; mean age at T1 = 64 years). The NEO-PI-R is an application of the five-factor model of personality where each personality factor (Extraversion, Openness to Experience, Neuroticism, Conscientiousness, and Agreeableness) has six lower-order facets. Three conditions were tested: condition 1, using the three facets (per factor) with the lowest age correlation; condition 2, using the three facets with the highest age correlation; and condition 3, using big-five factor sum scores. Results In condition 1, Conscientiousness, Extraversion, and Neuroticism at time 2 were not related to performance at time 1, but Agreeableness and Openness to Experience at time 2 could be predicted by time 1 ( $\beta_A = .685, \beta_O = .391$ , significant). In condition 2, performance on the first three factors at time 2 could be predicted almost perfectly by time 1. The relationship between time 1 and time 2 for Agreeableness and Openness to Experience did not change notably in condition 2. Finally, in condition 3, Extraversion was the only factor notably predictable at time 2 using time 1 scores. Conclusion These analyses suggest that identifying age changes for Neuroticism, Conscientiousness, and Extraversion is more dependent on how those factors are defined within the measure as compared to Agreeableness and Openness to Experience which have age (time) relationships that agree across the conditions. The ramifications for health research and identification of longitudinal personality changes are discussed.

#### **PC6 599 THE FORGOTTEN AGE : OLD' UP**

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M. TUBIANA, C. VIMONT

The OLD'UP Association was born of an observation and a study spread over two years regarding "the second stage of retirement". It stands for actions with and for, the standing elders, an ever growing population, that covers the span between newly retired and highly handicapped. It concerns around 50% of retired French population. The originality of this association lies in the fact that it is made up by people who belong to this generation. Every one of them is concerned with optimizing the years added by increased longevity.

This has produced a social situation hitherto unknown; for the proper integration of this age group, its familial and social utility must be explored, valorized and made more dynamic. OLD'UP is a grassroots association working to bring to the attention of public and private decision-makers the daily realities endured by our elder contemporaries. It is pursuing two objectives: - On the individual level, create and stimulate, social bonds through an active network dealing with civic life overcome the risks of isolation and uselessness... (By stimulating them, by fighting against loneliness, organizing meetings to favor new contacts.) - - On the collective level- address public and private administrations informing them of the specific needs of this generation so that their minor handicaps don't exclude their - active participation in community life. And collect information on similar actions. (Ex. sub-titles accessible on television to compensate slight losses of auditory acuity, access to public buildings facilitated by inclined handrails, elevators available without need of a handicap card, enlarge letters on road signs or markings etc.) OLD'UP is weaving inter associative connections in France and Europe and wishes to make itself known to the

**PC6 600 A "LETTER SENT TO ...": FROM SELF EXPRESSION TO FREEDOM OF EXPRESSION**

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**Introduction** When elderly people living in residential institutions are given the opportunity to write about the past, the present, the future, how do they express themselves and what do they say? Are their words constrained because of the influence of the institutional setting ? Methods and materials To answer these questions, the National Foundation of Gerontology has created a "Letter sent to..." project that enables elderly people attending senior centres and home care services or living in institutions to write a letter on a subject they choose. The FNG analysed the themes, form, syntax and word formation in a sample of 303 letters. A qualitative analysis was undertaken on interviews conducted with professionals and authors who took part in this research, as well as a lexical analysis using specific software. Results When they talk about themselves, elderly people are influenced by the contextual and environmental settings around them. In this respect, they do not differ from younger people. Some construct very lucid narrative accounts while remaining in touch with their emotions. The content shows a high level of literary expression including control, anticipation, choice and responsibility for challenging words. Although the past has a central place, the present also dominates the content of the letters. The themes that emerge include transmission, expression of affection for a parent, reflexion about things unsaid, and atonement. Conclusion The 'Letter sent to...' project restores an individual sense of identity. Older people can re-say "I" instead of being considered as one of the many as so often happens in communal institutions. Thus the primacy of individuals is reasserted.

**PC6 601 SARTORIAL IDENTITY AND FASHION NEEDS FOR OLDER WOMEN LIVING AND WORKING LONGER: AN INSIGHT FOR GERONTOLOGISTS AND GERIATRICIANS.**

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The 21st century is faced with a unique aging paradigm that entails millions of older women to stay healthier and independent longer, often demanding them to remain in the workforce longer. The role of "clothing" is inherently associated with protection, identity formation, appearance, and status definition. As such the study of clothing and textiles needs to be integrated in the fields of gerontology and geriatrics. Similar to caring for the older population through improved nutrition, exercise, and cognitive activities, there is a necessity to focus on sartorial needs that is still ignored for this age-group. A sixty-five year old woman today working and competing against a forty-year old must feel as equally attractive and effective for both herself and the market demand. This reality, based in present and future political economies of our global world has direct consequences for studying aging through social sciences and geriatric practices. Using an hermeneutic phenomenological method, this qualitative research explores through in-depth interviews the sartorial experiences of ten urban professional women over age 60 in Manhattan sharing their wardrobe stories, opinions, and struggles (University of Minnesota IRB: 0206E26362). The voices of these participants contradict assumptions about physical and mental aging, gender roles, and apparel needs in later years. To them, chronological age becomes a non-entity and post-menopausal physical and biological changes combined with typical aging ailments are internalized as just being 'normal age-related changes.' As such, these women continue to live their lives adapting the same sartorial needs they always had to express their positive attitudes toward work, appearance, and aging. This presentation illustrates the pertinence of integrating sartorial entities in the multidisciplinary study of aging and in the goal of caring for older persons.

**PC6 602 THE INTERACTION BETWEEN EMOTION AND COGNITION IN AGEING:ALEXITHYMA AND ITS INFLUENCES ON INHIBITION PROCESSES**

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According to Mandler, emotion processed consciously (=cognition) and unconsciously (=physiological reactions). However, in alexithymia (=difficulties in experiencing and expressing emotion), only the unconscious processing of feelings is efficient, which involves disorder at the cognitive level of feelings. We explore alexithymia' effects on elderly individuals' cognitive processing, especially in regard to inhibition which permits to selectively attend to or ignore information, by using the directed forgetting paradigm (DF). DF studies ability to voluntarily forget activated information which is no longer relevant. Forgetting appears necessary to effective performance. We assume that alexithymic elders would ignore emotional information, and so prevent their conscious treatment. Two experiments using DF with list method were conducted to explore the impact of Alexithymia on DF: for neutral words (experiment 1), for emotional information (experiment 2). We studied 135 persons (45 young adults, 45 non alexithymic elders and 45 alexithymic elders). In DF procedure, people must learn a list of words, at the middle of it, an error screen appears. Participants have to forget previous words ("TBF") and to remember new items ("TBR"). At the end of the list, participants must only recall the TBR items. We observed a DF effect when more TBR than TBF items were recalled. This effect was inferred by voluntary inhibition. DF effect was obtained with neutral words and with young adults [ $F(1,42)=48.22;p<.001$ ] and non alexithymic elders [ $F(1,42)=13.17;p<.001$ ], but disappeared with alexithymic elders [ $F(1,42)=1.22;NS$ ] (experiment1). In experiment2, DF effect was obtained with emotional words and with the different subject groups [ $F(2,84)=7.65;p<.001$ ]. Findings pointed that inhibitory deficit is caused by alexithymia, more than ageing, especially with non emotional information. Emotional information in alexithymia would operate as attentional attractor facilitating voluntary inhibition.

**PC6 603 HEALTH TYPE SCENARIOS: UNDERSTANDING THE DYNAMICS OF CHANGING USER NEEDS IN AGING-IN-PLACE**

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Aging is characterised by diversity. Housing needs vary among people and across the life span. To achieve satisfactory aging-in-place facilities an understanding of the dynamic needs of older adults is required. A scenario approach may give more insight into relevant aspects. Methods and materials Persons over 65 in the Netherlands may be classified in 6 different health types, with symptoms of (i) COPD & cancer, (ii) other chronic disease, (iii) impaired cognition, (iv) arthritis, (v) cardio vascular diseases, or (vi) healthy older adults without these symptoms. 'Worst-Case' scenarios are written for each health type. Health type V incorporates two scenarios to illustrate the effects of multimorbidity (cardiovascular diseases and diabetes). Medical literature and statistical data are used to describe the changes over time in health status and physical, social and mental functioning. The 3rd and 4th age of three Dutch couples (male-female) and one single Indonesian female are subsequently viewed within (i) technology use, (ii) Becker's Generations, (iii) life cohorts from 1921-30 up until 1961-70, (iv) social groups and (v) life clusters. For each scenario, between 3 and 6 moments in time are chosen to depict typical housing needs of the user, especially in relationship to mobility, socialising, and privacy. Results The seven scenarios demonstrate the housing consequences of various physical, mental and social changes in the Dutch population over 65. The varying housing needs for mobility, socialising and privacy concern the balcony, living room, dining room, bedroom, kitchen, bathroom, restroom, workroom, guestroom, storage space and outdoor space. Conclusion The scenario approach combines characteristics of the Dutch elderly population with the home environment. With disease progression taken as the starting point, an estimate is made of the actual housing needs. For satisfactory aging-in-place, the dynamically changing needs of the users are paramount.

**PC6 604 THE IMPACT OF ALCOHOLISM ON THE QUALITY OF LIFE OF THE ELDERLY**

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In Slovenia, one of the European countries most at risk for alcohol consumption, alcohol abuse is on the rise among the young and those aged 60 and over. At the same time, the demographic imbalance between the young and the oldest generation is increasing rapidly. The present study compares the life-style characteristics of alcohol addicts aged 60+ with those of equally aged moderate alcohol consumers. The interviewers, aged 21 to 25 and from all Slovenian regions, were themselves partially research subjects. The data were collected by means of an open, semi-structured questionnaire. Each interviewer first completed the questionnaire about his/her own attitude towards alcohol consumption and then interviewed, in his local environment and using predetermined criteria, one alcohol addict and one moderate alcohol consumer, both aged 60+. There were 100 addicts and 100 moderate consumers included in the study. Typical cases were extracted and then qualitatively analysed. The main findings are: 1. Alcohol addicts are less active, less creative, and express fewer needs and lower standards about a quality life than lower-risk drinkers. Mostly they are satisfied with their lives, despite their disorderly living conditions. 2. They both experienced tragic life turning points, but the moderate drinkers coped successfully, whereas the addicts increased their alcohol consumption. Healthy life habits play an important role in keeping the alcohol addicts nevertheless energetic.

3. Alcohol addicts have fond memories of their first alcohol experiences during their youth. In their opinion young people used to drink for a reason, while today youngsters drink because of the drinking itself. With the help of this study we shall better understand the impact of alcoholism on the quality of life of the elderly, which is important for the planning of care programmes for the elderly and youth drinking prevention programmes.

**PC6 605** QUALITATIVE ON-THE-SPOT FIDELITY CHECKING OF AGED PEOPLE ANSWERS TO A QUESTIONNAIRE ON INDEPENDENCE IN DAILY LIVING

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Introduction: Quantitative approaches to auto-checking questionnaires for independence in old age are scarce and categorically limited. One alternative is the use of qualitative techniques that may reveal incoherence and untruthfulness in opinions given by respondents. Methods and Materials: Qualitative semi-structured interviews conducted by an experienced health anthropologist with 12 selected elderly persons in different levels of independence in daily life. Sessions took more than one hour, in-depth probing their abstract thinking as being or not coherent with given opinions about themselves in a closed questionnaire on independence in activities of daily living. Results: a) when home provided medical care becomes routine, patients do a "clean-up" of former subjective experience-based concepts of disease, thus being able to talk about their situation in objective, scientific grounds, at least to socialize properly with interviewers, in an opinion giving situation; b) information given is channeled into a few stances, suggesting the existence of an independence related typology of responses, ranging from straightforward ones, to entirely manipulating ones; c) all patients who remain faithful to old habits of living, and socializing, are more prone to lie about their present condition and hide symptoms. Conclusion: Constant medical information and care at home improves self-appraisal and establishes marks of objectivity, very useful to caregivers. Knowledge of the level of independence in daily life becomes a very important health indicator. Trying to turn the moment of interview into an exaggerated and embarrassing social situation (arrogance, doling up), as well as talking of the past as an everlasting model for behavior, point to probable untruthfulness in opinions about the self. Studies are needed to detail this line of investigation.

**PC6 606** EFFECTS AND UNDERLYING MECHANISMS OF ERRORLESS LEARNING IN COMPARISON TO OTHER LEARNING METHODS TO IMPROVE ACTIVITIES OF DAILY LIVING IN ALZHEIMER DEMENTIA

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INTRODUCTION The purpose of this project is to highlight theoretically-driven learning techniques that may facilitate the acquisition of new information in Alzheimer's disease (AD) patients. Gradual deterioration of functional autonomy in the instrumental activities of daily living (IADL) is a key feature of AD. A better understanding of the parameters that predict successful outcome of such intervention techniques in AD, as implicit memory function, will help to improve independent living across dementia stages. This work presents the comparison of three learning techniques [Errorless Learning (EL), Spaced Retrieval (SR), Trial and Error learning (TEL)]. The aim is to highlight the most beneficial learning method to (re)learning instrumental skills in moderately-severe AD. METHODand MATERIALS Design Pilot in which 3 AD patients follow cross-over training of either EL consisting of a reduction of errors during learning using forward information or SR/TEL. Interventions: We developed a new EL strategy consisting of a 4-week cognitive-training and follow-up of 3 IADL. Each activity (making coffee, sending a mail, setting the table) was divided in small steps on cue cards (A4-sheet with a picture of the step and written instruction). SR refers to the increasing time intervals between the completion of the task and the rehearsal of the targeted information, and also is compared to TEL as the regular unstructured learning. Measures In great detail feasibility, process and performance are studied also in terms of application of implicit/explicit memory functions. RESULTS This study is a work in progress but the final results of the intervention will be presented. CONCLUSION There has been only limited exploration of the feasibility and effectiveness of EL in AD. The mechanism and significance of this learning method will be discussed based on the results of our in depth pilot study.

**PC6 607** CROSS-CULTURAL CONFIRMATORY ANALYSIS OF THE CES-D IN SPANISH AND MEXICAN DEMENTIA CAREGIVERS

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Introduction The Center for Epidemiological Studies Depression (CES-D) is probably the most used scale for assessing depressive symptomatology in caregiving research. Although different factor structures have been found, the four factor structure (depressed affect,

somatic symptoms, positive affect, and interpersonal problems) has received recent support in caregiving population. However, the factor structure of the Hispanic version of the CES-D has not been analyzed in caregivers. Methods and materials Face to face interviews were conducted with 539 female dementia caregivers (370 from Madrid, Spain, and 169 from Coahuila, Mexico). The Center for Epidemiological Studies-Depression scale (CES-D) was used. Single and multigroup confirmatory factor analyses for categorical outcomes were performed using MPlus software, employing the WLSMV estimation method for polychoric correlations. Results Different structures of the CES-D previously reported in the literature were tested and compared. Considering the entire sample, the four factor model presented the best fit ( $CFI = .96$ ;  $TLI = .98$ ). The four factor model was tested separately for each sample, obtaining acceptable fit for both samples (Spain:  $CFI = .97$ ;  $TLI = .97$ ; Mexico:  $CFI = .90$ ;  $TLI = .95$ ). Then a multi-group confirmatory factor analysis was performed in order to test factor loadings invariance across countries. Constraining factor loadings and thresholds to be equal across samples produced a significant fit worsening, and complete invariance could not be assumed. A model of partial invariance is consequently proposed. Conclusion The CES-D appears appropriate for cross-cultural use in Hispanic samples. Results generally support the invariance of the factor structure across groups, although there was some evidence of differences for model parameters. We discuss these findings and their implications.

**PC6 608** A TAILORED MADE INTERVENTION. THE EFFECTIVENESS OF LIFE REVIEW THERAPY USING AUTOBIOGRAPHICAL MEMORY RETRIEVAL IN A DEPRESSED NURSING HOME POPULATION: A RANDOMIZED CONTROLLED TRIAL.

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Introduction Life review can be conducted for therapeutic purposes; it can help people cope with loss, guilt, conflict, defeat, or help someone find meaning in ones accomplishments. Recent meta-analyses have proven the effectiveness on both depression and psychological well-being in community dwelling older adults. Bearing in mind the high prevalence rate of mood disorders in residential- and nursing home elderly and the need for effective interventions, life review might be an effective and attractive intervention. In this study we performed a RCT with depressed residential- and nursing home inhabitants who received autobiographical memory retrieval practice, which focuses on retrieving positive memories. Autobiographical memory has been found to be related to depressive feelings. By training the elderly we hope to reduce their feelings of depressed mood and to find an association with change in specificity of autobiographical memory. Methods In 2007 100 older adults were included to this RCT. Participants were randomly assigned to a direct intervention group or waiting list control. After pre-test they received the autobiographical retrieval practice that entailed focusing on a particular life period each weak- childhood, adolescence, adulthood and summary. For each period, 14 questions were prepared, for example: "What is the most pleasant situation that you remember from your childhood". Results Preliminary results show the protocol is effective in reducing depressive mood. 73 participants completed the intervention. For depressive symptoms a medium to large effect size was found (Cohen's d of .70). Of those with a major depression 44 % were recovered at post measurement. Change in depressive symptoms was found to be related to change on specific memories. In conclusion, these results suggest the protocol is effective in training the oldest old in recollecting positive specific memories and as such can be useful in treating the symptoms of depression.

**PC6 609** THE INTEREST OF MEASURING RECOGNISING FACIAL EXPRESSIONS IN DEPRESSED PATIENTS WITH MAJOR DEPRESSION DISORDER(MDD)

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Background : Abnormal recognition of Facial Expressions (ARFE) is associated with interrelational difficulties and among depressive patients, lead to errors in emotionally charged information. Objectives: To evaluate ARFE following the Analysis method and the search for emotional integration (MARIE). This tool uses a continuation of fictive portraits created from two real portraits and in varying proportions (Ekman's portraits). This is an emotional series which can be either unipolar or bipolar (neutral/emotion, emotion/emotion). The subject has to choose between two possibilities for each portrait. The programme comprises nine series of 19 pictures of different faces (a fair-haired woman, a dark-haired woman and a man). Statistical Analysis An average between the 2 evaluations ( $\chi^2$  test) can be compared according to the patient's answers. Comparison of results between patient's answers before and after the treatment and results before and after

of a standard reference which is, by definition, 100%. Comparing the averages of time answering between the 2 evaluations (Student test) by logarithms. Results At the acute depression phase, the ARFE is linked with the congruent mood. In remission, a dissociation between an improvement of recognition of happiness emotions and sadness approaching results of a population reference and a degradation of recognition of other emotions appears; resulting in an overall deficiency of facial emotion recognition. The persistence of recognition errors of Unipolar Emotional Continuum (UEC) (neutral-anger, neutral-fear, neutral-surprise, neutral-disgust) with an appropriate treatment, can prove the severity of the case. Discussion The ARFE is an integral part of the depression criteria. However, the disorder varies according to the face presented. Improved performance of recognition of UEC Neutral/happy and BEC happiness/sadness and a degradation of recognition of the others UEC apparent in the patient and others depressives can reiterate the depression aspect.

**PC6 610 DEPRESSION,QUALITY OF LIFE AND LIVING WILL OF COMMUNITY-DWELLING POSTMENOPAUSAL AND ELDERLY WOMEN IN THREE ASIAN COUNTRIES: JAPAN,KOREA AND CHINA**  
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**INTRODUCTION:** The purpose of this study was to examine the prevalence of screening-based depression and the association of depression with quality of life (QOL) of community-dwelling postmenopausal and elderly women living in three Asian countries: Japan, Korea and China. **METHODS AND MATERIALS:** A total of 911 community-dwelling postmenopausal and elderly women living in three Asian countries (Japan:169, Korea: 300,China: 442) participated in this study. Depressive symptoms were assessed using a 15-item geriatric depression scale (GDS-15). For the assessment of QOL, we used EQ-5D. And we also examined the prevalence of subjects wish to be informed that they have cancer and wish to be treated for prolonging life. These were assessed by self-report questionnaires. **RESULTS:** Using the cut-point 5/6 for the GDS-15, proportions of subjects with depression comprised 33.9% of those in Japanese postmenopausal, 39.0% of those in Korean postmenopausal, 29.2% of those in Chinese postmenopausal, 17.0% of those in Chinese elderly, 36.4% of those in Japanese elderly and 32.7% of those in Japanese extremely elderly. For the assessment of QOL, following five dimensions were assessed: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Proportions of reported problems for each dimension were examined. Subjects with depression had significantly lower level of QOL than those without depression in all three countries, all six populations. **CONCLUSIONS:** In all three countries, 17.0-39.0% of community-dwelling postmenopausal and elderly women had screening-based depression, which was significantly associated with lower level of QOL. These results suggest that clinicians should pay more attention to depression of community-dwelling postmenopausal and elderly women.

**PC6 611 A RCT OF LIFESTYLE AND MENTAL HEALTH LITERACY INTERVENTIONS FOR THE INDICATED PREVENTION OF DEPRESSION**  
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Introduction. To test whether mental health literacy (MHL), physical activity, or folic acid + B<sub>12</sub> reduce depressive symptoms in at risk community-dwelling older adults. Method and Materials. A randomized controlled trial, the Beyond Ageing Project (BAP), recruited 909 adults aged 60-74 years with K-10 scores > 15 directly from the community. The BAP was a two-year intervention with a completely crossed 2 x 2 x 2 factorial design that comprised eight intervention arms: (400 mcg/d folic acid + 100 mcg/d B<sub>12</sub> vs placebo) by (physical activity promotion vs nutrition control) by (MHL vs pain information control). The intervention was delivered via mail in 10 modules with concurrent brief telephone tracking calls. Changes in depressive symptoms were measured using the PHQ - 9 at 6 weeks, 6, 12 and 24 months. Examined here is the data currently available from baseline to 12 months. Results. In the intention-to-treat analysis, depression was lower in the MHL intervention compared to the control condition at six weeks ( $p = .042$ ). Neither folic acid + B<sub>12</sub> ( $p = .476$ ) nor physical activity promotion ( $p = .177$ ) reduced symptoms. Conclusions. MHL reduces depressive symptoms and, consequently, may be a viable indicated prevention strategy in older adults. Neither folic acid + B<sub>12</sub> at the chosen doses, nor promoting physical activity were effective for preventing depressive symptoms compared to attention control interventions.

**PC6 612 AFFECTIVE DISORDERS AS RISK FACTORS FOR DELIRIUM AFTER CARDIAC SURGERY**  
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**Introduction:** Delirium is a known adverse outcome of cardiac surgery and research supports an association with depressive symptoms. The objective of this study was to determine the association between incident delirium after cardiac surgery and preoperative affective disorders, and also Type-D personality. **Methods and materials:** Ninety nine cardiac surgery patients free from delirium were assessed preoperatively for mood and anxiety disorders using structured diagnostic interview, and patients completed a Type-D scale. Patients were re-examined for new onset delirium in the postoperative period, and results were analysed using Fisher's exact tests. **Results:** Postoperative assessment showed that 22 (22.2%) patients met criteria for delirium. The prevalence of affective disorders at baseline was 12.1% for current major depression, 8.1% for panic disorder and 4% for generalized anxiety disorder (GAD). Delirium was associated with major depression (5.2% vs. 36.4%),  $p < .001$ , panic disorder (2.6% vs. 27.3%),  $p < .001$  and GAD (1.3% vs. 18.2%),  $p < .01$ . Social phobia was not associated with incident delirium (1.3% vs. 9.1%),  $p = .12$ . Delirium was associated with high negative affect without social inhibition (23.4% vs. 45.5%),  $p = .06$ , but not in combination with social inhibition (i.e. Type-D personality) where a trend was observed (11.7% vs. 27.3%),  $p = .10$ . **Conclusion:** This study highlights an association between affective disorders and delirium following cardiac surgery, while support was also shown for negative affect in isolation without social inhibition. This suggests that current distress rather than distressed personality style is associated with incident delirium. Future research should consider the utility of differential diagnosis for postoperative delirium among cardiac surgery candidates who have a high prevalence of affective disorders and explore the rehabilitation options and longer term neuropsychological function of this precarious population.

**PC6 613 LONG TERM NEUROPSYCHOLOGICAL DEFICIT AFTER CARDIAC SURGERY: THE EFFECT OF PSYCHOLOGICAL DISTRESS**  
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**Introduction:** The independent influence of depression and anxiety on neuropsychological performance following coronary artery bypass graft (CABG) surgery has not been examined in the longer term where it has been suggested that CABG patients show marked cognitive dysfunction. **Methods and materials:** Seventy five CABG patients and 36 non-surgical community control subjects completed a neuropsychological test battery and measures of psychological distress at baseline, six months and five year follow up. Neuropsychological change in CABG patients was derived from standardized regression based methodology estimated from the control group. Linear regressions were performed to predict neuropsychological change from psychological distress, adjusted for hypertension, diabetes, peripheral vascular disease and intraoperative parameters. **Results:** The results showed that cognitive and affective depressive symptoms five years after surgery were significantly associated with lower neuropsychological function at this time in the CABG patients. Depression symptoms were associated with the Trail Making Test part A and B and Digit Symbol Coding, and explained 6.8%, 7.6% and 12.3% of variance respectively. Anxiety was significantly associated with verbal memory, and explained 5.3% of variance among CABG patients. No significant effects for psychological predictors were evident at six month follow up. With regards to cardiac and surgical covariates, poorer neuropsychological function at six months and five years was commonly associated with hypertension and diabetes, and the minimum temperature on cardiopulmonary bypass. **Conclusion:** These results suggest that depressive symptoms may influence long term neuropsychological performance after CABG on tests tapping into attention and visuomotor speed and executive functioning. Depressive symptoms may exacerbate cerebrovascular ischemia over time and this might partly explain long term neuropsychological dysfunction in CABG patients.

**PC6 614 SLEEP HABITS AND SLEEP THOUGHTS IN AGED INDIVIDUALS SHOWING PSYCHOLOGICAL DISTRESS**  
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**Introduction:** Sleep disorders, anxiety or depression co-occur frequently in the elderly population (Morgan, 2000; Giron, 2002). While the physical and affective symptoms tends to be thoroughly looked at by the physician or therapist, other aspects of the problems, such as the attitudes, beliefs and habits, surrounding the sleep problems of the elders are often neglected. **Methods:** Participants were 1850 adults (M age=74, SD=6 years) selected from a probabilistic sample composed of individuals leaving at home in the province of Québec, Canada. The inclusion criterias were: being over 65 years old and having no diagnostic of cognitive disorders. The DIS was used to evaluate the presence of depression or anxiety in the past 12 months, whereas the PSQI was used to measure sleep quality (Buysse, 1989). Sleep habits, thoughts and beliefs were investigated with chosen items from different questionnaires (Morin, 2004). **Results:** A subgroup of particular interest was identified from the 12% of the participants that had at least 1 diagnostic of mental health problem and a PSQI score greater than 5. Concerning sleep habits, this subgroups of subjects reported practicing relaxation, watching TV or reading in bed, doing lots of thinking during the night and awakening in a bad mood more often than the subjects

without a diagnostic ( $p<.01$ ). They also believed that they should stay in bed, trying harder to fall asleep, and that it is normal that their sleep is worst because of the aging process itself ( $p<.01$ ). Conclusions: Psychological distress is related to several bad habits and dysfunctional beliefs that could contribute to exacerbate and perpetuate the sleep problems. Together with pharmacological and/or psychological treatments, these aspects should be looked at more closely while treating anxiety or depression symptoms in aged individuals.

#### **PC6 615 A TRAINING PROGRAM FOR PEOPLE WITH DEMENTIA AND THEIR FAMILY CAREGIVERS: A RANDOMIZED CONTROLLED TRIAL**

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Introduction People with dementia and their caregivers can suffer a lot from dementia. A recent review shows that combined interventions both for dementia patients as for their caregivers are effective to diminish depressive symptoms. One combined intervention is developed by Linda Teri and her colleagues (2003). People with Alzheimer disease together with their caregivers received an exercise program. The caregivers were also trained in behaviour management techniques to deal with behaviour disturbances. People with Alzheimer disease who participated in the intervention program performed significantly better on measures of physical function and measures of affective status compared to the care as usual group. For our study we translated and adapted the intervention program of Teri to the Dutch situation and at the moment we investigate whether it is feasible and effective for both people with dementia as their caregivers. Methods and materials The patients-caregivers dyads (160) are randomly assigned to the training program or care-as-usual with attention. The duration of the exercise training is three months. Assessments are conducted at screening, baseline, after 3 months and at 6 and 12-month follow-up. The intervention effect will be assessed by trained interviewers who are blind to the treatment assignment. Next to measures as used in the study of Teri, we add measures for physical, cognitive and executive functioning. In addition, we study the effects of the integrated treatment program on the mood of the caregivers. Outcome analyses compare the intervention group with the routine care group using generalized estimating equations for linear, logistic, and Poisson regression. Results The data collection started in January 2009. The first results will be presented at the congress.

#### **PC6 616 INVARIANCE IN THE PREDICTORS OF SEVERITY OF SUICIDE ATTEMPTS BETWEEN OLDER AND YOUNGER ADULTS.**

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Introduction: In the elderly suicide is an important problem, and literature has reported that attempts are in general more severe and have higher impact on health in this age. Differences between younger and older adults have still not been, however, well analyzed. Methods: Reports of all patients attempting suicide were collected during 4 months in 4 general public hospitals (covering 44.7% of the whole population) in the Community of Madrid. 1009 suicide attempts were collected, with an incidence of 34.3 people per 100.000 in 4 months. Sample was split according to age in those 55 years old or over (11.99% of the sample), and persons below 55 years. Results: A multigroup confirmatory factor analysis with covariates with categorical factor indicators was performed. Demographics, different disorders, other clinical characteristics, social support, etc. were included as predictors of a latent factor of intent, which explained scores in characteristics of the attempt related with the severity and the extent of willingness to die (e.g. suicidal ideation). The first model including all variables had not a good fit, and the worst predictors and indicators were iteratively removed one by one. A final baseline model for both groups reached a good fit ( $CFI = .932$ ;  $RMSEA = .056$ ). Predictors in the final model were depressive disorder, social support, and substance abuse disorder. When constraining factor loadings and thresholds to be equal across groups there was not a significant worsening in the fit of the model ( $\chi^2$  squared change = 3.7;  $p = .296$ ). Latent factor means did not significantly differ between groups. Conclusion: A structurally invariant model with adequate fit was found in predicting suicide attempt severity across age groups. This suggests that factors involved in attempt severity are similar among the older adults compared with general population. Funded: Madrid Public Health Institute

#### **PC6 617 DEPRESSIVE SYMPTOMS IN OLDER MALE ITALIAN IMMIGRANTS TO AUSTRALIA: THE CONCORD HEALTH AND AGEING IN MEN PROJECT.**

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Introduction: Italian-born Australians represent the largest group of older Australians from a non-English speaking background. However, there has been little research conducted on the mental health of this important group of older Australians. The aim of our study was to describe the prevalence of depressive symptoms in older male Italian-born immigrants compared to Australian-born men. Methods and Materials: This study analysed data from 335 Italian-born men and 849 Australian-born men aged 70 years and over participating in the baseline phase of the Concord Health and Ageing in Men Project (CHAMP). Depressive symptoms were assessed using the short version (15 item) of the Geriatric Depression Scale. Crude and adjusted odds ratios for country of birth were calculated using logistic regression. Results: The prevalence of depressive symptoms in Italian-born men was 18%, which was almost twice the prevalence of 10% in Australian-born men ( $OR=1.9$ , 95%CI 1.2-3.0). After adjusting for socioeconomic and health factors, the relationship between country of birth and depressive symptoms was attenuated and became statistically non-significant ( $OR=1.7$ , 95%CI 0.9 – 3.0). The strongest confounders of the relationship between country of birth and depressive symptoms were source of income and satisfaction with social support. Conclusion: Male Italian-born immigrants aged over 70 years report more depressive symptoms than their Australian-born counterparts. This association appears to be partly explained by increased reliance on a government pension as the sole source of income and lower satisfaction with social support in Italian-born men.

#### **PC6 618 STANDARDIZATION AND FACTOR STRUCTURE OF THE CES-D IN IRANIAN ELDERLY**

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Objectives. Depressive disorders are a public health problem even in developing countries. Access to valid and reliable screening instruments is needed for conducting community surveys. The main objective of this study is to provide the Iranian version of the Center for Epidemiologic Studies Depression Scale (CES-D). Methods. The CES-D, (10 items) Farsi version was developed by translation and back translation. Two hundred and four subjects aged 59 years or older, who were chosen randomly from residents of the Ekbaten district of Tehran, the capital city of Iran, completed the CES-D. The Composite International Diagnostic Interview (CIDI) was used to establish a gold standard diagnosis of major depressive disorders. Results. The CES-D was found to be an internally consistent measure. Alpha, split-half coefficients and test-retest reliability were 0.86, 0.81 and 0.49 respectively. Two factors were extracted by using factor analysis and the principle component analysis (varimax rotation): 'depression' and 'interpersonal relationship'. The Depression factor (omitting items 6,9), which could be considered as a short form of the scale ( $\alpha=0.87$ ), has significant correlation with the main scale ( $r=0.99$ ). Using receiver operating curve (ROC) analysis, the optimum cutoff score for both short and long form of is 5, yielding a sensitivity of 0.81 and a specificity of 0.74. Conclusion. The long and short forms of the CES-D have acceptable properties as screening instruments for major depression in older dwellers in Iran, particularly in urban areas, as presented in our findings.

#### **PC6 619 REMINISCENCE FUNCTIONS AND MENTAL HEALTH IN OLDER ADULTS WITH MODERATE DEPRESSION**

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Introduction There is growing knowledge on the relation between reminiscence functions and mental health, such as depression and anxiety. However, most studies have been conducted in the general population, without clinical symptoms. Since the presence of depressive and anxiety symptomatology which do not meet the diagnostic criteria are by far the most important risk factors of late-life clinical disorder, it is relevant to study the functions of reminiscence in a group at risk. Methods and materials A total of 171 Dutch older people, with mean age of 64 years ( $SD= 7.4$ ), and with moderate depressive symptomatology, participated in this study. Participants' depressive symptoms were measured with the CES-D, and anxiety symptoms were assessed using the HADS-A. We also measured whether participants had recently experienced important life-events or serious illness. The reminiscence functions that we included were boredom reduction, identity, problem solving, and bitterness revival, measured with the Reminiscence Functions Scale (RFS). Results Depression is positively correlated with boredom reduction and bitterness revival, the so-called 'negative' reminiscence functions. Regression analysis shows that only bitterness revival remains significant after controlling for the other reminiscence functions. Anxiety has a positive relation with bitterness revival and boredom reduction, and a negative relation with problem solving. If we control for all reminiscence functions, only problem solving has a unique contribution. Also, we observed a positive relation between important recent life events and anxiety. Moreover, problem solving mediates the relation of negative life events with anxiety. Conclusion In order to reduce

clinical symptomatology and prevent mental disorder, we advise mental health care professionals to focus on techniques which reduce bitterness revival in people with depressive symptoms, and to focus on problem solving reminiscence in people with anxiety symptoms.

**PC6 620 DIOGENES SYNDROME (DS): RESULTS FROM AN OBSERVATORY STUDY IN A PARIS DISTRICT.**

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Introduction Diogenes syndrome is a behavioral disorder affecting more often older adults. It is a controversial syndrome with at least 4 almost permanent described symptoms: No request from the subject, when he had nothing; an unusual relationship with things (hoarding of rubbish, or nothing in the house); an unusual relationship with people (misanthropy) and an extreme self neglect. Difficulties in taking care of such subjects, has conducted our socio-medical team to carry out a descriptive study to find out if these subjects had a pathological state or not. Methods and material It is an observatory retrospective study aiming to improve our knowledge of DS in a community dwelling older persons from the XVth Paris District. 600 questionnaires had been sent to medical and social workers, to describe potential cases of DS. Results 136 questionnaires have been completed by 53 professional workers, and 15 of them, concerned the same patients. Our sample was 121 subjects. The mean age was  $77.8 \pm 9.9$ , from 52 to 95 years old. 71% of the subjects were women. All the socio professional categories were represented. 60% of the subjects were living alone, with in 65% of the cases a proxy's help. 26% of the subjects had a diagnosis of dementia. 93% had no alcohol addiction. Only 12% were reported having psychiatric troubles as anxiety or depression. Conclusion Prevalence of the reported DS is comparable to the previously published data: 2/10 000 habitants. However we need a prospective study with a good methodology to conclude. Thus these results may help to build the future questionnaire. Some younger subjects seemed to have schizophrenia; older subjects had a probable FTD, although 10% of the subjects had no pathology but personality disorder linked with a traumatism during the first years of their life. .

**PC6 621 DEVELOPING A SELF RATING SCALE FOR DEPRESSION IN OLD AGE: THE DIA-SCALE A VALIDATION OF TEST PERFORMANCE CRITERIA IN COMPARISON TO THE GERIATRIC DEPRESSION SCALE (GDS-15)**

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Introduction: Despite the relevance of depressive disorders in geriatric medicine there is a lack of appropriate screening instruments. The 15-Item-Shortform of the Geriatric Depression Scale (GDS15) is one of the few scales developed for elderly subjects and a widely used assessment instrument. But, as it is not designed for physical impaired subjects, the GDS-15 does not seem suitable for a clinical geriatric setting. The Purpose of the study was to create a depression rating scale that exceeds diagnostic accuracy for physically impaired geriatric patients whereas in terms of practicability it is comparable to the GDS-15. Methods: In a pilot study a self-rating scale for depression in old Age (DIA-Scale) was constructed considering formal, content and empirical criteria. The Scale consists of 10 short Items and has a simple yes/no-answering scheme. In the main study the new Scale and the GDS-15 were validated using the Montgomery and Asberg Depression Rating Scale (MADRS) as gold standard criterion. Based on a stratified sample of N = 300 geriatric inpatients (N = 150 depressed Subjects; N = 150 not depressed subjects) performance criteria of the two tests were compared. Results: The DIA-Scale shows a considerably higher internal consistency than the GDS-15. The better screening qualities of the DIA-Scale also show in a comparison of sensitivity and specificity for the best cut-off-score of each test. Furthermore, in a comparison of classification performance via Receiver-Operating-Characteristic-Curves the new test achieves a significantly better result. Conclusion: The better test performance of the DIA-S is a very promising result considering that the new instrument is also 5 items shorter than the GDS-15. Hence the new scale would also be an improvement in terms of efficiency. On this account further investigation such as an implementation of the new instrument into the practice of geriatric medicine or the validation in other European countries seems worthwhile.

**PC6 622 GENDER DIFFERENCES IN SYMPTOMS OF DEPRESSION AMONG PEOPLE 65 YEARS AND OVER LIVING IN QUEBEC**

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Introduction: Despite abundant literature on the subject, the gender imbalance in depression is one of the major unresolved problems in psychiatric epidemiology. Epidemiological studies suggest that women present between 1.5 and 2 times more depressive disorders than men. A wide range of hypotheses have been put forward to explain this gender difference, including those that focus on differences in clinical manifestations of depression in men and women. In the depressed elderly population, however, the relationship between age and gender seems more complex. The present study

examines (1) the differences in the prevalence and nature of the symptoms of depression, reported by depressed older men and women in Quebec and (2) how the severity of depression influences the prevalence of the symptoms reported. Method: Data was used from the ESA study conducted in 2005-2006 with a representative sample of community-dwelling adults aged 65 years and over in Quebec (N=2784). Depression (including major, minor and subclinical depression) was measured among depressed older adults (n=205) according to DSM-IV criteria using the ESA questionnaire developed by the research team. Results: Concerning gender rates for individual symptoms of depression, the greatest differences statistically significant were found for the following items (women's rates provided first): appetite disturbance (36.8% vs. 22.6%), psychomotor change (59.9% vs. 52.8%), thoughts of death (34.9% vs. 18.9%) and difficulties in social activities (71.7% vs. 54.7%). No significant gender differences were found for the other remaining symptoms. Most of the participants reported minor depression (78%). Only 7.3% met the subclinical depression criterion, and of these all were women. Conclusion: Depressed mood and loss of interest or pleasure, which are the essential features of depressive episodes, do not differentiate between depressed older men and older women. The other features, in accordance with the DSM-IV, may be more typically feminine features of old age.

**PC6 623 PSYCHOMETRIC CHARACTERISTICS OF THE DEPRESSIVE SYMPTOMS QUESTIONNAIRE IN A SAMPLE OF ELDERLY PEOPLE FROM CUBA.**

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Introduction: In this work, the factorial structure and psychometric characteristics of the depressive symptoms questionnaire (Riquelme et al, 2006) are studied in a sample of elderly people from Cuba. Material and method: The questionnaire of depressive Symptoms was applied to a sample of 100 65-year-old grownups living in Havana (Cuba). Out of these people, 50 had clinically diagnosed with depression according to DSMIV TR approaches, in the Clinical Psychology Service at the Iberian-Latin American Elderly Center. Results: The results show a structure of four factors again just as it happened in the Spanish population. (perfomance problems, self-conceptuation, sleep disorders and suicidal ideation). As far as reliability is concerned, an alpha coefficient of Crombach .91 has been obtained. Finally, the capacity of this instrument as a screening test for clinical depression showed a specificity of 95.7 and a sensitivity of 88.3, with a total percentage of correct classifications peaking 91.7% for a top cutout point of 39. Conclusions: The data contributed in this work indicate excellent values of the questionnaire in this preliminar study of the Cuban population, both regarding their psychometric characteristic –as their capacity- and as a screening tool. These results are encouraging in the face of the adaptation of this questionnaire to different cultural contexts.

**PC6 624 DIFFERENCES IN EITHER PRESENCE OR ABSENCE OF DEPRESSIVE SYMPTOMS IN ELDERLY PEOPLE FROM SPAIN AND CUBA.**

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Introduction: The purpose of this work is to value the existence of depressive symptoms differences between elderly people from Spain and Cuba, both at overall magnitude level and with regard to the relevance of different depression symptoms. Material and Method For conducting this study, as many as 223 people of 65 years of age or older were screened. The Spanish sample is composed of 56 elderly people that make up the clinical level, with an average age of 70.73 years, plus 57 elderly people without depressive background with an average age of 69.7 years old. Regarding the Cuban group, this one is composed of 110 elderly people, 35 men and 75 women. Out of this group, 67 people conform the clinical subgroup and the remaining 41 individuals make up the normal group. Their respective age averages are 70.27 and 71.51. A model of clinical questionnaire, laid out under DSM-IV TR approaches, was coupled with the Ces-d questionnaire, plus a 58-item self-designed inventory that focuses on the assessment in terms of existance and repetition of different depressive symptoms that was also applied. Results: The outcomes show a much bigger presence of depressive symptomatology in the Cuban sample. Regarding the depressive symptoms, significant differences in over 20 different depressive symptoms, both in the case of the clinical sample and in that of the normal population. Special attention must be paid to the case of suicide tentatives, reported in 12.2% of the normal population from the Cuban sample of elderly people. Conclusions: The data contributed by this work shed light on the need of making deeper analysis of the differences found in elderly people from both countries, as well as the reasons whereby these differences can be explained away.

**PC6 625 CAREGIVING: A HARD JOB DONE WITH LOVE**

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Burden may not be the most appropriate concept used to describe the full impact of caregiving in Hispanic/Latino Alzheimer's caregivers. Caregiving models based on classic stress and coping theories have not considered the role that culture and language has on the perception of the caregiving experience. The Spanish language lacks a word that translates to the exact meaning of the English word burden. The Spanish word carga translates more to a physical load than to an emotional load. Neither burden nor carga are culturally congruent words to describe the Hispanic/Latino caregiving experience. This culturally informed conceptual orientation of caregiving proposes burden as one of the consequences of caregiving realities (situations faced day-to-day by caregivers), which are the antecedent to caregiving coping and perceptions. Caregiver expenditure, an antecedent to the coping response, is the degree to which one offers time, as well as physical, social, financial, environmental, and personal resources on behalf of another. Culture and language moderate the relationship between the caregiver expenditures and the coping response, and the relationship between this response and the perception of the experience. The 3 constructs are: Caregiving Realities, Caregiving Coping, and Caregiving Perceptions. Caregiver expenditure is a "kind of" Caregiving Reality. Hours of care, travel time, money, and time for self, are expenditure referents. Caregiver coping response is a "kind of" Caregiving Coping. An example of a referent is The Lazarus Coping Scale. Caregiver Burden, Caregiver Duty Fulfillment, and Caregiver Satisfaction are "kinds of" Caregiving Perceptions. Referents of these Perceptions that consider the moderating role of language and culture remain to be developed. The inclusion of culture and language as moderators of the Caregiving Perception offer a culturally informed conceptual orientation that further refines theory that frames studies aimed at decreasing the negative impact of caregiving.

**PC6 626 GENDER DIFFERENCES IN THE ASSOCIATION BETWEEN SOCIOECONOMIC STATUS AND DEPRESSION IN THE ELDERLY**

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Introduction: With rapid population aging in Korea, increasing attention is given to the mental health of older people. This study examines the association between socioeconomic status and depression in older adults. Methods and materials: The study population consisted of 4123 persons aged 65 and older from Wave 1 of the Korean Longitudinal Study of Aging that used a multistage stratified cluster sampling of community residents. The Center for Epidemiologic Studies Depression scale was used to measure the extent of depressive symptoms. Socioeconomic indicators included education, employment, income source (wage, family support and assets, public transfer, others), and household assets. Analyses were conducted by age groups (65-74, 75+) and gender, using multiple logistic regression, taking into account demographics and health-related variables. Results: Among the survey participants, 16% of men and 27% of women experienced symptoms of depression. In the young-old, education, wage income, and assets were associated with depression, whereas in the oldest-old, public transfer income was significant. In the young-old, for men, those currently employed and having higher assets were less likely to have depression. Receiving wage income was associated with a higher risk. For women, higher education lowered the risk, but those who had worked in the past were more likely to have depression. In the oldest-old men, those who received income support from family or had public transfer of income showed a higher probability of experiencing depression. For women, higher education tended to lower the risk of depression, while having public transfer of income showed a higher risk. Conclusion: Depressive symptoms of the young-old and the oldest-old by gender showed a clear difference depending on the socioeconomic factors. Even with the demographic and health-related variables controlled, the correlation turned out significant, indicating that socioeconomic factors have a major influence on depression.

**PC6 627 CLINICAL BENEFITS OF MEMORY TRAINING PROGRAMS FOR OLDER CHINESE PEOPLE WITH EARLY DEMENTIA**

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Introduction Little is known about the clinical efficacy of memory training programs for older Chinese people with limited education. This study investigated the clinical benefits of two forms of memory training – (1) spaced retrieval and errorless learning (SR-ER) and (2) mnemonics (MNEM) among older Chinese people with early dementia. Method 39 community-dwelling subjects with early dementia were enrolled to the study (data collection is still in progress), and were randomly assigned to SR-ER group, MNEM group and a wait-list control group. Subjects assigning to the two intervention groups attended 8 sessions over 4 weeks. Subjects were evaluated with Fuld Object Memory Evaluation (FOME) and digit span (DS) tests at baseline and post-intervention. Percentages of training items recalled and recognized were obtained from the intervention groups. Results Full sets of results will be presented. Mean age, years of education, and MMSE score of the study sample were 82 years, 2.2 years, and 18.0 respectively. About two-thirds of the study subjects were females. Preliminary results suggest that the three groups did not significantly differ from each other in delayed recall score of FOME ( $F = 0.43$ ,  $p = 0.66$ ) and backward

span score ( $F = 1.85$ ,  $p = 0.17$ ). The percentages of training items recalled were 70 for SR-ER group and 75 for the MNEM group. Conclusions The preliminary data suggest that memory training programs are not clinically beneficial for older Chinese people with early dementia. Three reasons may explain for these observations – (1) insufficient sample size as shown by power analysis, (2) subjects too old and mostly illiterate, and (3) low dosage of training sessions. Yet, approximately two-thirds of training items could be recalled and recognized by the subjects, suggesting that the memory interventions might be effective for the items being trained but have limited generalization effect.

**PC6 628 BURDEN OF CHRONIC DISEASE IN THE QUALITY OF LIFE OF THE ELDERLY IN SÃO PAULO, BRAZIL**

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Objectives: To evaluate the impact of chronic disease in the quality of life of elderly people living in São Paulo, Brazil. Methods: Cross-sectional study of individuals over 60 years. Application of a standardized questionnaire and the Short-Form 36 items questionnaire. Statistical analysis describes the clinical and demographic data, ANOVA were used for the correlation of the SF-36 domains with age and the number of morbidities. Results: 353 individuals were evaluated. The mean age was 71.6 years, with 48.7% of men and 51.3% women. The women presented the worst levels of quality of life in all domains evaluated. ANOVA revealed significant variation in the quality of life in several areas as increasing the number of morbidities. The most compromised domain was Role Physical ( $p < 0.05$ ). The same analysis, applied to the average of the domains by age group, showed an inverse relation of Functional Capacity ( $p < 0.05$ ) with age. Conclusions: The increase in the number of morbidities and the increasing age would significantly affect several areas of quality of life in the old people.

**PC6 629 LEARNING HOW TO BE AN 'OLDER WOMEN': NEGOTIATING CULTURAL SCRIPTS OF AGEING FOLLOWING THE MENOPAUSE**

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Background Whilst traditional cultural scripts of ageing invoke decline and decrepitude, new 'ways' of ageing are beginning to dominate popular understandings of mid and later life. In particular, emergent technologies of ageing are now considered critical in shaping the ageing experience. However, empirical research is needed to further this debate. Methods In-depth interviews were conducted with 12 women aged 48-60 years who self-defined as post-menopausal on 2 occasions, 6-8 months apart. Findings For many participants, menopause was perceived as a time of transition into a 'different' phase of life. Whilst for most it invoked feelings of 'getting older', these were framed both negatively (in relation to concerns about mortality) and positively (as a time of increased opportunities). Evident in some participants' accounts was an uncertainty and anxiety about how an 'older woman' should behave. Concerns related to self-presentation (dress, make-up, weight), as well as behaviour (appropriateness of having sex, need for exercise and dieting). Participants reported negotiating these concerns with reference to the advice and behaviour of peers, female family members and the media. Physical appearance was identified as important to most participants, although views about the use of age-resisting technologies to modify appearance were mixed. Some saw these as inherently unnatural, but to others they were 'just a bit of help'. Discussion These findings indicate that women in mid life experience difficulties in negotiating competing cultural scripts of ageing and identify the menopause as a time when these concerns are brought into focus. The importance of the body in shaping women's understandings and experiences of ageing is also highlighted.

**PC6 630 RELATIONSHIP BETWEEN QUALITY OF LIFE AND CLINICAL AND PSYCHOLOGICAL PARAMETERS AMONG THE OLDEST OLD IN TOKYO.**

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Introduction Quality of life (QOL) of the elderly is one of the most important issues concerning well-being in their late-life. Various factors, such as physical and cognitive function, personality, psychological status, and medical condition may contribute to QOL of the elderly. Despite the number of the oldest old has been increasing dramatically, little is known about QOL of the oldest old. This study aims to evaluate which clinical and psychological parameters correlate to QOL among the oldest old. Methods We recruited 179 individuals aged 85 years or older living in Tokyo metropolitan-area (men 74, women 105, mean age 88.4 years) and examined QOL (WHOQOL-OLD), basic and instrumental activities of daily living (BADL and IADL), cognitive function (mini-mental state examination; MMSE), personality (NEO-FFI; Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness), mental status (WHOS), and morale (PGC morale;

PGC). We simultaneously examined morbidity of age-related diseases, such as hypertension, diabetes mellitus, heart disease, stroke, fracture, and malignancy. Relationships between WHOQOL-OLD and other variables were investigated by Spearman correlation coefficients and multiple regression analysis. Results. BADL, IADL, Extraversion, Openness, Agreeableness, Conscientiousness, and PGC showed significant positive correlation with WHOQOL-OLD ( $p<0.05$ ). Besides, gender (men 0, women 1) Neuroticism and WHO5 showed significant negative correlation ( $p<0.05$ ). Neither MMSE nor morbidity of diseases was correlated with WHOQOL-OLD. A subsequent multiple regression model ( $R^2=0.624$ ,  $p<0.01$ ) extracted significant independent variables correlated with WHOQOL-OLD; IADL and Extraversion showed significant positive association, gender and WHO5 showed significant negative association ( $p<0.05$ ). Conclusion. These results suggest that the oldest old living independently and sociably, taking optimistic views and who are less prone to depression, have better QOL. Prevention of disability and depression might contribute to high QOL in late-life.

**PC6 631 PSYCHOLOGICAL ADJUSTMENT STRATEGIES OF FRAIL OLDER PERSONS TO MAINTAIN QUALITY OF LIFE**  
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Introduction: The population of aged people is increasing worldwide. At any age, quality of life (QOL), with its subjective and multidimensional elements, is a major concern for a person. Little is known about QOL for frail older persons. Methods and materials: This study developed a substantive grounded theory regarding the major concern regarding quality of life for a group of frail older persons in Taiwan. Guided by theoretical sampling until saturation, data were collected via interviews about theoretically sampled incidents and situations pertaining to the QOL of 28 frail older persons aged 65 years and over. Results: The core basic social psychological process identified was 'The process of frail older persons seeking to maintain QOL in Taichung, Taiwan'. The substantive theory about that process encapsulates four major categories. Presented here is 'Psychological Adjustment', one of these categories, with linkage to another category, 'Level of QOL', regarding the quantitative level of QOL consequent from use of psychological adjustment strategies. The category of 'Psychological Adjustment' is comprised of several subcategories, which are presented in detail. Frail older persons applied four types of psychological strategies to maintain their QOL, these being the sub-categories of: cognitive strategies, self-reliance strategies, evasive strategies and coping with emotion strategies. Each of these sub-categories has relevant properties. Conclusion: Understanding how frail older persons seek to maintain QOL and how this influences their level of QOL can guide facilitation of optimal QOL for them. Keywords: Frail elderly • Older people • Psychological adjustment • Qualitative study Quality of life

**PC6 632 SATISFACTION ANALYSIS ON INP MEETING HOUSE'S ELDERLY PEOPLE FROM VALPARAISO, CHILE.**  
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Introduction Students from educational programs usually show high levels of satisfaction. Main goal of this research is analyze vital satisfaction on elderly people that joins a Memory Stimulation Workshop. Methodology A descriptive research was made on 2008 over on elderly people that joined a Memory Stimulation Workshop on INP Meeting House's. Dependent variable was satisfaction and its factors, independent variable was age, married status and to live alone. Sample was made for 17 women and 3 men, from 57 to 84 years old. Statistical Methods used: Philadelphia Satisfaction Scale adapted for I. Montorio and an inquiry that take social and demography information. Both methods were running at the same time to all the people, after an explication about it. Software Excel 2007 was used to process the data. Results Elderly profile: 60% lives alone, 30% has between 70 and 74 years old, 55% are widows or widowers, 15% are married and 10% are singles. Global satisfaction punctuation fluctuates between 15 and 2, average of 9.0; without difference between alone people or accompanied ones. Groups between 60 to 64 years old and 75 to 79 years old show lower satisfaction. Discussion Punctuation of 9.0 could be consider lower over Satisfaction Scale in comparison of other researches, low satisfaction on group 60 to 64 years old could be caused by a recent retirement and physical body changes produce by growing old and way of life

**PC6 633 INTIMACY RELATIONSHIP , PSYCHIC MODALITIES OF INTEGRATION DURING BODY CARE**  
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Both intellectual disabilities and physical impairment in people with A.D make necessary to help them, particularly during washing . Nurses frequently complain about the difficulty of this task which often generates refusals and can even pull risks of violence. We are leading a research to understand better the complex relational processes that are working during this particular moment. The first step of this research is to understand what happens during this care with old patients. We have first chosen to study how patient without AD but with physical impairment can tell their experience about this particular moment of nursing. We train the hypothesis that they set themselves in a particular psychic disposal which allows them to benefit from this care, in spite of the dependence from which they

suffer. We first decided to have non-directive interviews with old patients having period of short hospitalization, for which the care or toilet was an unusual event. We handled these data following two methods: - a manual qualitative method of analysis based on traditional methods of analysis of contents - an analysis automated by the speech using the software "Tropes" ®. This method allows us to find how the patients are telling their experience. It shows the ordinary or unusual expressions that appear in the interviews. We noticed that they consider themselves in a impersonal way and that they use the same process towards the nursing which carry out the care. We have now to pursue other interviews with old patients for whom nursing is necessary in a chronic way. We form the hypothesis that they have to use other way of managing this situation than patient in short caring situation.

**PC6 634 AGEING IN PLACE – RISK OR RESOURCE FOR LIFE SATISFACTION**  
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Given age-related reduction in internal resources such as health, the importance of the immediate socio-physical environment for life satisfaction is likely to increase in later life. As old and very old individuals may differ in their person-environment relationships, the aim of this presentation is to investigate whether objective and perceived physical and social environmental conditions at home and in the neighbourhood represent risks or resources in relation to life satisfaction of young-old (65-79 years) versus old-old (80-94 years) individuals. A sample of 381 community dwelling individuals (65-94 years) was presented with measures on their immediate objective and perceived socio-physical environment as well as on life satisfaction as outcome. On the mean level young-old differ from old-old participants in physical environmental indoor indicators (e.g., living space, accessibility), but not in neighbourhood characteristics (e.g., neighbourhood quality, outdoor place attachment) or social aspects of housing (e.g., perceived social quality, social partners in area). Regression analyses revealed that living space, perceived neighbourhood quality and outdoor place attachment made independent contributions to life satisfaction, while social aspects of housing did not. Separate analysis for young-old and old-old participants revealed age-differential prediction patterns. Living space was positively related to life satisfaction in the young-old and negatively in the old-old while controlling for functional capacity (i.e., ADL, IADL). Thus, living space emerged as a resource for life satisfaction in young-old and as a risk factor in old-old age. Moreover, for the old-old, neighbourhood quality and outdoor place attachment were more important in explaining differences in life satisfaction compared to the young-old. In conclusion, findings suggest that physical environmental resources have an age-differential function for life satisfaction in later life.

**PC6 635 PSYCHOLOGICAL IMPACT OF PROSTATE CANCER ON ELDERLY COUPLES**  
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Recent research consistently indicates that age is a major risk factor for cancer (Tubiana, 2002). Such is the case of prostate cancer, which is typically detected between the ages of 60 and 90 (average age of detection: 73 years). Coping with the physical effects of cancer is not the only challenge for elderly patients; cancer may also affect patient's emotional and social lives as well. The current study presents preliminary results of an experience sampling study on the psychological impact of prostate cancer on the daily lives of elderly patients and their wives. We present data on 20 patients with prostate cancer and their spouse who were recruited from the Regional Center for the Fight Against Cancer in Bordeaux, France. Participants completed 3 daily assessments for 4 days (at the beginning of treatment, in the middle of treatment and at the end of treatment). The methodology has a number of advantages, including that it allows us to establish the relationship between variables (couple adjustment, anxiety and depression), between subjects, and within the couple. (Swendsen, 1997, Czikszentmihalyi, 1984). This study will help us to refine our knowledge and understanding of emotional adjustment and quality of life of patients with prostate cancer and their spouses. We will thus be able to realize the importance of taking into account the couple and not just patients in psychological interventions. Research must continue to move forward for patients, with patients and their families, in a desire to make it quicker and more incisive to support the patient suffering from cancer. More research should allow us to test the feasibility of this methodology on cancer patients and then to evaluate patients' daily lives experiences. This research is being funded by the National League for the Fight against Cancer, France

**PC6 636 NEUROPSYCHOLOGICAL ANALYSIS OF GAIT DISTURBANCES DURING DUAL TASK IN MCI PATIENTS**  
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Introduction : dual task difficulties are frequently reported in MCI patients, but are not easily objectivated in classical neuropsychological tests. Methods and Materials : 14 elderly normal controls and 14 MCI patients participated in the preliminary study. Patients were first diagnosed MCI according to Petersen criteria (1999). All participants realized both neuropsychological and gait testing. Neuropsychological testing consisted of global cognitive assessment (MMSE and Mattis scales), verbal episodic memory test (Grober & Buschke test), visuoceptive test (Copy of Complex Rey Figure), alerte and divided attention tests and IADL assessment. Different gait parameters were recorded using a new sensitive instrument ("Locometrix"), during simple and dual task (counting down). Gait parameters which differentiated both groups in dual task were entered into correlational analysis with the neuropsychological performances in MCI patients. Results : the following gait parameters differentiated both groups in dual task : speed of walk, stride frequency and symmetry. Interestingly, correlational analyses showed that speed of walk was positively correlated to the MMSE score and that the alteration of symmetry due to dual task was correlated to the higher reaction time in the divided attention test. Conclusion : this study demonstrates that "walking and talking" situation is already impaired in MCI patients. By affecting specific gait parameters, it could reflect reduced attentional resources in MCI population. From a more theoretical point of view, this observation could be discussed in terms global cognitive functioning and of automatic versus effortful processes required to walk "normally".

**PC6 637 LEISURE ACTIVITIES OF DISABLED ELDERLY: PATTERNS, CHANGES, AND CORRELATION WITH QUALITY OF LIFE**  
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Introduction: Studies indicate that leisure activities contribute to the psychological well-being, life-satisfaction and functioning of the elderly. However, they seldom focus specifically on the disabled elderly. Methods and materials: Analysis of data from face-to-face interviews with a sample of 160 elderly with disabilities living in the community. Results: 41% of disabled elderly engage solely in passive activities (e.g., TV, radio, reading); 25% in one active leisure activity and 34% in two or more. The more popular are physical exercise (24%), going to cafes (24%), and board games (18%). 40% reported their current activities to be greatly (rather than moderately or somewhat) meaningful to them and three-quarters wanted more activity. Most (83%) had reduced activity since retirement. A multivariate analysis of the correlation between health-related quality-of-life (SF-12) and the elders' characteristics and leisure activity patterns revealed that older age (80+), participation in at least one active leisure activity, and a great meaning of the activity, had a positive impact on the mental component summary (MCS-12) of quality of life. Interestingly, functional status, gender, frequency of contact with family, and the reduction of leisure activity had no effect. Analysis of the physical component summary (PCS-12), revealed that gender, and great meaning of the activity attributed positively to the health-related quality-of-life. No connection was found with active leisure activity in the present, reduced activity compared to the past, age, and functional status. Conclusion: The study found that significant active leisure activities contribute to quality-of-life among the disabled elderly. Unexpectedly, engaging in fewer activities than in the past has no significant impact on current quality of life, implying the great importance of encouraging disabled elderly to engage in significant leisure activities and creating suitable opportunities for them.

**PC6 638 A QUALITATIVE INVESTIGATION OF THE NEEDS OF COMMUNITY DWELLING OLDER ADULTS WITH SELF-REPORTED MEMORY PROBLEMS**  
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Introduction Given the nature and significance of human memory, an understanding of the needs of older adults experiencing memory loss and their families is vital. This is a qualitative investigation of the needs of community dwelling older adults with self-reported memory problems. The primary objectives of the study are: (1) to identify the priority health-related needs of community dwelling older adults with mild memory loss; (2) to identify the services and potential intervention strategies that could assist this group of individuals to meet these needs. Methods and materials The needs assessment consisted of a comprehensive literature review, qualitative interviews of twenty-two community dwelling individuals with early memory impairment (MMSE above 22) and their significant others, and focus groups. Data analysis followed the method of textual analysis described by Diekelmann, Allen, and Tanner (1989). Results Many themes emerged from the data describing the participants' experiences of memory loss which could be very useful for planning intervention strategies. The main health-related need expressed by the participants was the need for information. Most participants felt that they had many unanswered questions and did not know where to seek assistance. Most stated that they did not feel comfortable discussing the problem with their primary health care provider such as their family physician and those who did, felt that their health care provider did not truly understand the problem. They also felt that there were very few resources available within

the community to address this knowledge deficit. Participants also discussed what they felt might be important for developing appropriate intervention strategies to meet their needs. Conclusion A greater understanding of the needs of community dwelling older adults with mild memory problems has the potential for the development of intervention strategies that support an increased quality of life.

**PC6 639 PERCEIVED AGE DISCRIMINATION PREDICTS HEALTH AND ILLNESS THROUGHOUT LATER LIFE**  
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Introduction: Many older adults experience age-based discrimination. Such events include discriminatory attitudes, prejudicial comments, and unfair treatment. Developing research has shown that perceived ageism can have significant effects on health and illness outcomes in later life. Consequently, it is imperative to substantiate the influence of ageism on health and disease outcomes over time. Using a longitudinal analysis and design, this study examines the influence that perceived age discrimination has on emotional well-being and disease status in later life over an 18 year period. Methods and Materials: Using data from the Aging in Manitoba (AIM) Longitudinal Study (1983-2001), ordinal and multiple linear regression models were developed. Respondents were drawn from a computerized registry containing all provincial residents covered under the universal health insurance program. Participants were randomly selected using an age- and sex-stratified area-probability sampling of both community and institutional dwelling individuals aged 65 and greater. Results: First, a negative linear association between perceived ageism and emotional reactivity was found over time. Subjects who believed older adults were treated with respect in 1983 were over seven times less likely to display negative affect in 2001 compared to those who perceived disrespect (estimate = -2.10, OR = 7.13, p < .01, n = 666). Second, after controlling for baseline level of disease, a negative relationship was discovered between perceived age discrimination and disease status such that as ageism increased, the average number of reported chronic conditions decreased over two decades (beta = -.21, p < .05, n = 919). Conclusion: Results confirmed that perceptions of age discrimination influenced psycho-emotional as well as physical measures of well-being in later life; however, perceiving unjust treatment has both deleterious and affirmative consequences on health over time. These effects are dependent on whether an older person is aware of discrimination or not.

**PC6 640 FACTORS RELATED TO LONGITUDINAL CHANGE IN OLDER ADULT'S SUBJECTIVE HEALTH PERCEPTIONS**  
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Introduction: An important domain affecting older adults' quality of life is the perception of health. A poor self-rated health (SRH) appraisal is increasingly recognized as an important risk factor for negative major health outcomes. The current study investigates the effects of a comparative reference point and change in health status on older adults' susceptibility to decline in self-rated health perceptions. Methods and Materials: A large representative sample (N=2034) of older adults (65+ years) from the Australian Longitudinal Study of Ageing was used to investigate the longitudinal (7 waves over 12 years) patterns of change in physical and functional health on change in two SRH measures with different reference points: global (overall health) and age-comparative (health compared to same aged peers). Results: Ordinal latent growth models revealed decline in physical and functional health negatively affected both global (OR=1.26, CI=1.22-1.30) and age-comparative (OR=1.20, CI=1.15-1.23) ratings over time. Males were 1.14 ( $p<.05$ ) times more susceptible to decline in age-comparative ratings than females. The significant age effect for the age-comparative slope showed that for each year over 78 years (mean age wave 1) the odds of decline in age-comparative ratings decreased by 1.19 ( $p<.05$ ). Model invariant testing showed health decline had a significantly greater negative impact on global SRH compared to age-comparative ratings (Scaled  $\chi^2$  (2) = 63.12,  $p<.001$ ). Conclusion: Results indicate that the SRH reference point strongly influences how older adults interpret health decline. Furthermore, this influence on health appraisals depends on gender and age. Findings have important implications regarding the use of SRH items with older adult populations and the psychological effect of comparative reference points on subjective well-being and quality of life.

**PC6 641 PSYCHOLOGICAL DISTRESS IN ELDERLY HOSPITALIZED PATIENTS WITH CHRONIC RESPIRATORY DISEASE**  
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Introduction: the studies of stress during the hospitalization has been mainly concentrated in patients entered in hospitals for acute problems but the same phenomenon and its relationship with Health Related Quality of Life (HRQOL) hasn't been described in chronic and elderly patients. Objective: to study the presence of stress and coping strategies in patients with Chronic Obstructive Pulmonary Disease (COPD) in the public

health hospital and its relation with previous patients HRQOL. Materials and Methods: n=51 patient with diagnostic of COPD has been evaluated in Joan March Hospital by means of: the Hospital Stress Rating Scale (HSRS), the Dyspnoea Scale (MRC), the Nottingham Health Profile (HRQOL) and a list of coping strategies. Results: the levels of stress in hospitalized elderly and chronic patients are minor than the obtained in samples evaluated in the acute hospitals and this is independent of the level of COPD severity stage ( $p>0.05$ ). The patients with slight dyspnoea presented more stress than the most severe ( $p<0.05$ ). Patients with a bad HRQOL before the entrance showed a greater level of stress during hospitalization ( $p<0.05$ ). The evitative coping strategies are most prevalent in these hospitalized patients. Conclusions: the stress generated during hospitalization in COPD/elderly patients will depend on psycho-social factors like HRQOL at the same time as structural factors related with the hospital quality.

#### **PC6 642 MAINTENANCE OF VERBAL MEMORY PERFORMANCE IN INDIVIDUALS WITH A HIGH INTELLECTUAL ACTIVITY**

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Introduction: memory during normal ageing has been broadly studied, as it is the most frequent complaint in elderly populations. Although it seems unavoidable that decay is experienced in some aspects, it can be slowed down or even inverted through cognitive interventions. Cognitive exercise can extend well being and life quality. Methods: the objective of this study was to compare, based on ex post facto transversal evolutionary study, verbal memory performance in individuals with a high intellectual activity in four age groups. Results: there were no performance differences between group 3 (51-64 year olds) and group 4 (65-83 year olds), thus we can state that advanced-age elderly people maintain their performance across time. Conclusion: this effect can be explained by the features of samples that we used: individuals with a high educational level and "mentally active" (as they were enrolled in the university programme for the elderly). Adding up, the results support the hypothesis that cognitive exercise helps to maintain cognitive capabilities.

#### **PC6 643 PERSONAL MEANING AND DEPRESSION: AN RCT ON THE EFFECTS OF LIFE REVIEW THERAPY**

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Introduction: Personal meaning is an important resource in maintaining mental health in contemporary society. Since older adults might find it difficult to achieve meaning in life, an intervention based on life review therapy was developed. The intervention intends to increase personal meaning by the integration of positive and negative recollections of one's life. This study assesses the impact of this intervention on personal meaning as well as the effects of personal meaning on depressive symptoms as outcome of the program. Methods and materials: A multi-center RCT was conducted with one group obtaining the intervention (N=73) and the other group (N=67) watching a video about the art of growing older and with access to mental health care as usual (mean age 64 years). Measures included the CES-D for depression and a sentence completion questionnaire for personal meaning. Measurements took place before and after the intervention as well as three months later at follow-up. Results: Those who followed the program increased significantly more in meaning in life than the control group and this increase in personal meaning remained stable at follow-up. Baseline personal meaning and improvements in meaning during the intervention predicted a significant decline in depressive symptoms later in time. Conclusion: Personal meaning is a positive asset in the lives of older people that can be supported by means of life review therapy. The focus of the intervention on the promotion of meaning in life contributes to the mental health of the older participants.

#### **PC6 644 PSYCHOSOCIAL FACTORS CONTRIBUTE TO REDUCING FEAR OF FALLING IN A COGNITIVE BEHAVIOURAL INTERVENTION**

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Introduction: Fear of falling is a disabling concern in older persons. Several cognitive behavioural interventions for fear of falling showed to be effective in community-living older people, yet the effect sizes were limited. Knowledge about the mechanisms that contribute to the intervention effects may help enhance intervention effects. In the current study we explored the mediating effects of psychosocial factors on trajectories of fear of falling in a cognitive behavioural intervention aimed at reducing fall-related fear and associated activity restriction. Methods and materials: Our study sample comprised 540 community-living older people who participated in an RCT evaluating a cognitive behavioural group intervention. This intervention aimed to instil realistic and adaptive views on falls risk and fear of falling, and to achieve behavioural change, for instance regarding physical activity. It comprised 8 weekly sessions of 2 hours and one booster session at 6 months after the intervention. Self-reported data on control beliefs, self-efficacy beliefs, outcome expectations, and social interactions - as potential mediating factors both separately and combined - and fear of falling - as outcome - were assessed

before, directly after, and at 6- and 12-months after the intervention. Results: Mixed-effects linear regression analyses showed small to moderate intervention effects on the psychosocial factors at nearly all follow-up assessments (effect sizes range from .04 to .41). Modest mediating effects of the separate psychosocial factors on fear of falling were shown. Taking all psychosocial factors into account, a substantial amount of the association between the intervention and fear of falling was explained, i.e. 44% to 76% for the various follow-up assessments. Conclusion: The intervention showed to improve several psychosocial factors that mediated the association between the cognitive behavioural group intervention and fear of falling in community-living older people.

#### **PC6 645 SOCIOECONOMIC POSITION AND SUBJECTIVE WELL-BEING AMONG ELDERLY PEOPLE IN SWEDEN**

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Introduction: The relation between socioeconomic position (SEP) and health have been studied extensively, the relation between SEP and subjective well-being less, especially among elderly. We study the relation between four measures of SEP and four measure of well-being. Methods and materials: The results are based on a nationally representative random sample of Swedes aged 77-99 years. In 1992 537 persons were interviewed. The dropout rate was 4.6 %. Measures of well-being: Sense of coherence is based on three questions, one from each of the three domains comprehensibility, manageability and meaningfulness, life satisfaction on three questions regarding fulfilled life expectations, social circumstances on three questions about positive relations to important persons and housing autonomy, and quality of life on questions regarding family relations, leisure and subjective evaluations of life. Measures of socioeconomic position (SEP) are income, cash margin (the ability to raise 1,100 euro in a week), social class based on main lifetime occupation, and highest finished education. Results: The results show significant correlations between SEP and well-being measured as sense of coherence, social circumstances, and quality of life, but not to life satisfaction. Not all separate correlations were significant. Many more of the correlations were significant among men than among women. For men significant effects were found of all four measures of SEP while among women only significant correlations were found for cash margin and well-being. Among men income and cash margin were the most important measures of SEP, followed by social class and with education as the least important. Conclusion: Results show the importance of SEP on subjective well-being among elderly. Results also show that the more economically oriented measures of SEP are more strongly correlated to well-being and that SEP are more important for men than for women.

#### **PC6 646 DOES LEARNER AUTONOMY DIFFER BY GENDER ACROSS AGE GROUPS?**

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INTRODUCTION: Conscious and continuous learning across the lifespan enhances the quality of human life. Learner autonomy is a key ability for individuals to engage in lifelong learning including learning self-care strategies to manage chronic illnesses. What is the pattern of the perceived learner autonomy of gender across age groups? METHOD: Using an international database (n=28,224) responded from 10 countries to the Learner Autonomy Profile (LAP) 3.0v validated for the four constructs of Desire, Resourcefulness, Initiate, and Persistence with Cronbach's Alphas of .94 to .98, gender and age-group effects were analyzed in a 2x6 unbalanced factorial design. Tamhane post-hoc analyses were selected for unequal variances. RESULTS: Central characteristics of the sample were 62% women, 61% single, average age 31 years old (range 18-89), and 51% bachelor's equivalent education. On the LAP total and all four constructs, main effects for gender [ $F<47.91$ ,  $p<.031$ , Partial Eta Squared (PES)  $<.002$ ], main effect for age groups ( $F<106.15$ ,  $p<.001$ , PES  $<.018$ ), and interaction effects ( $F<100.58$ ,  $p<.001$ , PES  $<.018$ ) were found. Post-hoc comparisons of LAP total highlight the over 65 years-old reported lower scores than two younger age groups (45-54; 55-64). While men hold higher total than women within the 18-24 age group ( $p=.000$ ), men had lower scores than women within three older groups ( $p<.001$ ). Older women group reported higher scores than younger groups, while lower for the men group over 64 than the 35-64 age groups. CONCLUSION: Although gender and age may account for small variances in learner autonomy scores, the cross-sectional data show different levels of learner autonomy by gender across age groups. Older women may hold positive identities as lifelong learners compared to older men.

#### **PC6 647 SUBJECTIVE WELL-BEING IN OLDER ADULTHOOD: DO SPOUSAL BELIEFS MATTER?**

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Introduction: Physical health contributes positively to subjective well-being, particularly in later life when functional capacity becomes a salient component of personal identity. Psychosocial resources believed to facilitate adaptation in response to the detrimental

effects of declines in health on well-being include control beliefs and relationship closeness. This study extends previous research concerned with psychosocial predictors of well-being by examining dyadic interdependencies in the associations among self-rated health, control (mastery and perceived constraints), relationship closeness and subjective well-being (life satisfaction, positive and negative affect) in a large sample of older married couples. Methods and materials: Participants consisted of 2235 spousal dyads (4470 individuals) who took part in the Health and Retirement Study (HRS) in 2006. Actor-partner interdependence (APIM) models were used to explore associations of individual and spouse characteristics with well-being indices. Results: A significant proportion of variance in health (25%), mastery (17%), perceived constraints (28%), relationship closeness (47%) and well-being measures (28 – 38%) occurred between dyads. Individuals' health, control and closeness were positively associated with life satisfaction and positive affect, and negatively associated with negative affect, controlling for age, gender, race and education. Spouses' health and control beliefs were also associated with greater well-being. Significant interactions indicated that individuals' control beliefs buffered against the effects of poor health on life satisfaction and negative affect. Conclusions: The findings indicate substantial concordance in the psychosocial characteristics of older married adults, and indicate that an individual's well-being could in part be dependent on both their spouse's health, and their spouse's perceptions of external constraints on personal agency. The absence of buffering effects of spouse characteristics on the association between health and well-being suggests a particular importance of individual mastery beliefs for positive adaptation to aging-related declines in health.

**PC6 648 FACTORS HELPING TO ENHANCE COMBAT VETERANS POST-WAR ADAPTATION AND WELL-BEING: A QUALITATIVE SYSTEMATIC REVIEW**  
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Introduction: As veterans' age, worldwide research confirms the unique long-term physical and mental consequences of combat and reveals "silent effects" as loneliness, confusion, concentration, memory, and daily functioning difficulties. Symptoms can be confused with dementia or lead to late-life Post Traumatic Stress Disorder. Quantitative studies indicate the potential of social supports in alleviating some effects of war memories for aging veterans. Some researchers advocate qualitative methods arguing for in-depth insights to supplement quantitative. This qualitative systematic review and meta-synthesis reports the impact of social supports on reconciling traumatic war memories from the emic perspective of veterans. Methods/materials: Included studies were peer-reviewed, published in English 1990–2009, had a qualitative component, and described nonmedical supports for veterans over 45 years of age experiencing traumatic war memories. Studies focusing on dementia and acutely ill were excluded. Expert qualitative search filters with veteran\*, military, coping, social support\* terms were used in OvidMedline, CINAHL, PsychINFO, AMED, Ageline. The McMaster Critical Review Tool was used to evaluate methodological quality. Study findings were categorised as themes and subthemes. Results: 432 studies were found. Seven met criteria. One study used grounded theory, another attachment theory and five thematic analysis. The studies revealed four supports: comradeship; family; veteran associations; community appreciation. Credibility/confirmability was compromised as studies lacked triangulation methods and strategies to decrease bias. Conclusion: There is an urgent need for focused, high quality qualitative research on non-medical, particularly social, supports for veterans. This review is an important initial step in showing that healthy aging of veterans goes beyond healthcare. Community-Based Rehabilitation, involving the whole community, is worthy of consideration. Healthcare professionals can help improve/maintain veterans' health, particularly those living in rural or nursing care settings, by partnering with communities in providing therapeutic engagement in meaningful social supports.

**PC6 649 PERCEPTION OF ELDER MALTREATMENT THROUGH THE EYES OF OLDER MALAYSIANS**  
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Introduction: Elder maltreatment has never been a problem to Malaysia where the culture is courteous and respectful of elders. However, it is expected to increase as the country is enduring the ageing process. The purpose of this paper is to examine the perceptions of elder maltreatment among older Malaysians. Methods: This paper utilizes a sub-sample of 480 older persons from a cross-sectional study entitled "Perception, Awareness and Risk Factors of Elder Abuse." The perception of elder maltreatment was measured by 45-statement (Cronbach Alpha = 0.92) with response categories of (1) Yes, (2) No and (3) Not sure. The statements were developed by the research team, based on literature of abuse and neglect. Results: The respondents' age ranged from 60 to 95 years (Mean = 68.99, SD = 7.602). It was found that 104 of the respondents have a full score on the statements of maltreatment. Chi-square test showed that sex ( $\chi^2 = 4.097$ ,  $p = 0.043$ ) and education level ( $\chi^2 = 5.299$ ,  $p = 0.021$ ) are significantly difference with perception on maltreatment. On explaining the respondents' perception by various type of maltreatment, statement on

sexual abuse received the highest agreement (97.1%) followed by emotional abuse (82.5%), physical abuse (79.2%) and financial abuse (66.3%). It was acknowledged that statement on neglect received a low score, with only 30% of full score was noted for self-neglect and none of the respondent holds a full score for neglect. Conclusion: Definition on elder maltreatment will differ by socio-demographic features and cultural values. The respondents associated maltreatment more towards an abusive behaviour. With non-existence of violence, neglect remains acceptable among the older persons. This study highlight the level of tolerance of neglect and this has serious implications for service development and utilizations.

**PC6 650 AGE DIFFERENCES IN POSITIVE MENTAL HEALTH AND ITS RELATION WITH MENTAL AND PHYSICAL ILLNESS IN THE DUTCH POPULATION**

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Introduction: Recently mental health is defined as not merely the absence of psychopathology but as a syndrome consisting of positive feelings (hedonic well-being) together with positive functioning in life (psychological and social well-being). Nevertheless, few studies have addressed positive mental health in older as compared to younger adults. The present study investigates age differences in positive mental health and its relation with mental and physical illness. Methods and materials: In this study use is made of data of the LISS panel of CentERdata, an internet panel for Longitudinal Internet Studies in the Social Sciences. A representative sample of 1.662 Dutch respondents between the ages of 18 and 87 participated in the present study. Positive mental health was measured with the Mental Health Continuum – Short Form (MHC-SF). Psychopathology was measured with the Brief Symptom Inventory (BSI), and questions were asked about chronic diseases, functional limitations, and subjective health. Results: Older individuals experience more physical health problems and less psychopathological symptoms than younger adults. Mental and physical problems are related to lower levels of positive mental health. No moderating effect of age was found, showing these relations are similar in all age groups. Yet, there are no age differences in positive mental health. When controlling for physical and mental illness, the oldest age groups (65-74 and 75+ years) even show a lower degree of positive mental health than younger age groups. Conclusion: Positive mental health shows different relations to age than physical and mental illness. Although related to mental and physical illness, positive mental health is therefore a distinct indicator of health. When controlling for physical and mental illness, older persons have the lowest degree of positive mental health. Older adults would thus profit from interventions directed at the promotion of their mental health.

**PC6 651 NEW INTIMATE RELATIONSHIPS AMONG OLDER PEOPLE LIVING IN INSTITUTIONS: EXPLORATORY STUDY**

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New intimate relationships among older people living in institutions are frequently associated with a wide range of difficulties from the understanding they have of their own sexuality, to the way they express themselves in an institutional environment and to various embarrassments and repressions that exist in our society. This study focuses on the difficulties and incentives felt by a group of elderly couples that had established new intimate relationships in an institutional setting. Based on a qualitative methodology, we formed a focus group and interviewed three couples aged 65 years or over, functionally independent and that had initiated an intimate relationship after they had entered a nursing home. Through analytic methods based upon open coding and grounded theory techniques, our findings suggest the presence of difficulties and encouragements for establishing a new intimate relationship. These are related both to family and professionals working in the institution. Findings also reveal an overall acceptance of the relationship, but often embedded in a perceived social pressure from the institution staff in order to make the relationship "official" (through marriage), even though that was not the couple's wish. Main motivations for beginning a new relationship rely on loneliness, feelings of compassion and overall affective needs.

**PC6 652 HOW FEELING YOUNGER CAN PUT OLD PEOPLE IN DANGER? A STUDY ON THE OVERESTIMATING OF POSTURAL CAPABILITIES IN THE ELDERLY**

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Introduction Falls in the elderly are very frequent, sometimes leading to medical complications and even causing death in extreme severe cases. During the elderly, the postural capabilities slowly but inexorably decrease and there would be a discrepancy between what the old peoples believe to be still able to do and what they really can do. In this study, we tested the hypothesis that old people overestimate their postural capabilities. This cognitive bias could put the old person in danger and could explain certain falls.

Method Twenty young adults (17 at 33 years) and twenty healthy older adults (64 at 84 years; MMSE>25) had to judge, without doing the real action, if they were able to stand upright without falling on an inclined board. The real maximal inclination permitted an upright stance was also measured after the perceptual judgments. This task was performed both in vision and without vision. The response times and the level of confidence were also recorded. Results As expected, the results showed that old people overestimated three times more than young controls their postural capabilities. No difference between vision and no-vision conditions were observed. They had lower postural capabilities but they behave not differently as young people on the perceptual judgments as if they felt, in fact, younger "in their mind". The results concerning response times and levels of confidence confirmed these data. Conclusion These results confirm our hypothesis: old people overestimate their postural capabilities both with visual and non-visual judgments. Old people behave as if they were "younger in their mind" and this could put them in danger and causing falls. This cognitive overestimation could be due to a difficulty to actualize the internal model of action with the new motor capabilities imposed by age.

#### **PC6 653 FACTORS PREDICTING LONELINESS AMONG OLDER PEOPLE IN DEPRIVED NEIGHBOURHOODS**

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Introduction Loneliness represents a difference between the actual and the desired quantity and quality of social relationships, and is associated with reduced health and well-being. This study investigated predictors of loneliness among older people living in deprived neighbourhoods in three UK cities: Liverpool, London and Manchester. Methods and materials Data were collected from 501 respondents by a questionnaire. Loneliness was measured using the 11-item De Jong Gierveld scale; this was used as both a continuous scale and as a dichotomy ('not lonely' versus 'moderately/ severely/ very severely lonely'). Potential predictors were identified a priori in three categories: sociodemographic factors, objective life conditions, subjective life conditions. Analysis was through multivariable linear and logistic models. Results Analysis was based on 447 respondents (median [interquartile range] age 70 [65, 77] years) for whom there was complete data. Of these, 198 (44%) were 'not lonely', 187 (42%) 'moderately lonely', 40 (9%) 'severely lonely', and 22 (5%) 'very severely lonely'. In both the linear and the logistic models, marital status, morale, satisfaction with life, feeling isolated from society, and perceived poverty were significant predictors of loneliness; feeling isolated from society was the strongest predictor in both models. Additional significant predictors were satisfaction with accommodation and quality of neighborhood in the linear model, and fear of crime in the logistic model. Conclusion The prevalence of loneliness among older people in deprived areas is relatively high. With the exception of marital status, subjective life conditions dominate among predictors of loneliness. Aspects of quality of life (morale and life satisfaction) and social isolation (both objective and subjective) were strong predictors, as might be anticipated from their conceptual closeness to the construct of loneliness. These predictors reflect those in other studies of older people. There is a need for comparative studies between deprived and non-deprived populations.

#### **PC6 654 IS IT TIME FOR AN IN-DEPTH REVISION OF THE CONCEPT OF MILD COGNITIVE IMPAIRMENT AS A PRODROME OF ALZHEIMER DISEASE?**

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Within the framework of early detection of Mild Cognitive Impairment (MCI) as a possible prodrome of Alzheimer disease, one of the main objectives is to characterize its subprofile and study its markers and outcome. Our longitudinal study analyzes the neuropsychological data of individuals whose diagnostic category changed during the early years (2) of follow-up. Methods and Material We evaluated 140 participants using a set of 12 psychometric and neuropsychological tests. Participants were classified using psychometric criteria as healthy, amnestic MCI (aMCI), nonamnestic MCI (naMCI), and mixed MCI (mMCI). The same tests were applied after 1 year and the patients were reclassified into the above-mentioned subprofiles according to the results obtained. Results Forty-four healthy participants (73.33%) and 48 MCI (72.72%) did not change category. However, 16 (27.11%) healthy participants became MCI and 19 (27.27%) MCI participants became healthy. If we take each of the MCI subprofiles, we observe that 4 (44.44%) of the aMCI, 2 (14.28%) of the naMCI, and 8 (80.00%) of the mMCI changed to another MCI profile. The chi-square test revealed a statistically significant association between both evaluations ( $\chi^2 = 57.443$ ,  $p < 0.000$ ). The performance of the executive function and praxis tests led to the change in diagnostic category of the healthy participants, who became MCI. In the MCI patients who became healthy, the tests affected by such a change were episodic memory and recall. Both these tests and the tests on immediate recall and verbal fluency led to the changes in MCI subprofile. Conclusions The relevant statistical tests showed that the results for praxis, executive function, immediate recall, and verbal fluency led to changes in diagnostic category. As demonstrated by Dubois et al (2007), these tests could represent a core diagnostic criterion for prodromic Alzheimer disease.

#### **PC6 655 UNDERSTANDING THE EXPERIENCE OF BEING AGED: WHAT WE CAN LEARN FROM COMMUNITY-DWELLING ELDERS**

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Introduction An ontological exploration of the 'being' of being aged has the potential to throw a new light on that which is already known about aging and the aged. The aim of this hermeneutic phenomenological study was to understand the meaning of 'being aged' through the everyday experiences of New Zealand elders. Methods and Materials Individual research interviews were conducted with fifteen participants; four Maori elders aged 71 to 93 and eleven non-Maori elders aged 80 to 97 years. Seven men participated and eight women. All were living in private residences on Auckland's North Shore and purposively recruited by way of the general electoral roll. Each persons account of everyday events as well as their reflections on aging were gathered. The interpretive analysis of the narrative data aimed to understand the meaning of being aged in the everyday. Results Four overarching notions were illuminated; elders ordinary ways of 'being in the everyday,' the experiences of 'being with others in advanced age, how being aged was revealed through 'experiencing the unaccustomed' in the context of a day, and how 'aging just is' in an everyday way. Conclusion The meaning of being aged is in its ordinariness. In this way, being in the ordinary everyday in advanced age both conceals and reveals the phenomenon of being aged. Being aged is something that most of us will come to experience. This study offers understandings which may guide how we move towards being aged, as well as inform the provision of health and social services for community-dwelling elders. Within the context of an aging population, both nationally and globally, the meaning of being aged is an important phenomenon to apprehend.

#### **PC6 656 NEIGHBORHOOD CHARACTERISTICS AND MENTAL HEALTH AMONG THE ELDERLY IN AN URBAN AREA OF JAPAN**

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Introduction: The number of elderly citizens in Japan has been rapidly increasing, particularly in urban areas. Although recent reports have revealed that neighborhood characteristics such as poverty affect the health of the elderly, few studies have examined the impact of these factors on elderly Asians. We examined the relationship between neighborhood factors and mental health in elderly people aged &gt;= 75 years living in an inner city in Japan. Methods: We conducted a face-to-face structured interview survey in July 2001 on 1,000 randomly selected people aged &gt;= 75 years living in a single ward of Tokyo, Japan. Abbreviated versions of the Life Satisfaction Index A (LSIA) and Geriatric Depression Scale (GDS) were used to assess mental health. Neighborhood variables of socioeconomic status, residential mobility, proportion of elderly people in the neighborhood, and crime rate were computed for each of 24 districts within the ward based on census data, police statistics, and data from another population survey. Multilevel analyses examined the correlation between neighborhood variables and the two dependent variables, controlling for district as a random effect and for age, sex, and other individual level variables as fixed effects. Results: The mean age of the 570 respondents was 79.6 years, and 63.0% were female. Multilevel analysis showed that no neighborhood variable was significantly associated with either the LSIA or GDS. However, neighborhood socioeconomic status was found to be significantly associated with both dependent variables among elderly people whose physical mobility was limited to their neighborhood ( $p=.034$  for LSIA,  $.017$  for GDS). Conclusion: In the present study, neighborhood characteristics did not appear to significantly affect the overall mental health of elderly people, although these factors may have some influence on the frail elderly. The relatively small sample size limits the generalizability of these findings.

#### **PC6 657 UNDERSTANDING PSYCHOLOGICAL DISTRESS AMONG ELDERLY MIGRANTS AND USE OF HEALTH CARE SERVICES: DOES ETHNICITY MATTER?**

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Introduction This paper assesses factors that influence psychological distress and their impact on the utilisation of health and community aged care services by elderly migrants living in the Sydney Metropolitan area (SMA). Methods and Materials Data on Arabic, Chinese, Greek, and Italian elders were drawn from the NSW Older People's Health Survey 1999 and data on Iranian elders were drawn from a targeted 2007 survey. All participants were aged 65 years or older, who had lived in the SMA for at least six months prior to the survey. Results Results showed that a majority of the elderly migrants (70%) were between 65-74 years age and most (64%) were married at the time of survey. Most of the Italian and Greek elders had arrived in Australia in the 1940s and 50s, and most of them (87%) owned their home outright. Most of the Chinese, Arab, and Iranian elders arrived in the 1970s and 80s and about 40% owned their home. Arab and Iranian elders

reported more limitations in physical function (using the SF-36 and ADL), lower wellbeing scores, and more psychological distress (using the K-6), than Chinese, Greek or Italian elders. However, the Chinese elders reported the fewest functional limitations and least psychological distress. There were no significant differences in use of Home and Community Care services between these groups, however, Arab and Iranian elderly reported greater use of health services than the other ethnic groups. A multivariate regression analysis that controlled for ethnicity showed that psychological distress was best predicted by well-being, ADL, physical functioning, and home ownership ( $r^2=0.623$ ,  $p<0.001$ ). Conclusion This suggests that home ownership, physical functioning, ADL, and well-being are better predictors of psychological distress than use of health services, age or duration of migration to Australia.

#### **PC6 658 IMPROVING MOTORWAY REST AREA BASED ON VISUAL SEARCH CHARACTERISTICS OF ELDERLY PERSONS**

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Purpose The purpose of this study is to seek concrete solutions for improving motorway rest areas "MRA" through wayfinding legibility from the viewpoint of universal design concept with an emphasis on visual search characteristics of elderly persons. Method The study focused on four major routes in a large-scale MRA. Subjects were eight elderly persons in good shape and their average age was 73.8 years-old. The experiment was carried out by video-recording their eye-fixation behaviors while wayfinding to the target while walking along the four routes previously selected, which represent typical behaviors of the elderly persons in MRA; a) From their vehicles to rest room, b) from rest room to ticket vendors for restaurants, c) from vendors to restaurants/shopping area, and d) from restaurants/shopping area back to their vehicles. Results and Conclusions 1) The experiment was shown that elderly persons found it the most difficult to find a way back to their vehicles among four routes. When returning to their vehicles, rather than identifying their vehicle's location by small public signboards, they relied on a particular visual search to locate their vehicles in relation to other surrounding environmental elements including parking lot arrangement, light poles and steel towers. It is concluded here that MRA legibility can be improved by planning signboard system that closely relate to obvious environmental elements. 2) Elderly persons tend to look down below for visual search, namely road surfaces and building floors. To make the use of the tendency, it makes sense to place signs to low-height area. 3) Elderly persons found it difficult to make a quick identification of proper signs that help them find the direction. The signs for wayfinding should therefore differ from other information by using specific size, dimensions, shapes and colors.

#### **PC6 659 LEGIBILITY CHALLENGES WITH WAYFINDING BEHAVIOR OF ELDERLY PERSONS IN MOTORWAY REST AREA**

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Purpose The purpose of this study is to clarify the environment-related legibility challenges in the motorway rest area "MRA" by examining how the elderly persons use MRA based on the analysis of their strategy while wayfinding behaviors. Method Eight elderly persons were subjected to the wayfinding experiments conducted in a large-scale MRA. After completing the experiments, a hearing session was held to identify how to locate their target destinations, upon which the important strategy factors were extracted. Furthermore, the subjects were categorized in accordance with a cluster analysis based on Pearson's product correlation "furthest neighbor method" while using the strategy factors. Results and Conclusions 1) Three major strategy factors of elderly persons extracted; a) Prior knowledge of target destination, b) Target destination location, and c) Judgment basis for target destination location. 2) Under an environment where the information is easily recognizable thanks to clearly identified target and/or signs, the most significant factor was "Judgment basis for target location". Elderly persons were categorized based on whether or not they had used the signs when locating their destination. All elderly persons, however, found it difficult to reach the destination especially when the actual spatial image of MRA differed from their visionary image or there were many similar signs. 3) Under an environment where the information is not recognizable with ease, due to temporary installation of the signs and/or unclear identification of the target destination, "Prior knowledge of target destination" was of the most importance. Elderly persons were categorized according to whether or not they had knowledge or memory as of where the destination is from their previous experiences. When the environment surrounding the destination was changeable "due to movement of the cars parked", all elderly persons encountered some difficulties to reach the destination.

#### **PC6 660 AGE-RELATED CHANGES OF ATTITUDES TOWARD DEATH AMONG JAPANESE MIDDLE-AGED AND ELDERLY**

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Introduction For the middle-aged and elderly, the theme of death and dying is thought to be one of the developmental tasks. This study investigated the age-related changes of attitudes toward death among Japanese middle-aged and elderly using longitudinal data. Methods The data were taken from the National Institute for Longevity Sciences-Longitudinal Study of Aging (NILS-LSA), conducted in 1997-2000 (Wave1) and 2002-2004 (Wave3). The subjects were community dwelling 803 males and 743 females (aged 40 to 79 years at Wave1). The mean interval between both waves was 4.1 years. A multidimensional scale of Attitude toward Death was assessed at both waves. It contained five subscales: 'Fear of death', 'Intention to live out own life', 'Belief in existence of afterlife', 'Meaning of death for life', 'Approval of death with dignity'. Repeated measures analysis with GLM procedure (in SAS ver.9.1.3) was used for the analysis. The independent variables were age group by decade, sex, wave, and those first- and second-order interactions. Results There were significant main effects of wave and age on the subscales of 'Fear of death' (both  $p<0.001$ ) and 'Belief in existence of afterlife' (wave effect:  $p<0.001$ ; age effect:  $p<0.01$ ): These scores decreased in Wave3, and were lower among the older groups. On the subscales of 'Intention to live out own life', 'Meaning of death for life', and 'Approval of death with dignity', the main effects of age were significant (in each,  $p<0.001$ ;  $p<0.01$ ;  $p<0.05$ ), namely, the elderly had high scores on the former two subscales, and showed more approval of death with dignity on the last subscale. Conclusion These results suggest that some aspects of attitude toward death changes for four years among Japanese middle-aged and elderly.

#### **PC6 661 BEHAVIOUR COGNITIVE PROFILE CORRESPONDING A SAMPLE OF USERS FROM A GERONTOLOGICAL CENTER**

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Introduction: Progressive aging of population implies a prevalence and incident increase of cognitive disorders including dementia. Although cognitive and functional symptoms have traditionally identified these subjects, behaviour and psychological symptoms (BPS) are becoming more and more relevant. The study's aim was to know the behaviour cognitive profile of the residential users in a Gerontological Center. Methods and materials: The study was carried out with residential users in a Gerontological Center in A Coruña (Spain). The sample was constituted by 32 people over 65, 6 men and 26 women with different levels of cognitive impairment. The MMSE Spanish version was used to assess the user's cognitive state and Global Deterioration Scale (GDS) to establish the different impairment levels. The 12-item Spanish version of the Neuropsychiatric Inventory (NPI) was used in order to evaluate behavioural and psychological symptoms. Results: From the total sample, 28 users (87.5%) were below the MMSE Spanish version cutoff point, which means they showed cognitive impairment. They were grouped in the following GDS Scale stages: GDS1 and GDS2: (12.5%), GDS3: (0%), GDS4: (25%), GDS5: (28.1%), GDS6: (15.6%) and GDS7: (18.8%). Twenty four users (75%) showed BPS. Those corresponding GDS6 showed an average of 4.4 symptoms and those in GDS7 showed 3.2 (0-12 symptom range). The study showed that users with severe cognitive impairment (GDS6) and very severe cognitive impairment (GDS7) presented the highest NPI levels with scores between 47.2 and 90.0. Conclusion: Most of the patients with cognitive impairment showed BPS, being more predominant in the most severe stages. Therefore, early diagnosis is of utmost importance in order to take action and improve both caregiver and patients quality of life.

#### **PC6 662 SUCCESSFUL AGING: LAY PERSPECTIVES OF YOUNG, MIDDLE-AGED, AND OLDER GERMANS**

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Introduction: Demographic changes and the growing number of old people fuel the increasing interest in the nature of successful aging. However, despite decades of research there is no consensus about what aging well entails. Since ideas about aging influence thinking and behaviour, clarifying subjective theories of aging represents an important goal and may inform intervention efforts. Methods and materials: The present study examined laypersons' definitions of successful aging and the factors determining it. Open interviews with young, middle-aged, and older Germans ( $N=155$ ) were conducted and evaluated with a newly developed coding system ( $\kappa=0.90$ ). Since findings showed comparable numbers of codes for definitions and determinants, data was combined for further analysis. Results: Findings indicate that health and social network were the key components of successful aging, whereas meaning in life, micro-environment and respect/status were reported least often. Age groups differed in four categories: Instances of activities/interests were

mentioned more often with advancing age, whereas knowledge/education was mentioned less frequently. Middle-aged reported more goals/tasks compared to younger and older participants. Finance matters showed an inverse trend. In addition, an interaction effect between age and gender was observed: Young women mentioned quality of life more often than young men, whereas middle-aged and older women mentioned it less frequently than men at the same ages. Conclusion: Results suggest that the understanding of successful aging is multi-faceted and can be mapped onto multiple dimensions discussed in several aging theories. The ideas about successful aging change only moderately over the life span. Nevertheless, these age differences highlight which areas of life could be targeted in prevention and intervention. Future research should include longitudinal data and more individual characteristics in order to explain age-related changes.

**PC6 663 A QUALITATIVE STUDY FOR THE BARRIERS FOR PARTICIPATIONG IN CHILD-SUPPORT ACTIVITIES BY GRANDPARENTAL GENERATIONS**

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The purpose of this study was to reveal the barriers for participating in child-support activities by grandparental generations, in order to promote "child support program by grandparental generations in communities". Grandparental generations (n=9) and parents caring preschool children (n=9) were investigated by means of a group-interview. The data obtained by grandparental generations were classified into 9 categories, "anxiety of being rejected by parents," "considering parents' attitude as too much dependence," "generation gap about how to caring children," "generation gap about attitude toward children," "having no time to joining," "liability issues," "anxiety about health and strength," "not knowing how to handle children," and "consideration for parents". The data obtained by parents were classified into 8 categories, "anxiety of being imposed by grandparental generations," "anxiety of being considered as too much dependence," "overindulging children," "generation gap about how to caring children," "generation gap about attitude toward children," "being confused receiving too much importations," "consideration for grandparental generations," and "being uneasy about leaving children". The results of this research demonstrate that the main barriers were the programmatic attitudes of each others'. To promote child support program by grandparental generations and exchanges among different generations, it's necessary to provide the importation about these barriers to each other, and dispel the misconception about generation gap.

**PC6 664 PSYCHOLOGICAL ADAPTATION TO VISION LOSS IN OLD AGE: THE ROLE OF FUNCTIONAL ABILITIES**

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Introduction: To investigate psychological consequences of vision loss in old age, we considered the concept of Adaptation to Age-related Vision Loss (AVL; Horowitz and Reinhard, 1998). We hypothesized that the consequences of objective visual acuity losses on the AVL outcome are largely mediated by perceived functional vision loss (FVL) and functional abilities to conduct activities of daily living (ADL). Following a process-oriented view of adaptation, we further expected some reduction of psychological responsiveness to vision losses with ongoing advancement of AMD, weakening the impact of vision loss when higher levels of vision loss have been "reached". Methods and Materials: Longitudinal data comprising baseline and one-year follow-up measures from two samples of elders suffering from age-related macular degeneration from New York City (N=361 at baseline) and Heidelberg (Germany, N=90) were analyzed. Structural equation modelling techniques were applied for data analysis Results: We analyzed the hypothesized structure of mediation cross-sectionally, relating the variables baseline measures, as well as longitudinally, relating their latent one-year change scores. Results confirmed the hypothesized relational structure, showing that the impacts of vision loss on psychological AVL are largely mediated by losses in functional abilities. We further compared the relations between one-year change scores of FVL, ADL, and AVL among those with low, medium, and high levels of objective vision loss at baseline and found evidence of a "unique psychological" adaptation, in that among those with high levels of objective vision loss, further changes in FVL and ADL showed only minor impact on AVL. Conclusion: Functional abilities appear to be a fundamental driver of positive attitudes kept under irreversible vision losses in old age. It seems, however, that on the long run there is some "immunization" of the elders' psychological reactions against further losses in vision.

**PC6 665 INFLUENCE THAT CHANGE IN LIFE ENVIRONMENT GIVES TO "TIME SPENT ALONE" OF ELDERLY PERSON WHO NEED CARING AND THE FAMILY**

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The purpose of this study is to clarify how the change in life environment influences "Time spent alone" of elderly person who need caring and his family living at home. Subjects are

husband who need caring (80 years old) and his wife (74 years old). The method is an interview to husband and his wife respectively. The investigation content five items "disability and health condition, cost for living, interpersonal relationship, physical environment, regional service" that relate living environment and "Time spent alone" in home. The interview results are evaluated by five stages "satisfaction - dissatisfaction" And, this investigation was done two times "November 2008 and December 2009". 1) Husband has dissatisfaction about "health condition" "physical environment" as well as one year ago. Though "Time spent alone" of husband was enhanced by his family doctor, husband's hobby activity will hardly be seen within one year. In this case, it is necessary to improve the environment that the husband can do alone, or husband's hobby is newly converted, after the reasons for dissatisfaction are considered enough. As a result, it is thought that the activity of husband's daily life is maintained, and it leads to the bedridden prevention. 2) His wife has dissatisfactions about "health condition" "physical environment" as well as one year ago. Nevertheless, an integrated satisfaction ratio of both life in home and region is improved compared with one year ago. The improvement reason for the satisfaction ratio is related to an increase of free time for his wife while husband living at nursing home. His wife is liberated from the mental and the physical stress of home care by the existence of "Time spent alone". As a result, this is useful for softening the loneliness and strengthening the connection with the society for his wife.

**PC6 666 AGE DIFFERENCES IN OROFACIAL SENSORY THRESHOLDS**

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Introduction: This study sought to assess differences in sensory thresholds for painful and non-painful multimodal orofacial stimuli. Methods and materials: Medically healthy subjects (Ss, N=178; female=100) judged thresholds for: (1) warming, (2) cooling and (3) painful thermal stimuli and (4) tactile stimuli delivered to the glabrous (upper lip) and hairy (chin) skin sites of the face and (5) salt (NaCl) and (6) sour (citric acid) taste in separate sessions. Thresholds were determined by the ascending and descending Method of Limits. The thermal stimuli were delivered via a 3-layer Peltier thermode; pressure stimuli were delivered with Semmes-Weinstein filaments, calibrated nylon monofilaments; and the taste stimuli samples were prepared with 0.25 logarithmic steps between successive stimulus concentrations. Results: Age was categorized based on a bimodal distribution split at 50 yrs, to yield 92 younger and 86 older adults. Separate ANOVAs were conducted for each of the sensory domains. For the thermal and tactile sensory domains lip thresholds were less than chin ( $p < .05$ ). The age effects were moderate to large in magnitude. Older adults had lower thresholds for all sensory domains ( $p < .01$ ). There was a small, but significant sex difference suggesting that women had higher cooling threshold for chin stimulation ( $p = .027$ ), accounting for approximately 3% of the variance in ratings and lower sour threshold ( $p = .01$ ) and an age x sex interaction accounting for 4% of the variance. Conclusion: Older Ss were less sensitive to threshold stimuli than younger. However, age accounts for <20% of the variance. When participant ratings of sensory words was controlled, age differences in sensory ratings decreased, indicating that a large portion of the age effect was a function of a more stoic response set in older participants. Supported by P.H.S. DE08845

**PC6 667 PATIENTS' PERSPECTIVES ON THE IMPORTANCE OF NURSE-PATIENT RELATIONSHIPS IN CHRONIC CARE**

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Introduction: Chronic care facilities (CC) provide complex care to patients for extended periods of time. When patients spend significant periods of time with nursing staff there are opportunities to develop warm and family-like relationships with them. The purpose of this study was to determine what aspects of patients' relationships with nursing staff matter most to them and how frequently patient's experience relationships that matter. Methods: Two scales were developed: a Humanistic Relational Importance Scale and a Humanistic Relational Experience Scale. The items were based on concepts embedded in Paterson's and Zderad's Humanistic Nursing Theory. A descriptive survey was used to collect data from 240 chronic care patients living in 6 facilities in Ontario, Canada. Results: This paper will present the qualities of the nurse-patient relationships that are most important to patients and how frequently these qualities are experienced. Conclusion: Findings of this study will lead to greater understanding of the nurse-patient relationship in CC settings and will support clinical practice, research and education of nursing staff in these settings.

**PC6 668 THERAPEUTIC ORIENTATION TO ADAPT ELDERLY AND THEIR FAMILY IN AN ASSISTED LIVING FACILITY**

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Introduction: In a Brazilian Assisted Living Facility, new residents and their families presented difficulties during the adaptation process. The complaints were of personal dissatisfaction and issues in their intergenerational relationships. Psychogerontologic assistance was created, aiming the resolution of past and current conflicts, promoting an adequate adaptation and stay, accompanied by intergenerational relationships. Material and

**Method:** A study, descriptive and analytical, with a qualitative data approach. Therapeutic Assistance is carried out since 2004, with systematic group approach. The interventions are held by a psychologist, monthly throughout the adaptation period, which lasts around 4 to 6 months. After this period, there is a therapeutic maintenance in individual or group assistance, according to their needs. Elderly are stimulated to live and experience their anxieties and doubts in their new everyday life. Family orientation reinforces affective bonds and the relevancy of their participation during the stay of the elderly at the institution.

**Results:** The continuity of therapeutic intervention contributed to the decrease of complaints and conflicts during the adaptation process. It was demonstrated a drop in resident departure, as well as an increase in their staying with lifted feeling of satisfaction and sense of self-efficacy. The exchange of experiences amongst family members helped to decrease angst and guilt feeling, developing a net of solidarity and protection between elderly and their family.

**Conclusion:** This psychogerontologic orientation demonstrated to be an excellent resource to the strengthening of affective bonds and improving intergenerational relationships. It contributed to the elevation of feelings of self-esteem, independence and autonomy in the elderly, accompanied by a sensation of dignity and pleasure, promoting a successful aging.

**PC6 669 MARITAL ADJUSTMENT AND ITS ASSOCIATION WITH MARITAL DISTRESS IN OLD AGE**

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Little is known about marital satisfaction in the elderly. Some studies suggest that it is generally higher than that of their younger counterparts while other studies suggest the opposite. Also, while the association between marital satisfaction and psychological distress has been well established in younger couples, knowledge about this association in older couples is scarce. The aim of the present study was two-fold: first, to compare the level of marital adjustment of the elderly with that of younger couples reported in previous literature; then, to document the cross-sectional association between marital adjustment and psychological distress in a representative sample of the married population of Quebec aged 65 years and older. Data was drawn from 1175 married participants of the Survey of the elderly's health (ESA study) in Quebec, Canada. Participants responded a face-to face interview at their own home. The Dyadic Adjustment Scale was used to measure marital adjustment while psychological distress was measured with the ESA Diagnostic Questionnaire (ESA-Q). Results suggest that the elderly are generally more satisfied of their marital relationship than their younger counterparts ( $t(1333) = 2.54$ ,  $p < .02$ ). In addition, after controlling for the effect of age and duration of the relationship on marital satisfaction, results suggest that sex ( $F(1, 1188) = 21.49$ ,  $p < .001$ ) and psychological distress ( $F(1, 1188) = 18.36$ ,  $p < .001$ ) are associated with marital satisfaction, being women and those suffering from psychological distress significantly less maritally satisfied. These results support what has been generally found in previous studies with younger couples.

**PC6 670 GIVING AND RECEIVING IN THE POST-MODERN ERA IN MANAGING SENIOR CITIZEN CLUBS WITH THE HOLISTIC APPROACH**  
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**Introduction:** This paper focuses on the study and the significance of reciprocal relations between the director of senior citizen clubs, on the background of social post-modern approaches and in line with the holistic approach. Mutual relations between the director of senior citizen clubs and the senior citizens constitute an essential foundation for the efficient operation of these networks. **Methods and Tools:** a semi structured interview was conducted to examine the viewpoint of the senior citizens and the perspective of the director regarding these mutual relations. The contents of the interviews were determined during the research design stage, by means of questions directed at understanding the ways of managing "receiving" and "giving" among the senior citizens and the director. The research population included 15 senior citizens from three senior citizen clubs and six directors. The mean age of the club members was 70. **Findings:** The main theme revealed in the senior citizens group was a feeling of security, expressed through five types of support: social security, emotional security, security of self reliance and independence, security of a place, reliance on the director of the club who serves as a secure anchor. The findings show that the senior citizens and the directors report these indicators and expressions in the three reciprocal relations; from the director to the senior citizen, from the senior citizen to the director and among the senior citizens themselves. The content analysis of the interviews with the directors revealed mirror relations which connect them to the senior citizens. **Conclusions:** Receiving and giving are processes that occur between the directors of the senior citizen clubs and the senior citizens in a reciprocal manner. The manifestation and the understanding of these reciprocal processes and the fact of their existence for a long duration lead to a significant and central conclusion.

**PC6 671 METAPHORIC MEANING OF WORDS PROCESSING AND AGING: A CASE OF BRAIN FUNCTIONAL REORGANIZATION**

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**Introduction.** The hypothesis of a brain functional reorganization for language during aging is still a matter of debate. The processing of metaphors offers an interesting field of research in order to observe possible age-related brain reorganization. That is because it is considered as a preserved ability in older adults. In order to explain the age-related functional brain changes of a number of cognitive processes, Cabeza has proposed the HAROLD phenomenon. Such a reduction of differences in neural inter-hemispheric activations has been shown to be present in the preservation of task performance during aging. However, still little is known about the determinants of the age-related reduction in hemispheric asymmetries for language processing in successful aging. The goal of this study was to describe the patterns of inter-hemispheric activations during processing of metaphoric meanings of words, looking for possible age-associated changes allowing for preserved performance. **Methods and materials:** Ten young adults and ten older adults were scanned using 3T fMRI during the performance of a semantic judgment task using pairs of words: targets with literal (LT) or metaphoric (MT) relationships and distractors paired with concrete (CD) or abstract (AD) words. Lateralization indices were calculated. **Results:** The [MT-LT] contrast showed significantly increased activity in the superior frontal gyrus bilaterally for both groups and in the inferior frontal gyrus and the left temporal cortex in the older group only. There was a left lateralized index for both groups. **Conclusion:** Different patterns of neural activity were associated with processing of metaphors depending on age: a change in anterior/posterior activation profile instead of a reduction of differences in inter-hemispheric activations. These results are compatible with the possibility that the greater frontal activations present in older adults may reflect a requirement of additional attentional resources on a demanding task.

**PC6 672 THE EFFECTS OF FAMILY-RELATED FACTORS ON THE QUALITY OF LIFE FOR THE ELDERLY PEOPLE IN KOREA**

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The main purpose of the study is to investigate the relationship between the family-related factors and the quality of life for the elderly people in Korea. Since family plays an important role in caring the aged in Korean society, the family-related factors are also very important in determining the quality of elderly people's life. The subjects of the study were a total of 443 people, both male and female, residing in Daegu and Gyongsan areas. Data were collected through a self-reporting method and each items in the questionnaire had a possible score of 5. The family-related factors are the degree of intimacy with the spouse, with the children, and the filial piety perceived by elderly people. The results are as follows: the intimacy with the spouse is positively related to the quality of life of the elderly. The average score for the intimacy with the spouse was found to be 2.56, which was relatively low in comparison with the score for the intimacy with the children (3.34). The score for the perceived filial piety by the elderly was found to be 3.21, which indicated that most elderly people perceived their children to be very close and faithful. The positive attitude toward the children of the elderly was very significant in making the old people satisfied with their life in general. As a conclusion, the quality of the life of the elderly was very much determined by the family-related factors such as the intimacy with the spouse, with the children, and the perceived filial piety. Therefore, it is suggested that the welfare policy for the elderly people should be family-oriented or family-centered in Korea. Much effort should be made in order to improve the relationship between the elderly people and their family members. It would be further proposed that many programs and services should be provided to give the family various incentives for taking care of their elderly people.

**PC6 673 A STUDY OF THE ECOLOGICAL FACTORS AFFECTING THE QUALITY OF LIFE AMONG THE ELDERLY PEOPLE IN KOREA**

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The purpose of this study is to analyze the factors affecting the quality of life for the elderly people from the ecological perspectives. Specifically, this study attempts to compare the relative contributions of the variables from the individual system, microsystem, mesosystem, and macrosystem on the quality of life for the elderly. The subjects for this study consisted of 443 elderly over 60 years old in urban areas using interview method based on a structured questionnaire. The data were analyzed by frequency, t-test, ANOVA, and hierarchical regression method. The major findings of this study were as follows: 1) Out of the individual factors influencing the quality of life of the elderly, the economic status of the respondents was found to be the most important. Out of the microsystemic factors, the most important factors were found to be the intimacy with the spouse and with the children. Out of the mesosystemic factors, the degree of the social participation of the elderly was found to be the most significant. However, none of the macrosystemic factors were found to be important in influencing the quality of life of the elderly. 2) The relative significances of the variables contributing to the quality of life of the elderly were analyzed using a hierarchical regression technique. It was found that there was no significant factor in social background and mesosystemic variables. On the other hand, the degree of the self-efficacy and the level of the economic status from the individual factors, and the intimacy with the spouse and the children from microsystemic factors were found to be very significant in the contributing the quality of life for the elderly. As a conclusion, based upon these results, it is suggested that the ecological factors are very important in determining the quality of life for the elderly people, and thus, strong

supports from the family, the local community, and the government are crucial in order to improve the quality of life for the elderly people in Korea

**PC6 674 THE IMPORTANCE OF COGNITIVE RESOURCES FOR EVERYDAY COMPETENCE AMONG VISUALLY IMPAIRED AND UNIMPAIRED OLDER ADULTS**

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**Introduction** This paper investigates the role of cognitive resources for everyday competence, contrasting visually impaired and unimpaired older adults. We hypothesize that relationships are different depending on impairment status, i.e., we assume that lower cognitive resources have a stronger negative impact on everyday competence among the visually impaired as compared to those unimpaired. Methods and materials Findings are based on samples of 121 visually impaired and 150 unimpaired adults between 72 and 95 years (mean age: 82 years) from the SENSO-AGE Project. Visual impairment was defined as distance and/or near visual acuity of less than 20/70 in the better eye. All participants were community-dwelling and had no major cognitive impairment. Cognitive measures mainly came from the Hamburg-Wechsler test battery. Everyday competence was assessed by everyday activities, leisure activities and the environmental mastery subscale from the Ryff Scales of Psychological Well-Being. Results Differential relationships in the predicted direction emerged for fluid as well as crystallized measures of cognitive functioning. More precisely, speed of processing was a significant predictor of out-of-home activities of daily living, but only in the visually impaired group. The positive relationship between capacity for abstraction and leisure activity level was stronger for the visually impaired as compared to the visually unimpaired older adults. Conclusion There is first evidence that the relationships between cognitive resources and everyday competence are different depending on impairment status. In terms of intervention, a possible implication would be that classic everyday competence trainings should be enhanced by systematic cognitive training.

**PC6 675 EXPLORING DETERMINANTS OF ORAL HEALTH-RELATED QOL AMONG THE OLDEST OLD IN TOKYO**

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**Introduction** Low satisfaction with oral health is serious problems among older adults, because it can cause not only undernourishment, but also poor mental conditions. However, few studies have focused on the relationships among oral function, state of the mouth, and a medical health condition among the oldest old. The aim of this research was to examine factors that potentially improve QOL among the oldest old in terms of oral health. **Material and methods** We recruited 152 community-dwelling individuals aged 85 or older (65 men, 88 women, mean age 88.4 year+3.1). Oral health-related QOL was assessed by using GOHAI (Geriatric Oral Health Assessment Index). Oral health measures included the number of remaining teeth, the condition of dental prosthesis and the bite force. Body mass index (BMI), serum levels of albumin (Alb), and total cholesterol (TC) were measured as nutritional indices. Philadelphia Geriatric center morale scale (PGC) was examined as an index of the psychological condition. **Results** The mean value of GOHAI score of the participants was 52.2 + 9.2, which was comparable with reference data from general population in Japan; 52.2+7.8 for 50 - 59 years old, 50.8+8.8 for 70 - 79 years old. A significant correlation was admitted in GOHAI score with the bite force and the condition of dental prosthesis ( $r=0.305$   $p<0.01$ ;  $r=-0.182$ ,  $p<0.05$ , respectively). However, no significant correlation was admitted in GOHAI score with BMI, ADL, PGC scale, and serum levels of TC and Alb. **Conclusion** The oral health-related QOL was found not to decrease by chronological age, but to be associated with poor bite force and the condition of dental prosthesis. Our results suggested that improvement of oral function and optimization of dental prosthesis could maintain oral health-related QOL even in the oldest old.

**PC6 676 CULTURAL-SPECIFIC SIGNS OF GEROTRANSCENDENCE IN THE VERY OLD IN JAPAN**

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**Introduction:** An increasing number of the very old in Japan show a decline in physical and cognitive function, but still achieve a psychologically adaptive development (cited article). This developmental change is conceived as a process of "gerotranscendence" proposed by Tornstam (1989). According to his theory, gerotranscendence process is hypothesized to be intrinsic and universal, but to be modified by specific cultural patterns. However, it remains unexplored whether gerotranscendence is culturally specific. The purpose of the present study was to explore cultural-specific signs of gerotranscendence in the case of

Japanese. **Methods and materials:** Informants: Participants were 16 volunteers aged 81-106 (M = 92.75). The ratio of male to female was equal. All the participants showed a substantial decline in physical function [e.g., Barthel Index  $\leq 90$ , etc], while maintaining cognitive function [MMSE  $\geq 21$ ]. Subjective well-being scores [PGC moral scale & self-reported health] varied between participants. **Procedure:** Semi-structured interviews were conducted following the interview guide by Tornstam(1997). **Analysis:** We made qualitative analyses into the interviews, based on phenomenological approach and grounded theory. **Results:** We successfully found three signs of gerotranscendence, which Torenstam failed to find in his studies (1997a, 2005). First, some had recognized spiritual existences even if they were not religious (spiritual existences). Secondly, some had accepted changes of situations by detaching from self (self-detachment): It means a shift away from defense mechanisms. Third, some had redefined independence and recognized interdependency (interdependency): Sometimes they accepted dependence on others. **Conclusion:** There seems to be some signs of gerotranscendence that are modified by not only cultural-specific patterns but also further age-changes. Amae may accelerate the development of "interdependency." And, older age may accelerate the development of "self-detachment." Recently, Tornstam described "selflessness" as a revised sign. So, it may correspond to "self-detachment."

**PC6 677 IMPROVED SPATIAL WORKING MEMORY IN MICE LACKING ADENOSINE A<sub>2A</sub> RECEPTORS**

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Extracellular adenosine acting at adenosine A<sub>2A</sub> receptors (A<sub>2A</sub>R) is increasingly recognized to modulate the striatal plasticity and cognitive function in brain. In this study, we employed adenosine A<sub>2A</sub>R knockout (KO) models to investigate the effects genetic inactivation of A<sub>2A</sub>R on spatial working memory in eight-arm radial maze and in a repeated trial testing of Morris water maze (MWM). Compared to the wild-type (WT) littermates, A<sub>2A</sub>R KO mice displayed an improved working memory as evident by reduced working memory errors in the radial maze performance in both 6 days or 15 days training protocol. This enhanced working memory in A<sub>2A</sub>R KO mice (after 15 days training but not after 6 days training) was retained even after 7 days of washout period. Moreover, the enhanced working memory was also confirmed/observed in two separate experiments with two different working memory testing protocols (i.e. four repeated trials with varying, but <3 min interval, and two repeated trials with mixed interval at 15 second, 10 min and 60 min.) However in both radial maze and MWM paradigms, there was no/minor significant difference in the performance of spatial reference memory between the A<sub>2A</sub>R KO and WT littermates. The results demonstrate that genetic inactivation of A<sub>2A</sub>R preferentially improves spatial working memory, suggesting a modulatory role of the A<sub>2A</sub>R in spatial working memory in mice.

**PC6 678 AGEING AND EMOTIONAL REACTIVITY: DO OLDER ADULTS SHOW DIFFERENTIAL SUBJECTIVE AND PHYSIOLOGICAL RESPONDING DURING PICTURE VIEWING COMPARED TO YOUNGER ADULTS?**

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Viewing affective pictures elicits reliable patterns of physiological change in the somatic, visceral, and central systems of children and adults that covary with reports of affective valence and arousal. Research that has directly investigated the relationship between emotion and overall physiological change in the context of healthy ageing is currently equivocal. Australian older and younger adults' subjective and physiological reactivity to affective pictures from the International Affective Picture System were compared. Across three experiments, younger (18-25 years), middle aged (31-48 years) and older (52-93 years) participants viewed and provided ratings of valence, arousal, dominance and fear for subsets of affective pictures using the Self-Assessment Manikin. Eyeblink reflex, skin conductance, heart rate, corrugator and zygomaticus activity were recorded during picture viewing in Experiment 3. Affective responding is assumed to be activated by basic appetitive and defensive motivational systems. Across the three experiments, there were no age related differences in subjectively rated pleasantness; older adults provided reduced arousal ratings for pleasant pictures and showed little differentiation among the pleasant high, medium and low arousal categories. Differences in emotion driven physiological responding were evident in both age groups. Blink magnitude of younger adults did not differ during pleasant and unpleasant pictures, however, older adults showed an enhanced blink magnitude during unpleasant pictures. Both age groups showed largest SCR activity during high arousal pictures. In older adults, corrugator activity was larger when viewing unpleasant compared to neutral pictures. Zygomaticus activity was enhanced for younger adults during pleasant pictures. Older adults did not show emotional modulation of

zygomaticus activity. Taken together, these findings suggest that older people differ in subjective and physiological emotional reactivity compared to younger people.

**PC6 679 AN EXPLORATION OF LONELINESS AMONGST OLDER WOMEN: LOSS OF IDENTITY**  
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**Introduction:** Loneliness has increasingly become a pertinent issue for many persons older than 60 years. The experience of loneliness in South Africa could be contextualised against the history of various negative circumstances, which contribute to the experience of loneliness by older people, such as poverty, urbanisation, HIV/AIDS and migration. Research demonstrates relationships between loneliness and chronic conditions, anxiety and depression. Furthermore, it impairs the quality of life and implies a poor prognosis for ageing. **Method and materials:** The focus of this qualitative, phenomenological study was to explore the experiences of loneliness. Fifteen Afrikaans-speaking women older than 60 years participated in the research. Various qualitative data gathering methods were used, such as, a visual projective technique that is referred to as the Mmogo-metodTM, individual interviews and journal writing. The data were enriched with a focus group discussion and member checking were used to ensure trustworthiness of the results. **Results:** The results indicated that their socio-cultural contexts, socialised women to adopt designated roles as carers for their homes, children and husbands. They were submissive to their husbands and supported their husbands in their career developments to the extent that they neglected their own development as independent people with their own identities, who were capable of adjusting to different situations and relations. The losses that accompanied old age accentuated the lack of identity roles that could be applied to different contexts. Specific recommendations were made regarding psycho-social interventions such as exploring the self, different identities, dealing with different losses and bereavement counselling. **Conclusion:** Many older women experience loneliness, hopelessness and a feeling that life has no meaning. Loneliness was experienced by this particular group of women as a loss of their identity.

**PC6 680 LIVING ALONE, SOCIAL ISOLATION AND LONELINESS IN SPAIN AND THE NETHERLANDS**  
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**Introduction:** Loneliness is a subjective and negative experience resulting from a cognitive evaluation of the discrepancy between the quantity and quality of actual social relationships and relationships standards (de Jong Gierveld, 1987). This experience has been acknowledged as an important indicator of subjective well-being in older age (Dykstra, 1990). Important cultural differences have been found in the prevalence and determinants of loneliness (Jylha and Jokela, 1990, Perlman, 2004). The aim of this study is to analyze the prevalence and determinants of loneliness in Spanish and Dutch elderly people. **Method and materials:** We use comparable data from two samples of community-dwelling older adults ( $n=646$  and  $n=656$ , respectively). In both countries, the de Jong Gierveld scale is applied to measure loneliness, and information about age, gender, health, living arrangements and social network characteristics, is collected. **Results:** Total loneliness is higher among Spanish than among Dutch older adults. However, more people live alone in the Netherlands than in Spain. The multivariate analysis showed that total effect size of living alone is higher in the Dutch than in the Spanish sample. However, interaction terms between living alone and age, gender and receiving support are significant for the Spanish, but not for the Dutch participants. In Spain, the effect of living alone is stronger for the very old (75+) than for the youngest old (60-75). Also, when living alone, men were lonelier than women. Finally, elderly people living alone, but with high levels of emotional support received, showed lower loneliness scores than those with low levels of support. The effect of receiving emotional support was not significant for those living with other people. **Conclusions:** Loneliness is a culture bounded experience. The results are discussed in the context of cultural differences in living arrangements and norms of support in both countries.

## Track D - Social Research, Policy and Practice

**PD6 681 UNEMPLOYMENT IMPACTS ON OLDER WORKERS MENTAL HEALTH**  
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This research assesses unemployment impacts on mental health in 55 year and older workers and their implications on self-perceptions and re-integration strategies in the labour force, given the particular economic, social and cultural pressures that this age group suffers. Unemployment in older ages will eventually speed up the deterioration of

health status. Several studies demonstrate that a stressful event like unemployment may cause depressive feelings, anxiety, physical and mental exhaustion and low self-esteem (Fryer, 1988; Eisenberg e Lazarsfeld, 1938; Jahoda et al. 1972, etc.). As economic stagnation diminishes the labour market demands, younger and most qualified workers are preferred. Age discrimination and poor practice in age management make maintenance and re-integration in the labour market an endeavour. As empowerment and active ageing political speeches are passed on to the community, pressure rises and these individuals are more exposed to stigmatization and mental health destabilization. Life story research was conducted on ten unemployed men with 55 years and older chosen by convenience sampling. Perceptions over 1) unemployment and ageing; 2) empowerment and individual responsibility; 3) labour force and age management 4) self wellbeing (physical, psychological and social); 5) Health related or health oriented behaviours and life styles 6) plans for the future; 7) community participation extent 8) quality of life, were addressed on a life course personal perspective. Results will be available on May this year.

**PD6 682 AGEING AND SOCIAL ENVIRONMENT: LATENT DISCRIMINATIONS. THE CASE OF CHILE**  
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**Introduction:** During the year 2008 the qualitative phase of the research "Calidad de vida y Adulto Mayor" was realized in Santiago, Chile. The target was to characterize the factors that have an influence over the quality of life of the older people, considering their own perceptions. The findings show the implications of the social environment on the given definitions of quality of life, including the role of the older people and the possibilities of inclusion that are socially given in Chile. **Methods:** A qualitative methodology was used, including 16 focus groups with free living older people, and 10 in-depth interviews with semi-disabled older people. The data was analyzed with the qualitative software Atlas ti 5.1. **Results:** According with the participants, there are 3 areas where the social environment is linked to the quality of life, which ones are also linked with other dimensions already empirically and theoretically defined as relevant, like health and economy. a) Intergenerational relationships. The attitude of the new generations to the older ones in public spaces, there would be an irrespectfull behaviour. b) Stereotypes and prejudices. The older people is discriminated by the images of ageism, reducing competition in front the other age groups, specially in the labor force. c) Influence and social participation. Not being considered as relevant for the decision making, diminishing validity to participate social and politically in their wider social environments. **Conclusions:** In Chile, traditionally there have been studies about the role of the older people inside the family, and their participation in groups and clubs. The results of these research add the implications of the chances of inclusion and social integration in their self perceived quality of life, which ones act like ways of latent discriminations, even in the daily treatment as in the institutional treatment to older people.

**PD6 683 AGE, AGEISM AND AGE DISCRIMINATION - NEW DYNAMISM IN MODERN SOCIETIES**  
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**Introduction:** In modern societies chronological age has been substantially structuralized, formalized, individualized and in reaction to new demographic developments was constituted in terms of age inequalities and age legitimization of discriminative behaviour. On the case of Czech Republic we are showing the dynamism of reports of age discriminative behaviour and discussing the role of chronological age in different social settings. **Methods and materials** We use two representative surveys "Ageism" conducted in adult population of Czech Republic in years 2003 ( $N = 1584$ ) and 2007 ( $N = 1810$ ). Results Due to the used datasets we can follow the dynamic development in perception of age discrimination in different fields of social life - interpersonal communication, labour market, and health care system to name a few. While some of the fields do show decrease in report of the discriminatory situations, others show increase and/or change in the main age group affected. The results from year 2007 also confirm some of the previous findings from 2003, such as higher share of persons reporting that they have "heard" about age discriminatory behaviour, then being actual victims or witnesses of it. Therefore further discussion about methodological issues and interconnection between ageism and age discrimination should be carried out as well. **Conclusion** We believe there are three possible modes of how older people can face the oppression of ageism and how may society answer their endeavour: assimilation, hyphenation, and age multiculturalism, and we will discuss them in more detail as well.

**PD6 684 THE SELF-DETERMINATION IN THE ILL ELDERLY PATIENT IN THE HOSPITAL**  
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In Geriatrics it is difficult to furnish an information suitable to the patient and to get an valid consent. THE AIM: to appraise the reliability and the validity of the signature of the informed consent in a population of elderly in-patients in a hospital for acute. MATERIALS AND METHODS: a observational study of cohort has been effected on 150 elderly patients within 48 hours from the admission. Exclusion: refusal to the study; MMSE<=10. The others patients were submitted GDS. He wondered to the patient if he had understood Informed Consent read and then to explain the content. RESULTS: the 25,33% had MMSE <=10 (one had the legal guardian), 64% completed the study. Of these the 46,88% had normal MMSE, 15,63% light cognitive deficit, 37,50% moderate deficit; 67,39% had GDS normal, 28,26% light depression, 4,35% severe depression. The 79,38% of patients declared to have understood the read document and of 5,15% acknowledged not to have it inclusive. Only the 13,40% gave a correct explanation, 36,08% gave a partly correct explanation, 23,71% it explained, 10,31% said not to know. None of patients with GDS>5, none with MMSE 11-20 included the consent. With to increase the score of MMSE and the school-years, the percentage of patients that understood the consent increased, with the aging percentage reduced. CONCLUSION: more than halves the champion has not included the consent; there is a notable difference among the number of patients that declared to have understood the document and the number of subjects that understood really. A greater school-years, a lower age, a taller MMSE and the absence of depression can be considered "positive factors" for a suitable understanding of the Consent. Confirmation of the literature: MMSE not to appraise ability to intend and to want but as screening, in partnership to GDS, age and school-years.

**PD6 685 SURVEILLANCE OF THE HUMAN RIGHTS OF ELDERLY PEOPLE IN COSTA RICA**  
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At the present time, the Human Rights of Elderly People are among the most violated ones and, despite that, there are public policies that seek to solve and give protection; those are not enough because the violent situations and the abuse continue. The project promotes the respect and execution of the Human Rights for Elderly People by means of a surveillance process that includes coordination, diffusion, follow up, and evaluation of the activities designed for the promotion of the Human Rights of this population in different scenarios. Likewise, the project makes use of an action research method. This way, the leading role and the active participation of Elderly People is promoted as leading activists in the surveillance of their rights and civic responsibilities in institutions and in the daily life. The people who join the program as observers play a part in all its stages, for example: the training and awareness of the subject of Human Rights, Old Age, and Aging, the process of training, incorporation and initiation of the duty, and evaluation of the project, etc. The techniques and instruments of data compilation are the following: the main technique is observation and the instrument used is a comparison list; and the secondary technique is the interview and the instrument used is an interview semi-structured guide. The creation of this project seeks to contribute, among many other things, to actively integrate Elderly People as observers of those daily-life situations where their rights are violated and, at the same time, that they become promoters of the knowledge of the Human Rights in their families and in the community; and to generate better policies that allow the adequate access to goods and services, eradicating any way of discrimination and violation of the Human Rights of Elderly People.

**PD6 686 AGEISM: RESULTS OF AN INTERNATIONAL STUDY**  
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Ageism in the health care sector is a matter of fact. It influences any actor concerned with the provision of health care services. Based on this fact the authors were motivated to investigate the attitudes towards ageism of geriatric experts in Germany and Austria. In the years 2006-2008 an empirical survey was undertaken. 376 experts in the field of geriatrics answered a questionnaire. They were asked about their attitudes towards ageism in general and their practical experiences concerning allocation decisions. Using the statistical method of SPSS, and especially a factor analysis, the scientists detected three different types of experts (clusters) concerning their attitudes and behaviors: In group 1 experts state that ageism is a matter of fact. They are strictly against it ("opposer"). They argue that medical treatment is independent of age and always useful. There are no possible savings based on the patients' age. Therefore, in their work they do not accept age limits. In contrary, they demand more time for the medical, psychological and social treatment, especially in palliative care settings. In group 2, the "realists" realize that age dependent provision of care is a rational need because of limited budgets in the health care sector. Therefore, they do accept an age limit. To their opinion it is reasonable. Realists demand for broad diagnostics in order to make better decisions. In group 3, experts purely deny the fact of ageism ("denier"). They argue that, independent of age, any possible treatment is provided. Everybody obtains the best possible care. Ageism is becoming more and more important in any society. The three groups mirror social reality. Transparency, discussions

and solutions about allocation decisions have to take place in any group of society (e. g. politicians, patients, medical experts, economists, managers) as everybody is personally affected with this important matter.

**PD6 687 "OLDER PEOPLE HAVE A LOT TO SAY ABOUT SEX AND SEXUALITY": ISSUES IN RESEARCHING SEXUALITY AND AGEING**  
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Introduction Engaging in research with older people around the issues of sexuality raises general concerns ranging from the belief that the sensitivity of the topic makes the research methodologically too difficult, through to a perception that sexuality and ageing are incompatible. It could be argued that these views are linked to a particular perception and construction of older people's sexuality that is influenced by ageism. Qualitative researchers in this field of study also experience discrimination through a lack of support and funding for their work. There is therefore a dearth of literature focusing on the issues and challenges raised by researching sexuality and ageing with only a few researchers exploring the issues in any depth. This qualitative study goes some way to addressing the gaps and discrimination in this area by focusing on the issues in researching sexuality with older people. Methods and materials A purposive sample of six older women and eight researchers, with an interest and experience respectively in the research area, were recruited to take part in individual interviews. The interview schedule was structured around seven key aspects of the research process which in turn made up the coding framework under which themes were developed using a thematic analysis (Braun and Clarke 2006). Results A range of themes were identified within the following aspects of the research process in relation to researching older people's sexuality, that of, level of importance, gaps in knowledge, influence of society's views of sexuality and ageing, language of sexuality, recruitment of participants, data collection methods, and the researcher's influence on the research process. Conclusion Undertaking research in this area is necessary and critical with the researcher having a pivotal role in countering any negative impact on the research process that may result from stereotypical views of sexuality and ageing.

**PD6 688 SOCIAL RISK AND FRAILTY IN LATER LIFE**  
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Introduction. Elderly people are de most expensive community for the National Health System. Prevention in Primary Care Health produces highest benefits. In this context Frailty appeared like one of de best index to evaluate community dwelling elders. Social Risk factors are less studied than others Frailty markers. Objectives: 1. to examine the prevalence of Social Risk factors. 2. To analyse relationship between Social Risk and others markers and demographic aspects. Methods and Materials. Cross sectional study through a survey carry out over a sample of elders at Guadalajara province(Spain) along de year 2002. The questionnaire contents social and clinical items and four evaluating scales: Folstein, Barthel, Yesavage and a specific Spanish social scale (five dimensions: social network to care, social support, participation, home facilities and incomes). Data base was analysed with logistic regression models (statistical significance p-value=0.05). Results. After elders loses (26.6%) a representative sample of 434 were studied (dwelling in rural communities, 56.7%, women, 51.4%, older age 85 years old, 12.7 %). The prevalence of Social Risk was 20.05%(95% CI,16.3-23.8). The distribution of this factors between eachother show significant difference in case of rural areas 65.5% (95% CI,56.5-74.6) age older 85, 34.3%(95% CI,26.3-42.4) and Dementia illness 71.4%(95%CI,48-95). When we analyse with Logistic Regression models only de age older 85, OR:3.1(95% CI,1.2-7.4) and Dementia, OR:11.3(95% CI,2-62.5) are explaining social risk in our communities. However it is not associated to depression, cognitive impairment, disability, polypharmacy, comorbidity and sex. Conclusions. Social risk appeared with a very large prevalence, like a independent factor only associated with age and Dementia. We need to take account this factor.

**PD6 689 PERSONHOOD FOR OLDER ADULTS RECEIVING NURSING CARE IN HOSPITAL: A CRITICAL REVIEW OF THE LITERATURE**  
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Introduction: As the Canadian population ages there will be increasing numbers of older people in the hospital who will require general and specialized nursing care. It is important to explore how nurses can best provide ethically sound care to older people while supporting physical and functional health in hospital settings. Ageism is a common occurrence in hospitals and affects the health of older adults. Personhood is an ethical concept reflecting the experience of being treated as a person in a social context that is not generally applied to older adults in hospital settings. In this paper I discuss the importance of studying the experience of personhood for older adults who are receiving nursing care in the hospital. Methodology: A critical systematic review of the current literature on personhood was conducted. Nursing and allied health literature was critically reviewed for how it can be applied to an older adult population by nurses working in hospitals. Findings:

Much of the research on personhood has been focused on the care of individuals with dementia or other forms of cognitive impairment and may not be directly generalizable to the older adult population. There are, however, important lessons to be learned from the literature on personhood in dementia care. Specifically, a conceptual framework which suggests research on personhood in dementia can be explored through three interconnected research domains can be a valuable way to explore personhood for hospitalized older adults. The three domains are: the subjective experience of the individual, the immediate interactional environment and the wider socio-cultural context. Conclusion: A framework developed to organize research on personhood in dementia care provides a foundation for a program of empirical research focused on the exploration of personhood in a general older adult population.

**PD6 690 COMPARATIVE STUDY OF THE HEALTH STATUS AND HEALTH CARE NETWORK OF OLDER PERSONS IN SOUTHERN TUNISIA (DOUZ) AND IN SWITZERLAND (GENEVA)**  
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The gradual settlement of the nomadic population is a feature of socio-cultural change experienced in most parts of Northern Africa Regions during the past 50 years. Nevertheless, the organization of family life and social interaction in daily life maintains many traditions of the nomads in the Sahara. In the traditional context, the older person has a key role, thus benefiting from a traditional health structure and social integration, which is often very remote from modern health care. Hence, the traditional health system used by the older person and national aging policies could be counter-efficient and not adapted to the culture of the specific generation of older persons in these areas recently settled. This study was initially developed to analyze the health status of the population as well as the formal and informal care networks of older persons settled in the past decades in Douz (Southern Tunisia). The objective of the study is to 1) give a clear picture of the health status and the health care networks (formal and informal) in the region, 2) to analyze not only this network, but also the access and interactions in it, 3) to identify the high risk health behavior and psycho-social ways of coping with the health (coping, sense of control, health belief system). The second objective was to conduct a comparative study among elderly in Geneva (Switzerland) and in Douz (Tunisia) to highlight the contrasts and similarities between the two contexts. This may attest or not the relevance of applying a public health population study model to another context. Our study was conducted from February to March 2003 with a sample of 104 persons aged 65 and over and their families in the district of Douz. A semi-structured questionnaire was used for all participants and a translator Arabic-French accompanied the interviewers; for comparability purpose, the questionnaire used stemmed from the population survey conducted in Geneva and in Valais funded by the Swiss National Research on Aging (1991-1999). Specific socio cultural and health aspects in Southern Tunisia were added to the original questionnaire. The statistical analysis was conducted with Epi Info. The main result shows significant differences between the older persons in Douz and in Geneva: a) the informal health care network is more dense and active in Douz than in Geneva, b) their health is significantly lower, but could reflect the fact that older people can and want to stay in their home longer, thanks to an intensive family care support which responds to the cultural norm rather than to the official policy formal care system. Many recommendations can be made, but the most important one is that implementing a formal standard care system with occidental hospitals and care systems can be challenged by traditional care. Preserving traditional family care benefits many stakeholders, not only does it maintain family and social cohesion but it can avoid the increasing costs caused by the development of formal care observed in Europe. A reflection on the importance to develop a culture-sensitive research approach in different settings is underlined, and calls for a carefully look at attempts to standardize care without an ethical framework respecting traditions and cultures.

**PD6 691 EVALUATION OF THE POPULATION PROJECTIONS FOR JAPANESE - THE LIFE EXPECTANCY MODEL BY USING THE MIXED WEIBULL MODEL**  
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Introduction In Japan, the National Institute of Population and Social Security Research (IPSS) announces population projections every five years based on the Population Census. We announced population projections in Japan using the mixed Weibull lifetime model in 2003. In 2006, the IPSS announced the 13th Population Projections for Japan. Based on this estimation by IPSS, we examined the accuracy of our estimation of future population. Methods and Materials The 13th Projections is based on the 2005 Population Census. Our population estimation is based on the 2000 Population Census and by making the life table based on the transition of death rates of elderly people (which are compared to wear out failure) from 1965 to 2000. In this research, the anticipated number of people aged 65 and older and those aged 75 and older in 2025 according to the 13th Projections and our estimation were compared. The comparison was made simply in terms of the number of

elderly people. The aging index was not considered in this research because it significantly fluctuates depending on the expected number of births. Results Estimated number of people aged 65 and older based on the Weibull model was 38.9 million, which was 7.09% more than the 13th Projections. We had also estimated the number of people aged 75 and above 9.22% more than the estimation by the IPSS. The number of men aged 65 and above was estimated 2.70% higher, and those aged 75 and above 4.93% higher. The number of women aged 65 and above was estimated 11.6% higher, and those aged 75 and above 15.6% higher. Conclusion According to our analysis based on the Weibull model, the lifetime extension of Japanese people has not slowed down. We would like to further make comparison with the 14th Projections by the IPSS (2012).

**PD6 692 ADVERSE DRUG REACTIONS IN HOSPITALISED ELDERLY PATIENTS: A PROSPECTIVE STUDY**

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Introduction Adverse Drug Reactions (ADRs) are an important problem resulting in admission or an increase in length of hospital stay and are clearly costly. The aim of this study was to assess the incidence of ADRs in elderly inpatients in a UK university teaching hospital. Method A prospective review was conducted between January to March 2007 in Brighton and Sussex University Hospital (BSUH), and repeated at the same period in 2008. The study population included elderly patients ( $\geq 65$  years) admitted to four wards. The patients were monitored daily for ADRs by a single observer through review of their notes until discharge or death. Suspected ADRs were validated by an independent reviewer. Results Six hundred and ninety patients were reviewed during the study period. The median age was 85 (interquartile range 81-89) years; 61% female. Eighty six patients [12.5% (95% CI 10-14.9)] had at least one ADR during admission. A total of 95 identified overall. The ADR occurred at a median of 5 days (IQR 3-10). Characteristics Patients without an ADRs Patients with an ADRs N 604 86 7 (5-10) 10 (7.8-13)\* $p$ Number of medications 11 (7-19) 16 (10-26)\* $p$ Length of Stay p< = Median (IQR) $p$ 0.000; Conclusion In the group studied almost one in eight inpatients experienced an ADR. Patients with ADR were on significantly more medications and had longer lengths of stay.

**PD6 693 AGEING IN RUSSIA AND UKRAINE: A COMPARATIVE ANALYSIS OF CURRENT STATE AND FUTURE TRENDS**

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 S. PIROZHKOVA

In Russia and Ukraine where since the collapse of the USSR in 1991, old people have experienced numerous shocks that have worsened their living conditions and health status ageing issues are highly important. In a globalizing world comparative studies present interest from both theoretical and practical point of view. The study aims at analyzing current state and future trends of ageing in Russia and Ukraine within European context. The study is based on censuses and vital statistics; materials of Council of Europe, Eurostat, UN DESA, Human Mortality Database (Max Plank Institute for Demographic Research) are used. Analysis of age structure changes has been made. To characterize the situation with ageing a number of conventional ageing indicators have been computed for the period 1989 – 2007. Future trends of ageing up to the year 2050 are studied based on probabilistic projections. Great increase in the proportion of the elderly and decrease in that of children in the post-war period take place in both countries. Ageing trajectories in Russia and Ukraine have been similar, values of considered ageing indicators for Ukraine being higher. Both countries are projected to follow monotonically decreasing trajectories. Ageing is expected to continue but increase in the proportions of the elderly will not be monotonous. Proportions of the elderly for Russia/Ukraine and developed European countries are converging, while life expectancies at older ages behave differently - for Russia/Ukraine they are much lower. Substantial rural/urban and male/female differences have been found, for Russia/Ukraine gender disbalance being more marked than that for developed European countries. Results obtained may contribute to better understanding of ageing regularities not only in Russia/Ukraine but in the whole Europe. Showing similarities and diversities in ageing dynamics in Russia and Ukraine, the study results may be useful in sharing positive experience in population policy forming.

**PD6 694 RURAL-URBAN DIFFERENCES IN REPORTED HEALTH STATUS BY OLDER PERSONS IN KOREA**

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The objectives of this research are to explore residential disparities between rural and urban areas in self-rated health status of older persons that aged 65 years and over in Korea. Despite the rapid increase of older population, a national profile on the health status of old individuals remains far deficient in Korea. Data for the analysis are from the public-use data files developed as part of the 2008 Elderly Living Condition Survey data base, conducted by the Korean Institute of Health and Social Affairs. The data sets contain information for 9,355 households and 2,535 older persons aged 65 and over using random

stratified cluster. To answer whether it is true that the elderly people living in rural areas are disadvantaged in self-rated health status, simple frequency counts, proportions, and chi-square tests have been used. Socio-demographic characteristics and self-rated health status including chronic illnesses, ADLs, IADLs, and MMSE scores have been analyzed by area of residence. The results show that there is a significant variability in the characteristics of older persons that aged 65 years and over by area of residence. Compared to their urban counterparts, 1) in terms of socio-demographic factors, those elders residing in rural areas are older, and have a higher proportion of spouse households, lower education levels, and lower monthly household income; and 2) in terms of self-rated health status, they are better situated in terms of chronic illnesses but worse situated in terms of ADLs, IADLs, and MMSE scores. Study findings that there are significant rural-urban differences in self-rate health status of older persons suggest that it is vital for planner and providers to take residential disparities into account when designing and formulating community-based long-term care service programs.

**PD6 695 PROMOTING MULTI- AND INTERDISCIPLINARY AGEING RESEARCH IN THE UNITED KINGDOM**  
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**Introduction:** Despite the growing awareness of the value of discipline spanning research on ageing, many common but significant barriers to interdisciplinary collaboration persist. In view of these barriers, government and other scientific funding bodies worldwide are actively involved in establishing the methods and means to promote cross-disciplinary cooperation in the field. In the United Kingdom, since the late 1990s, national Research Councils with key interests in ageing and older people have been actively pursuing the development of programmes of research which feature multi- and interdisciplinarity. **Methods and materials:** This presentation reviews key developments in the promotion of multidisciplinary science on ageing in the United Kingdom including Research Council programmes and other strategic initiatives. It details the approach to multi- and interdisciplinary research developed by the authors in the National Collaboration on Ageing Research, a partnership among four of the Research Councils to stimulate cross-disciplinary collaboration through working with scientists, funding bodies, and research end users. The presentation highlights how this approach is being pursued in the New Dynamics of Ageing (NDA) Programme (2005-2012), the largest programme of multidisciplinary ageing research to date (£20 million) in the United Kingdom which spans the social, medical, biological, and engineering sciences, and the arts and humanities. Examples of how cross-disciplinary working is being stimulated in the NDA are provided including the incubation of interdisciplinary research teams under the programme's Preparatory Networks scheme. **Results and conclusions:** This overview of some of the major programmatic developments in the promotion of multi- and interdisciplinary research in the United Kingdom identifies and discusses the rationale behind and key features of these efforts. As a successful innovation in providing infrastructural and intellectual support to scientists working across a broad range of disciplinary affiliations, the NDA Programme is offered as a potential model for other research funders.

**PD6 696 ESTIMATING POPULATION SIZE FOR MICRO MINORITY POPULATION GROUPS: ESTIMATING ELDERLY INTERCENSAL DENOMINATORS**  
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Measuring growth, change and health disparities among minority sub-populations in the United States is limited by the lack of reliable population estimates, particularly in terms of their elderly populations. The lack of baseline denominator information is unfortunate, as what were once considered small migrant groups have rapidly exerted a growing influence on the composition of the US population, particularly in the case Hispanic and Asian/Pacific Islander (API) groups. These demographic changes have significant implications for our understanding of the growth of the elderly populations in the US as labor force migration, late life family reunification and emigration to the country of origin all impact the accuracy of demographic estimates of population change. A grounded understanding of challenges to making estimates for sub-populations is essential as we increasingly recognize the role of internal heterogeneity within minority populations and wide variations in health outcomes, longevity and the need for public services within minority groups. Without denominator population estimates, we cannot accurately examine either the risks of the disease process or the potential cost of disease to the health care system. This paper presents a statistical approach to estimating adjusted growth projections that address the internal heterogeneity within minority populations in the United States. The analysis presented is an examination of API populations which face not only the impacts of migration on expected population size but also the effects of changes in the 2000 Census of Population which allowed people to self-identify race and ethnicity including designations of bi-racial or multi-racial classifications. We present a series of re-

weighted population estimates that identify the growth of the elderly API population between 1990 and 2000 from the perspective of the 1990 and 2000 definitions.

**PD6 697 THE ORGANIZATION AND USE OF SCALE DATA IN AGING RESEARCH: IMPROVING MULTIDISCIPLINARY RESEARCH OPPORTUNITIES**  
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The ongoing recognition of the importance of scales in aging research and analysis is well established. Many surveys that routinely collected basic variables on a variety of topics including health, and socioeconomic status also either employ or create scale measures how specific behaviors were outcomes. Established projects routinely collect scale information but the composition, application and interpretation of the constructed scales can vary wildly, depending upon their specific research focus. Recently, a growing interest in the variety of scales available, their protocols, and their application in multidisciplinary research reflects the growing acceptance of this approach within mainstream social survey research. The growth in both the collection of information necessary for the construction of scales and the development of analytic models that incorporate a variety of scales in research frameworks argues that our science will benefit only if we can achieve a systematic understanding of how scales are collected across disciplines, how they are organized and how results from scales are interpreted. With greater multidisciplinary understanding we can more broadly introduce this kind of information into our research models. This poster presents an overview of recent work to catalog and systematically review the use of scales in social research at the NACDA Program on Aging. The poster reviews on how various types of scales on the aging lifecourse are collected and how different disciplines use different strategies in survey design and the creation of questionnaires and how this impacts collection protocols. The poster also introduces a summary of potential extensions of these various approaches to scaling information to social based research and how overcoming differences in technical language will overcome barriers to collaborative research between social and physical science practitioners.

**PD6 698 IMPACT OF WALKING SPEED ON THE ONSET OF FUNCTIONAL DEPENDENCE AND MEDICAL AND CARE COSTS IN JAPANESE OLDER ADULTS**  
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**Introduction:** This study examined the impact of walking speed on the onset of functional dependence and medical and long-term care expenditures in Japanese older adults. **Methods and materials:** The subjects were those aged  $\geq 70$  years ( $n=512$ ) who participated in the baseline health-check (2002) in Kusatsu, Gunma, Japan. We followed up 406 individuals (79.3%) who did not receive any services under the long-term care insurance at that time until the end of October 2005 (3.3 year-period). We classified the subjects into three groups according to the baseline walking speed (m/min): low, middle and high walking speed groups,  $<60.0$  m/min ( $n=99$ ),  $60.0\text{-}81.1$  m/min ( $n=212$ ) and  $\geq 81.1$  m/min ( $n=95$ ). We identified the onset of functional dependence during the course, defined as the state at which a person started to receive any services under the long-term care insurance or died. We compared the period to the onset of functional dependence, the accumulated medical and long-term care expenditures over the follow-up period among the three walking speed groups. The Cox-proportional hazard models were used to examine the independent association between baseline walking speed and the onset of functional dependence with adjustment of potential key confounders (sex, age, important medical conditions, and self-rated health). **Results:** 41 subjects (10.1%) exhibited the onset of functional dependence. The adjusted hazard ratio (HR) against the onset of functional dependence was 2.07 (95% CI: 1.01-4.21) for the low walking speed group compared with the middle walking speed group. The accumulated medical and long-term care expenditures per capita per month were also higher in the low walking speed group compared with other two groups. **Conclusion:** Walking speed was not only a good predictor for the onset of functional dependence in the Japanese non-disabled older adults but had a strong impact on the future medical and long-term care expenditures.

**PD6 699 A STUDY ON THE CONSUMPTION EXPENDITURE DEPENDING ON RETIRING AGE**  
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Aging process of population alters the size and pattern of consumption by individual families and it is imperative that consumer's expenditure should be well adjusted. It is also very important to understand the proper level of consumption varied according to the time of retirement since the involuntary retirement is increasing since the financial crisis in 1998. Therefore this study will prove and analyze the consumer's expenditure by categorizing the retiree into early retirement(under 55 years of age), regular retirement(56-65), delayed retirement(over 66 years of age) and comparing the consumption. In order to do this, Korea Labor Institute conducted technical statistics, frequency analysis and

ANOVA on 268 retired families out of object families of 6th edition of Korea Labor and Income Panel Study to understand the structure of consumption and verified the difference of groups depending on the time of retirement. According to the result of the study, it was revealed that there was a big difference of expenditure according to the time of retirement. For the total amount of expenditure, the early retired family spent 15,510,000 won, Regular retired families spent 11,370,000 won and the expenditure of late retirement family was 669,000 won which was less than half the amount spent by early retirement families. The total expenditure compared to the total income is 83.6 % for early retired families, 59.6% for regular retirement and 77.1% for delayed retirement families, which showed that the expenditure of early retirement families are the largest. Through this study, we obtained the results which supports the preceding studies showing that the time of retirement greatly influences the consumption. The result of this study can be used as basic materials to design retirement on the basis of age.

#### **PD6 700 THE COSTS OF AGEING - A STRUCTURED STUDY ANALYSIS**

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The subject "costs of ageing" is becoming more and more important as ageing is a global phenomenon. Health care costs of ageing societies rise continuously and budgets are limited. Experts in the sector have to take allocation decisions. Therefore, they have to get insights about the future development of the costs of ageing. In order to get deeper insight one has to understand common theoretical approaches in this field. There exist three main theories: the theory of "expansion of morbidity" [Gruenberg 1977], the theory of "compression of morbidity" [Fries 1980] and the theory of "dynamic equilibrium" [Manton 1982]. The scientists surveyed 39 studies published between 1993-2008, detected by the use of databases (DIMDI, MEDLINE, NCBI, PUBMED, Metager, Google Scholar and EbscoHost). The studies were analyzed and structured by criteria such as theoretical approach, impact of costs, considered health care sector, country, database, duration of investigation, size of sample, age groups, results, and limitations. It turned out that there does not exist "one best way" of theoretical explanation. In contrary, each theory was supported by the different studies. Earlier work and studies was mainly undertaken in the USA, but later on scientists all over the world scientists undertook research in this field. The origin of data often is based on availability. The sizes of the samples show broad variety. The concerned age groups differ and the studies vary concerning their impact of costs and sectors. In order to get best results about the subject "costs of ageing", it is necessary to investigate a broad study. The design has to concern environmental factors. It must be based on independent data and has to be representative and longitudinal. It has to include all sectors of health care. Such a profound study could set a milestone for future decisions in the health care sector.

#### **PD6 701 ECONOMIC RATIONALITY AND MANAGEMENT STRATEGIES OF LONG-TERM CARE SUPPLIERS: A STUDY ON THE FRENCH NURSING HOME MARKET**

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Introduction The long-term care (LTC) sector is expected to represent a major interest in view of the further demographic development, putting a stress on LTC provisions. Nevertheless, if LTC research in economics constitutes a broad field to explore, it remains poor in France, especially for microeconomic studies. Methods and materials On one hand, this paper aims to present the intermediate results of my PhD thesis. It focuses on a review of the literature about microeconomics of long-term care supply. On the other hand, the study purposes to use statistical and econometric treatments of a survey dataset on nursing institutions providing LTC (skilled nursing facilities). Results The literature review seems to indicate that ownership (for-profit, non-profit or state-owned) has some influence on the structure and the performance of nursing homes, even if results are often contradictory. About the characteristics of LTC market in France, it is still not consolidated. The perspectives of the fast growth of demand for nursing home services seem to have an impact on the development of for-profit supply. As a result, new strategies appear such a movement of concentration due to the financial burden imposed by the compliance with growing security and technical standards. Among other factors, these standards contribute to improve quality. Nevertheless, they are also source of costs inflation since the literature points out that a higher quality care implies a higher price to users. As a consequence, the accessibility of LTC is reduced and increasingly submitted to mechanisms of selection of patients, which mainly bear their own LTC charges because of the current price-setting and public financing schemes. Conclusion The knowledge of the french nursing home industry must be improved, as well as researches about the determining factors of consumers' choices (in an environment where information asymmetry exist). Indeed, we still know very little about the rationality and the economic strategies of the agents of the field. This work is a contribution to partially fill this gap.

#### **PD6 702 DEVELOPMENT OF A FINANCIAL MODEL FOR GERIATRIC DAY HOSPITALS (GDH).**

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Background: In order with the growing number of frail elderly, geriatric day hospitals (GDH) are developed all over the world. However financial models taking into account the geriatric profile are rare. This study wants to test a financial model taking into account the patient profile and level of activity of the GDH. Material and methods: From October 1 till December 31st 2006, all patients admitted in 45 belgian GDH were registered (n=2750) for patient demographics, performed activities (diagnosis, assessment, therapy, revalidation) and available assessment instruments. To find paired inpatients in acute beds, an administrative database which contains clinical and National Health Insurance billed data (FY 2003)was examined. Therefore, a group of patients whose hospitalization could have been avoided partially or totally was collected out the FY 2003, comparing their profiles with those of the GDH population in 2006. Results: to build the financing model, 3 components were implemented: (i) a fee-for-services which will only occur for the financing of the geriatrician, (ii) an admission fee which is an hospital-specific lump sum allocated for each admission in acute bed by the federal authorities, and (iii) a fee-per-pathology. The basic amount of this last package corresponds to the per diem fee used in classical hospitalization. As the package by admission, it is specific to the hospital and does not depend on the pathology. The pathology-related dimension is obtained by multiplying this package by the average number of days when similar patient stays in classic hospitalization. Conclusion: The final model seems equitable; it advantages the GDH which demonstrates a justified activity, with a suitable volume of patients (number of admissions per day), and a heavy case mix. In the proposed framework the budget, actually assigned in the pilot project, for the implementation of the GDH, is globally respected.

#### **PD6 703 A MARKOV MODEL OF THE COST EFFECTIVENESS OF DISEASE MANAGEMENT PROGRAMS IN ALZHEIMER'S DISEASE**

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Alzheimer's Disease (AD) is a primary degenerative disease of the brain, characterized by cognitive and physical decline and an overall loss of independence. In France, nearly 860 000 individuals were estimated to have AD in 2004. According to the demographics' studies, AD could affect 2,16 million of elderly in 2040. The cost of AD is estimated at €9,9 billion and the health care expenditures will continue to rise, because there is no method to prevent or cure AD. The patients require long term care, associating with medical problems, social, psychological and financial problems. They need an active participation of the caregivers and a therapeutic education. A lot of professionals must take care of the patient : general practitioner, nurse, cleaning woman, ... Nevertheless, this variety of caregivers doesn't allow an optimal coordination of the health care. A possible solution is the development of the Disease Management (DM). These programs consist in bringing a support for the patient by bringing them informations relatives to their pathologies and advices on the adaptation of their way of life. Trials have shown the clinical effectiveness of the DM programs with different results : better quality of life for the caregiver, institutionalization delayed, fewer behavioural disturbances,...Despite trials showing effectiveness of the trials, there has been no formal published cost-effectiveness analysis of AD DM programs. In this study, we compare the expected costs and outcomes for a cohort of patient with AD who are (a) selected or (b) not selected for a preventive AD DM program. We constructs a Markov state-transition model using the Paquid study data for AD patient progression. Outcomes estimates includes the incremental cost-effectiveness ratio and cost per quality-adjusted Life-years gained. We hypothesizes that the preventive AD Disease Management program provides saving costs for patients.

#### **PD6 704 THE COST OF ILLNESS AND BURDEN OF DEMENTIA DISORDERS IN EUROPE**

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Introduction The EuroCoDe (European Collaboration on Dementia) project from Alzheimer Europe convened an international group of economists to estimate cost of illness and burden of dementia disorders in the 27 European Union countries (EU27). Materials and methods A literature review was conducted for papers reporting cost of care for people with diagnosed dementia or possible/probable Alzheimer's disease; Two approaches were used: a bottom-up approach allowing stratification on disease severity and different cost types, and top-down cost of illness studies. Prevalence figures used for cost of illness estimates (7.2 million people with dementia in EU27) were based on a new EuroCoDe meta-analysis combined with population statistics from the United Nations. European cost model was built using 14 papers where both direct and indirect costs could be identified. For countries where no cost-of-illness figures were available, imputation was used, based on 4 identified care patterns: Northern (mainly formal care); Western (mix between formal and informal care), Southern and Eastern (mainly informal care).

Imputation figures were also adjusted for differences in gross domestic product per person between countries. Results Estimated total cost of illness of dementia disorders in EU27 in 2008 was 160 billion euros (1.3% of GDP), of which 71.7 billion (45%) were direct costs and 88.6 billion (55%) indirect costs. Annual costs per person with dementia were 22,194 €, of which 9,925 € in direct costs and 12,270 € in informal care. Burden of dementia disorders was 2.12 million DALYs (disability-adjusted life years) in EU27, or 441 DALYs/100,000 persons. Burden of dementia disorders is higher than burden of diabetes (1.29 million DALYs and 268 DALYs/100,000 persons in EU27). Conclusion Cost and burden of dementia disorders are high. Economic database for dementia is still small, although expanding. Methodology for economic data collection should be improved, and more data should be collected in Eastern Europe.

**PD6 705 BARRIERS TO CAREGIVER EDUCATION IN ALZHEIMER'S DISEASE**

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Background: Caregiver (CG) education is a major component for the management of Alzheimer's disease (AD), but many CG do not participate in educational programs, even when those are available. Objective: To understand why CG of AD patients did not participate to an educational program that has been proposed to them. Methods: During one year, all CG of AD patients attending to one clinic were proposed to participate in a free educational program. This included 4 three-hour group-sessions and 3 one-hour individual sessions, distributed for 2 months. An interviewer not involved in educational programs gave a phone call to CG who declined participation and ask to answer to 8 predefined questions designed to understand why they declined it. CG were asked to provide open comments. Results: Among the 28 CG called, 22 responded, 8 males and 14 females, including 8 spouses and 14 children or relatives. 8 CG lived with the AD patient. Three CG had forgotten the proposal to participate; 11 declined participation because they thought that care to the patient is more important than care to CG; 6 preferred to delay education until conditions became difficult. Seven thought they had enough information about AD; 5 did not want to get more information. Nine had difficulties to leave their patient alone to attend the program. Six were mistrustful of healthcare professionals. Eight felt that they were not sufficiently incited to participate by healthcare professionals. All CG outlined 2 reasons or more for declining participation (mean 4.0 +/- 1.6 reasons). CG comments showed that 10 CG had strong difficulties to cope, and 5 other underscore difficulties related to the situation. Conclusion: CG declined participation in educational program because of multiple and miscellaneous reasons. Understanding them might help improve their involvement in educational programs.

**PD6 706 AGING IN CONTEMPORARITY: TEACHING COMPUTER SKILLS FOR ELDERLY PEOPLE**

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The spread of technology among the society occurs at the same time Brazilian population is getting older. So, there is a demand for living the next years with a high quality of life. With the purpose to understand if there is a real contribution of computer science learning in healthy ageing, this study analyzed why some old people look for computer science lessons, interpreting the existence of multiple reasons in this apprenticeship process. The study counted with 20 elderly people who were 60 or more years old and that were studying or had already studied computer science. A socio-demographic form, organized for the study, the BDI-II and a semi-structured questionnaire were applied. The obtained data were analyzed by quantitative and qualitative methodologies, using Excel spreadsheet and Bardin's content analysis. It was verified a high socio-economic level, with a great incidence of female participants (75%). The most part of the sample (45%) were in the range between 71 and 80 years old and, in this range, were married, having operated computers for more than 3 years. The participants expressed how they have changed their behavior towards computers, the acquisition of self-efficacy and the importance of the relationship between teacher and learner. They also have shown a will to keep themselves inserted in the contemporary world. Besides, they related the pleasure of learning and the need of effectiveness in relationships. The teacher is a transformation agent who must have aging and computer knowledge, as well as being perspicacious, emphatic and patient, adapting the teaching to the rhythm and interest of each student. Finally, it was concluded that the computer, with all its possibilities, both in terms of knowledge, as of overcoming and reporting, may be another tool of helplessness to keep the person active and, therefore, aging in a healthy way.

**PD6 707 SENIOR-FRIENDLY COMPUTER INTERFACE TO ENHANCE LEARNING AND INDEPENDENT USE OF EMAIL AMONG SENIORS**

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Introduction: Many senior adults have trouble or anxiety when learning to use the computer. Computer technology is unfamiliar to many of the elder generation, making it harder to learn tasks such as writing and reading email. In addition, vision, hearing and/or motor impairments can cause visual displays and audio cues to be misinterpreted and make the keyboard and mouse difficult, if not impossible, to use. To alleviate age-related computer difficulties and to encourage the use of computers among seniors, SoftShell Computers™ has designed a senior-friendly computer interface. Featuring large font and buttons, narrated user prompts, simplified instructions, touch-screen and voice-recording, this novel computer interface is intended to make email technology more accessible for seniors. Methods: Elderly subjects (78.9yrs+/-8.1) with little to no computer experience, were taught to login, read and write email on two interfaces: (1) Windows Live Hotmail® and (2) SoftShell Computers™. The time taken in seconds(s) and the number of errors made for each condition were recorded. A paired t-test, with significance set at 5%, was used for all comparisons. A subjective pre and post-study questionnaire assessed user confidence. Results: For the login task, users performed 78% faster using SoftShell™ (21.5s+/-6.3) versus Windows® (96.2s+/-61.3)( $p<0.005$ ). For writing an email, users performed 73% faster using SoftShell™ (58.7s+/-27.8) versus Windows® (216.2s+/-147.7) ( $p<0.01$ ). No difference was found for reading emails ( $p=0.197$ ) nor for number of errors made ( $p=0.12$ ). On average, SoftShell™ received a higher ranking based on a confidence scale of 1-5 (1=least confident, 5=most confident), although not significantly. Six of ten subjects preferred to use SoftShell™; the remaining four were comfortable using either system. Conclusion: These early results suggest that email is easier to learn and use with the SoftShell Computers™ interface. The SoftShell™ interface can increase the confidence level of elder users in using computer technology.

**PD6 708 CHINESE DIABETIC PATIENTS' COMMUNICATIVE HEALTH LITERACY: VIEWS FROM HEALTH PROFESSIONALS**

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Introduction: Communicative health literacy, the ability to extract health information and derive meaning through communications, has been a concern in the field of health promotion. Little is known about the communication between diabetic patients and health professionals in Chinese society. This study aims to portray how doctors and nurses view Chinese older adults' ability and barriers to retrieve health information in clinical settings. Methods and materials: This qualitative study comprised of two focus groups (one for 6 nurses and the other for 5 doctors) which were performed in November/December 2008. Interviews were semi-structured and guiding questions were used to facilitate discussions. Each interview lasted for one and a half hour. All the interviews were carried out in Cantonese and audio-taped. The content was transcribed verbatim and then coded by two independent researchers. Result: Doctors and nurses perceived that most of the diabetic patients were capable to obtain and understand essential health information through individual or group counseling. They welcomed patients to ask questions and agreed that interactive communication was crucial. However, external factors (such as time constraint, manpower issue, confusion due to massive information from the Internet) and personal factors (such as language, low literacy level, Chinese cultural belief and mood problems) may hinder individuals' ability to communicate better with health professionals. Different strategies (such as "teach back" technique, authoritative figures, pictures or models, rapport building) were used to enhance communication. Conclusion: These findings encourage clinical practitioners to take a closer look to the issues and barriers in communicative health literacy. The current study is of significant importance to contribute to health literacy arena with Chinese culture and with information about people with diabetes mellitus.

**PD6 709 NATIONAL INITIATIVE FOR THE CARE OF THE ELDERLY (NICE): INTERNATIONAL NETWORKING AND KNOWLEDGE TRANSFER TO IMPROVE THE CARE OF OLDER ADULTS**

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Introduction: Canada, like many other countries, faces an aging population and significant challenges in meeting its needs, including a gap between evidence and practice and a dire shortage of professionals who can provide specialized care to older adults. The National Initiative for the Care of the Elderly (NICE) is a Canada-based international knowledge transfer network of researchers, practitioners, students and seniors dedicated to addressing these challenges. The network focuses on (1) moving research into practice and (2) improving education and training for students and practitioners in the field of aging. Methods: NICE has over 700 national and international members and institutional partners.

NICE operates through interdisciplinary "Theme Teams" and Committees in specific areas of elder care. The teams use evidence-based research to develop interdisciplinary, team-based tools which are disseminated through professional development initiatives. NICE Committees develop interdisciplinary resources to lobby for curricula changes; improve enrolment in aging-specific programs and careers; and promote professional development. Results: NICE "Theme Teams" have developed and disseminated numerous tools, aimed at practitioners, seniors, and seniors' friends, families and caregivers. NICE Committees have developed a compendium of core interdisciplinary competencies in geriatric care as well as a database of key teaching resources available online. NICE administers a Student Mentorship Program to attract and retain students to the field. Our international partners facilitate a mutually beneficial exchange of knowledge. Conclusion: NICE uses an innovative model of networking and knowledge transfer to improve the delivery of care to older adults. Networking and knowledge transfer is essential to ensure that (1) knowledge creators and knowledge users collaborate to create resources which respond to identified needs; (2) researchers and practitioners are aware of the work of their colleagues across the globe; and (3) rigorous research is put to practical use, to improve quality of care and quality of life for older adults.

**PD6 710 EXPECTATIONS OF PROFESSIONAL CARERS FOR ELDERLIES ABOUT TRAINING ON ALZHEIMER'S DISEASE IN THE HEALTHCARENETHVARSITY PROJECT.**

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Introduction : The early and accurate diagnosis of Alzheimer's disease (AD) is essential for the best disease management. Because nurses, social workers and care assistants are daily in contact with elderlies, it is important to improve their ability to recognize early signs of illness. In the frame of the HealthCareNetVarsity (HCNV) European project cofunded by the European Commission, an innovative blended learning program (eLearning combined with face-to-face sessions) was designed to provide the competencies to better understand and recognize the dementia but also to better act. Expectations about contents and training methods were assessed before its development. Methods: A questionnaire for needs analysis was distributed to a panel of nurses, social workers and carers working with elderlies in Spain and France. Results: Respondents were 218 individuals (121 French - 97 Spanish) mainly nurses, social workers and home-care assistants. Demographic data were similar in the two groups. Only 38% of the French group and 47% of the Spanish one have attended a course about AD. Among them, 65% of the French group and 78% of the Spanish one, expected further training to improve their knowledge or skills. Lack of time and cost were the main reasons for not following previous courses. Concerning training methods, 38% of French and 41% of Spanish respondents preferred eLearning rather than face-to-face and paper-based training sessions. In Spain all those (whereas 75.7% in France) who preferred eLearning have a higher level of education. Conclusions: In the two European countries the majority of professionals working with elderlies received a limited specialised training about dementia. New technologies such as eLearning (on-line courses, collaborative platform, multimedia contents, virtual classrooms...) could bring a solution to enhance quickly the knowledge of health care professionals. Input of eLearning methods has to be evaluated in target groups based on educational level.

**PD6 711 DIGITAL INCLUSION IN LATER LIFE: MOTIVATION AND OUTCOME OF COMPUTER CURSES IN SOUTH-BRAZIL**

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Introduction The contemporary societies are marked by changes in social structures and in technological innovation, creating new forms of exclusion, especially for older adults. In this situation, processes of digital inclusion could provide new chances, despite the risk of also creating new dependencies. In this contradictory context, the paper aims to examine the reasons why adults and older adults attend courses of introduction to use the computer and what are the outcomes of such courses. Methods There are analyzed three different groups who participated in courses on digital inclusion within the last 7 years: workers of the metallurgical industry, general public over 45 years, and members of Senior groups. During the course, half-structured interviews with the participants were realized to access the reasons and the motivations of the participation. Several months after the course, the participants were contacted by telephone to see the actual utilization of the computer. Results The way, people come to realize computer courses, has a strong influence on the motivation: while the metal workers and the Senior groups showed stronger external motivation, both participated by invitation, or of the company or of the group coordinator, in the courses opened to the community appeared more internal and specific motivation: to communicate, to be independent, and for work. Several months after the course, most of the participants of the worker group and the Senior group didn't have used the computer since the course, while most of the group of general public continued using the computer. Conclusions Only realizing a computer course is certainly not sufficient to include adults and elderly in the digital world. Beside the motivation and the access, the most important

thing is that the utilization of a computer makes sense for the adults or elder adults to maintain the contact with the digital world.

**PD6 712 QUALITY OF LIFE IN NURSING CARE - APPLICATION OF APPRECIATIVE INQUIRY IN TEACHING PROJECTS**

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Introduction To present the impact of demographic changes is a major challenge in teaching students in sociology, social work and nursing. Media often concentrates on scandals in care homes and present a picture of old age which is characterised by bad health status and high care needs. How is life in old age in reality, especially if people are in need of care? How do people of high age define quality of life? What do they dream about and try to achieve? Methods and Materials In the seminar students got an insight in the structures of geriatric care in Germany as well as different aspect of quality of life. They were taught the principles of the method "Appreciative Inquiry". Ethical requirements from professional bodies were introduced and students had to transfer these issues on the project they were performing. The approach "Appreciative Inquiry" has been developed by David Cooperider. This method is a particular way of asking questions and envisioning the future that promotes positive relationships. Based on the goodness in a person it focusses on the positive of a situation or an organisation, and utilizes a four-stage process: - Discovery – Appreciating what gives life - Dreaming – Envisioning what might be - Designing – Determining what will be - Delivery – Planning what will be (Reed, Jan: Appreciative Inquiry, 2007) Today, Appreciative Inquiry is mainly used in organisational development. The approach supports a system's capacity for collaboration and change. However, Jan Reed proposes also (as it was done in the start) to apply the method for research. In an international research project on »Managing Well-being in Old Age (people aged 65plus) – Appreciative Inquiry as Research method in the UK, Australia, Germany and South Africa« funded by Northumbria University in England, the method proved to achieve interesting results on factors attributed to well-being. The idea came up to use Appreciative Inquiry also in a setting where care needs were more advanced and quality of life factors probably slightly different to those living independently. Students developed in teams a research approach interviewing: - Elder people in different living settings (at home, flat (house)-sharing communities, care homes) - care staff - persons in the entertainment business offering services in care homes. Developed questions focussed on - the understanding of what means quality of life for the person interviewed - how does he or she experience quality of life or how can he or she contribute to quality of life of an elder person - to dream what could be possible in the best of all worlds and - steps to be done to achieve the dream. Students interviewed between three to five persons, recorded the interviews, transcribed and analysed them. Results First results indicate that "Appreciative Inquiry" works well with care staff and people still having enough perceived time to transpose future dreams. The approach might be challenging to apply in care home settings. However, there seems to be a variety of factors determining quality of life and sometimes interesting ways to achieve them. Conclusion The presentation will give an insight in the educational structure of the course, acceptance of the method by the students and shows by the means of examples what kind of results can be achieved.

**PD6 713 ATTITUDES OF MEDICAL STUDENTS TOWARDS OLDER PEOPLE AND CARING FOR OLDER PATIENTS**

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Introduction In the coming decades, substantial growth is predicted in the proportion of the population aged over 65. It is therefore important that all medical practitioners who will treat older people have an understanding and interest in the welfare of this group. Today, almost all medical schools in the United Kingdom have introduced Geriatric Medicine into their undergraduate curriculum, but the breadth and depth of these programmes vary. The aim of this study was to explore the attitudes of final year medical students in our hospital towards older people and caring for older patients and to identify factors that might influence their interest in geriatric medicine. Methods and Materials Participants in this study were final year medical students from the University of Southampton based at our District General Hospital between 20th February and 3rd May 2006. We used a combination of quantitative and qualitative methods for our study: a questionnaire based on a validated Geriatrics Attitudes Scale (GAS) followed by a Focus Group. Results 11 students completed the questionnaire (Male/Female: 4/7). The average age of the students was 23 years. 9/11 stated that they had had previous clinical attachment in geriatric medicine in their 3rd and/or 5th year of medical school. Scores from the GAS indicated that participants had a positive attitude towards older people (mean score 3.76, standard deviation = 0.40). The discussions in the focus group demonstrated that the students had a reasonable understanding of geriatric medicine as a specialty and its important aspects. However they felt that the complex and chronic nature of diseases of old age make geriatrics less rewarding. Conclusion This study showed that medical students had moderately positive attitudes towards older adults and relatively low interest in

geriatric medicine. The future challenge is how we could make caring for older patients more appealing.

**PD6 714 KNOWLEDGE OF GERIATRIC MEDICINE BEFORE AND AFTER A CLINICAL GERIATRIC MEDICINE COURSE**

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**Introduction:** The majority of doctors will provide health care to older people. Graduating medical students must achieve the necessary competencies required to provide health care to older people. This paper describes the performance of 5th year medical students in multiple choice question (MCQ) examinations before and after Geriatric Medicine course. **Methods and Materials:** In 2008, 51 students (<50% 5th year cohort) received 2.5 week geriatric medicine teaching at the Queen Elizabeth Hospital, University of Adelaide. A 30-question MCQ test was administered at the commencement of the course. This included 18 questions from the validated UCLA geriatric medicine knowledge test and 12 questions taken from the American Geriatric Society Case-Based Geriatric Review (AGS). On the last day of the course, a 45-question MCQ test (including 30 repeated questions) was administered. **Results:** There was a statistically significant improvement in the MCQ scores from a mean of 62(SD 10.4) to 75.2(SD 7.9)% [p<0.001]. The total mean scores for the UCLA test improved from 65(SD 10.4) to 73(SD 11.7) % [P<0.001]. The total mean scores for the AGS questions improved from 59.3(SD 17.0) to 78.3(SD 12.1) % [P<0.001]. Post course, students scored equally well in the new questions, the validated UCLA test and the AGS questions (75.4 + 11.4 vs. 73 + 11.7 vs. 78.1 + 12.1). **Conclusion:** Students were passing (score 50% and above) the MCQ prior to the 2.5 week course supporting the concept of vertical integration of the geriatric medicine syllabus within the medical school curriculum. This paper confirms that a dedicated undergraduate geriatric medicine clinical teaching block can further increase students' knowledge in Geriatric Medicine. It remains to be determined if students have achieved desired competencies and if this knowledge is retained in subsequent years.

**PD6 715 EDUCATION FOR INVOLVEMENT: INNOVATIVE APPROACHES TO OLDER PEOPLE'S INVOLVEMENT IN SOCIAL CARE RESEARCH**

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**Introduction** Older people are frequently asked for their views of the services they use and their involvement is increasingly required in research. Such involvement calls for researchers who have skills in undertaking research with 'user groups' and older people, as service users, who have skills in working with researchers. Though the two roles are not necessarily mutually exclusive, it can sometimes be difficult for researchers and service users to develop skills in working together, not least because of the widespread exclusion of service users from the academy. This paper describes and assesses a new course has been developed at Sheffield University to prepare students for roles which support service user involvement in research. **Methods** The course - Researching Together - is underpinned by the principle that we all - tutors, undergraduates and service users - have much to learn from each other about how to do research together. It is based on enquiry-based learning approaches which both emulate traditional research encounters and challenge conventional notions of research and knowledge production. In 2007, the course involved both final year undergraduates ('long course students') and service users ('short course students'), including older people, as students in the same classroom. It was evaluated through reflexive presentations as well as independently through questionnaires and group discussions with students. **Results and Conclusions** The paper demonstrates the importance of enquiry-based exercises, including examples of group-based and simulated research encounters, to collaborative learning and research work. It also shows how such approaches raise questions about knowledge which comes from older people's experience as 'service users' and its relationship to ('expert') knowledge generated by more traditional approaches to academic research. The emergence of 'access' as a key theme of the course indicates the crucial need to develop inclusive educational practices in close association with those in marginalised groups.

**PD6 716 TRAINING PROGRAM DEVELOPMENT FOR NURSES OF HOSPITALIZED ELDERLY PATIENTS IN JAPAN**

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**Introduction** In Japan, the number of elderly people who need care is increasing. As a result, there is a demand for nurses with the related specialities and skills in general hospitals. The purpose of this study was to develop a training program for nurses who care for hospitalized elderly patients. The goal of the program developed by this study was to aid elderly patients in living more autonomously. **Methods and materials** The study subjects were nurses working in the same institution and in the same ward. The data were collected through focus group interviews and observation of fieldwork. The data were collected by the Action-Research Method and analyzed by the KJ Method. The process of the study was as follows: 1) issues limiting the autonomy of elderly patients were ascertained, 2) a plan to

address these issues was drafted, 3) the plan was tested by the selected nurses, 4) the results were evaluated. Results Twenty-four nurses working at hospital participated in this study. All of them were female, with an average age of 40.7( $\pm 8.9$ ). The training program included four items as follows: 1) identifying issues limiting the autonomy of elderly patients, 2) developing a plan to address these issues, 3) discussion and lecture on the issues limiting elderly patients' autonomy were held, 4) the plan was tested and further developed together with the nurse. **Conclusion** In the final analysis, the developed program was found to be effective in allowing nurses to aid elderly patients in achieving greater autonomy. Consequently, this program can contribute to improvement of the quality of the care for the elderly who are hospitalized.

**PD6 717 EUROPEAN MASTER**

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**Introduction:** In Europe, there has grown an increasing awareness of the imbalance of study programs in gerontology in higher education. Meanwhile, the growing number of older adults, and especially people of 85 and over, leads to an increasing need for qualified gerontologists. Till 2003, training programs have been deficient, especially in Eastern Europe, and entry requirements varied widely as well as the curriculum contents and final terms of the educational programs (Meyer, 2003). **Method:** The European Master's program in Gerontology (EuMaG: [www.eumag.org](http://www.eumag.org)) started in September 2003 with support from the European Commission. The EuMaG is a modular, two-year part-time international training program about the ageing process and its societal implications. The multidisciplinary curriculum emphasizes international comparison, focusing on current European debates concerning - among other things - policy and care for the elderly. Members of several gerontology programs deliver the program across Europe, i.e. VU-University Amsterdam (The Netherlands), Institute of Gerontology of the University of Heidelberg (Germany), Keele University (United Kingdom), and the Université du Versailles Saint-Quentin-en-Yvelines in Paris (France). All institutes are involved in aging research, which provides ample opportunities to inform students about the latest research. Part of the standard curriculum is the Summer School, which is a collaborative endeavor of the VU-University Amsterdam and one of the partner universities of the larger European network. **Results:** Since the start of EuMaG in 2003, a mix of participants with respect to age, nationality and background has entered EuMaG. More than 200 students subscribed for (parts) of the EuMaG program. Students evaluate the EuMaG as highly informative and inspiring. **Conclusion:** EuMaG rectifies a deficiency in higher education in gerontology in Europe. The establishing and consolidation of a European network of new generation-gerontologists will be the next step of the EuMaG admin center.

**PD6 718 STUDENTS KNOWLEDGE RELATED TO TEMPOROMANDIBULAR DISORDERS FROM THE VIEW OF GERODONTOLOGY**

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**Introduction.** The purpose of this study is to evaluate undergraduate students' knowledge in Croatia about oral care of the elderly related to temporomandibular disorders (TMD). **Methods and materials.** The study carried out on 47 students of School of Dental Medicine University of Zagreb and 24 students of Department of Dental Medicine at School of Medicine, University of Rijeka. All students were in the last year of studying. The average age of all participants was 23.8 years, 29 were male and 42 female. The questionnaire consisted of general information, specific knowledge about oral care of the elderly, and level of relevant and current knowledge on TMDs (Likert's scale in which 0-3 means "disagree", 7-10 means "agree", and 4-6 means neutral standpoint). Data were analyzed by chi-squared test or Fischer's exact test. **Results.** High level of positive answers was given by both groups of students about importance of the increasing proportion of old adults in general population and a close connection with oral health and dental specialties. Both groups of students were not sure that the prevalence of TMD decreased with age; they answered neutrally. Students from Rijeka showed better knowledge that psychological condition could have influence on treatment of TMD (p=0.039). However, students from Zagreb considered that only clicking or crepitus in TMJs is not an obligatory indication for treatment (p=0.006). 57.5% of students from Zagreb were unsatisfied with education level from the field of dental care of geriatric population in the dental curriculum, and 45.8% of students from Rijeka answered neutrally (p=0.005). **Conclusions.** Specific geriatric education is expected to be provided by dental schools and be a part of undergraduate curriculum. The level of participants' knowledge of the evaluated groups showed that it is important to improve the undergraduate dental teaching including knowledge about TMD.

**PD6 719 THE SCRIPT CONCORDANCE TEST AS A FORMATIVE ASSESSMENT TOOL IN GERIATRIC MEDICINE**

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Introduction Script concordance test (SCT) aims at evaluate knowledge organization, which represents an essential component of clinical competence. Clinical reasoning learning (CRL) is used in medicine schools to implement teaching and learning activities for the purpose of improving students' clinical reasoning skills. So far, no research has been done to compare students' knowledge improvement following an educational intervention in geriatric domains provided by CRL assessment, and moreover to have a quantification of this improvement by a SCT questionnaire. Method The objectives of this investigative study are to verify the students' knowledge improvement in a geriatric ward, of 8 students enrolled at the same time, by assessing SCT . At the beginning and at the end of their clerkship ,student had to assess a SCT including 42 questions divided in 14 items, that 11 senior geriatric experts have done before. Students, then, have to work up predetermined geriatric clinical problems, in relation with SCT assessment, and to produce, during the CRL assessment, think aloud protocols which were analysed using a grid. Results SCT scores obtained by experts were higher than those obtained by students at the both sessions ( $76.9 \pm 7.6$  vs  $65.4 \pm 12.2$ ;  $p < 0.05$  for the first session and  $76.9 \pm 7.6$  vs  $69.8 \pm 10$ ;  $p < 0.05$  for the second session). At the end of their training, all the students have shown an improvement of their SCT score by  $4.4 \pm 2.2$ ;  $p < 0.05$ , and an improvement in their CRL assessment ( $47.2 \pm 15.3$  vs  $56.25 \pm 15.4$ ,  $p < 0.05$ , respectively for the first and the second CRL session). Conclusion Elaboration of a geriatric SCT should be used for students evaluation. SCT provided at the beginning and reassess at the end of the clerkship could allow to distinguish students with clinical reasoning difficulties.

**PD6 720 NATIONAL PROJECT FOR EXCELLENCE IN GERIATRIC CARE EDUCATION-A COMPREHENSIVE, INNOVATIVE AND PRACTICAL PROGRAM FOR LEARNERS OF DIFFERENT LEVELS**

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According to the Taiwan census, the elderly population will approach 20% within the next 20 years. This enhances the need for skilled and experienced healthcare providers, in many health care settings, who can address and meet the needs of older people. Therefore, healthcare providers in Taiwan need to increase their work with the elderly. Gerontology is a multidisciplinary field. Invariably, the best research, training and service programs in gerontology emerge when professionals from a variety of disciplines are afforded the opportunity to work together, each contributing unique expertise while benefiting from the expertise of others. Therefore, With the financial aids from the Ministry of Education, Ministry of Interior and National Department of Health, Chung Shan Medical University (CSMU) established a National Project for Excellence in Geriatric Care Education (NPEGCE) which focuses on academic and practical experience for learners of undergraduate, graduate and postgraduate levels in understanding and working with the elderly. The philosophy of the curriculum design is "LOVE" (live, obligation, vitality, and Expertise). The NPEGCE consists of required and elective courses on gerontology/geriatrics through lecture, small group discussion with problem-based, practicum and participating research . The features of NPEGCE include: (1). to nurture students' ability for future job and career , (2). to emphasize the research ability on gerontology, (3). to set up a faculty team on geriatric education, (4). to establish a model of assessment on geriatric care education , (5). to strengthen the interaction and cooperation among academy, enterprise and official organizations, and (6). to exploit the opportunity on international cooperation. The NPEGCE is the first Geriatric program in Taiwan. Since the NPEGCE was well received by students and seemed to encourage them to be more nurturing towards the elderly, it can be regarded as a catalyst for better care for the elderly in the future.

**PD6 721 SEXUALITY AND AGEING WITH DEPENDENCE**

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Males who experience an Encephalic Vascular Accident (EVA) may develop sexual disorders in their relationship with their caregiving spouses or steady partners. Our study sought to identify and qualify the level of sexual dysfunction in ageing males who have suffered an EVA by analyzing their relationship with their dual-role sex partners from a personal, sociocultural, and economic perspective. Fifty EVA patients, 50 years old and over, were referred to us by four São Paulo hospitals in 2004. A semi-structured questionnaire was given to subjects at home to collect qualitative and quantitative data. 29 men and their sex partners were selected. The Descriptive Social Survey and the Golombok Rust Inventory of Sexual Satisfaction (GRISS) were applied. 40% of male respondents were aged 70-79, while 28% were aged 50-59. 60% of respondents were male, while 92% of the caregivers were female. 40% of these were aged 50-59. 87% of patients were married and their wives cared for them. 70% of patients had abandoned personally satisfying activities. 48% had an average monthly family income between US\$330.00 and US\$650.00. 57% of the couples mentioned that the EVA had a negative impact on their sexual arousal, while 14% of patients had not reported any sexual dysfunction, and 33% had become impotent. 71% of the wives had an active sexual life, while 37% experienced dyspareunia. Results showed that the quality of a couple's sexual life was directly proportional to the male patient's level of functional dependence. It was observed that the dual sex partner-

caregiver role may have an effect on the couple's relationship. Better-educated patients living in better economic conditions reported no sexual disturbance. The emotional bonds that existed before the EVA facilitated adjustment to the couple's new life situation. Those able to broaden their concept of sexuality seemed more sexually active.

**PD6 722 WHOQOL-BREF: THE CAREGIVER'S QUALITY OF LIFE FOLLOWING THE DEATH OF THE DEPENDENT ELDERLY BY STROKE**

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INTRODUCTION: 20% of male patients suffering from Encephalic Vascular Accident usually die within one month after the episode; 50% of survivors present permanent disability and require assistance; 30% present neurological deficit but remain independent. Caregivers are usually female spouses, daughters, daughters-in-law or sisters. Conducted in 2008, the study sought to identify demographic traits and verify caregivers' quality of life following the death of their dependent elderly patient. METHODS: The study focused on 7 female widows subjects of the research conducted in 2004 and 2005 by São Paulo Catholic University's Caregiver Epidemiology Research Group (50 researchers). A semi-structured questionnaire and a WHOQOL-bref survey containing 26 questions grouped together under the headings Physical, Psychological, Social Relations and Environment were applied. Interviews were conducted at the caregiver's home by two researchers. RESULTS: Age bracket: first interview between 44 and 84 yo, average 66.4 yo (+12.9) and second interview between 46 and 85 yo, average 64.7 yo (+13.1); Marital status: 5 widows and 2 married daughters; Education: 3 illiterate women at first interview and one at second interview. At first interview, there was one caregiver who lived alone, and 2 at second interview. 5 cared for another family member at first interview, of whom 4 also looked after their grand-children; at second interview, 3 women cared for family members. Heading scores showed the following distribution: Social Relations – all respondents were satisfied and a significant improvement from first interview (61.8) to second (78.7) ( $p=0.015$ ). Psychological – wives (1.2/+20.5) and daughters (4.0/+12.7) were not satisfied; Physical and Environment – daughters were moderately satisfied (-7.0/+19.7 and -3.5/+0.7). CONCLUSION: Caring for the elderly for prolonged periods of time may result in biopsychosocial effects that compromise family structure. Caregivers presented altered quality of life, especially in the psychological and physical domains, a situation which persisted after the death of the patient.

**PD6 723 ARCHITECTURAL SPACE AND INDIVIDUAL CARE IN ASSISTED LIVING**

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Introduction Individual care of older people in assisted living is care in which the residents' personality, needs and wishes are acknowledged. This is a study of the relationship between architectural space and the individual care the staff provides. Methods and materials This is a ten months ethnographic study in an assisted living facility in Sweden. Observations and individual interviews with staff as well as residents were the main data collection methods. Analysis was done with a grounded theory approach. Results The spatial structure allowed few possibilities to the resident to express their individuality. All residents had similar private rooms which they furnished with their own furniture and assets. These assets were important tools to the staff to make acquaintance with the residents in order to give individual care. Residents stayed most of the time in their private rooms which they indicated as most important for their privacy. However, this is the space where they are most public in the sense that they are exposed to its outmost by intimate care. The staff used a number of spatial micro-strategies to help residents who were uncomfortable by this exposure. The public spaces were mostly frequented by the residents at the meals. The staff constantly rearranged the furniture in the dining-room in order to meet the wishes and needs of various residents so that they would attend the meals. Staff did not interfere with the residents' use of space according to their own wishes, not even for security reasons. Residents moved freely in the facility. Conclusion The spatial possibilities for individual care in assisted living are limited to the architectural micro level. This is, nevertheless, of great importance to the support of the individual since neither the private rooms nor the public spaces fully reflect or accommodate the individuality of the residents.

**PD6 724 WHO IS THE FAMILY CAREGIVER OF THE ALZHEIMERS PATIENT THAT FINDS POSITIVE ASPECTS IN THEIR CARE TASKS?**

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INTRODUCTION: Providing care and help within the family context to people with Alzheimers Disease (AD) is an extraordinary task that requires significant expenditure of both time and energy for the caregiver and family alike, often spanning years, requiring

performing tasks that can be exhausting and unpleasant, and often disturbing the carers other family and social roles. MATERIAL AND METHOD: Descriptive cross-sectional study using interviews and questionnaires using techniques of quality metrics. Full information was gathered, following informed and valid prior consent, from 287 carers (mean age 56 years; 83% women, 17% men) belonging to various associations of friends and relatives of AD in the Spanish province of Alicante, with regard to their sociodemographics, clinics, occupation, behaviour, health and perceived quality of life. RESULTS: A total of 68% of the caregivers reported finding positive aspects in their care tasks. The presence of positive aspects were independent of the age and sex of the caregiver. The caregivers reported more positive aspects when dealing with female AD patients in comparison with male patients ( $\chi^2=7.77; .005$ ). Of all the caregivers, 26% had to leave their job to care for their relative; these caregivers showed a significant tendency to report more positive aspects in the care they provide ( $\chi^2=4.93; .017$ ). No significant differences were found in other variables of sociodemographics, job, clinic and assessment of state of health, although they were found in the caregivers degree of overload, psychological distress, perceived quality of life and degree of satisfaction with life. CONCLUSION: Caregivers who perceive positive aspects in their tasks report a greater perceived quality of life, a lesser degree of psychological distress and overload of care, and a higher satisfaction with life. These results may be of interest in identifying those caregivers at increased psychosocial risk, and to design interventions to provide specific psychological help. Note: This research project received funding from the Conselleria de Sanitat de la Generalitat Valenciana through the Escuela Valenciana de Estudios de Salud in its 2006 announcement of grants for research projects on programmes of health and the prevention and prediction of illness.

**PD6 725 AN EXPERIMENT IN ENVIRONMENTAL IMPROVEMENT IN A GROUP HOME FOR ELDERLY WITH DEMENTIA**  
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This research focuses on an experiment in environmental improvement in a group home? The program constituted of 1) a lecture about the environment, 2) environmental assessment, 3) environmental improvement plan, 4) implementation of the plans, and 5) the plan assessment of the total program? There was highest evaluation concerning 'Opportunity for Personal Control' in the portion of the plan concerning environmental assessment performed by the care staff of the group homes. Furthermore, also in the plan of the created environmental improvement, the contents of joint work of the elderly with dementia and the care staff were well evaluated. It was suggested that programs focusing on environmental improvement in a group home should be included as part of community life care, which is the main characteristic of group home care. This process not only raised the consciousness of the care staff's environment, but promoted communication, and can also be considered to lead to the support of the maintenance of the total care environment

**PD6 726 INDEPENDENCE AT AN OLD AGE: RESEARCH EVIDENCE OF THE KLAIPEDA 80+ STUDY**  
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Introduction: As older people are growing as a proportion of the population, and the probability of poor health increases with age, an increasingly larger proportion of dependent old people can be expected. However, there are several factors that contribute to the stabilization of the balance of the dependent/independent population, including healthier lifestyles, improved nutrition, and the latest medical and living environment technologies, conducive to sustaining functional health and independence of old people. The objective of this paper is to discuss the health aspects of maintaining independence at an old age. Methods and materials: The 80+ Studies in Klaipeda, Lithuania, Lund, Sweden, and Reykjavik, Iceland, account for collecting data regarding the medical, psychological, and social aspects of 80-year-old people. The 80+ Studies use identical instruments and a longitudinal method with a sequential design, i.e. including a new cohort every fifth year. In the present paper, the results of the 80+ Study in Klaipeda are discussed. The participants were 200 residents of Klaipeda (with the response rate of 34%), born in 1923. The data were collected during a participant's visit to a local clinic. The results show that the majority of the participants – 83.9% – did not need help or supervision in carrying out daily activities. In the SPT test the 80-year-olds demonstrated relatively good memories and recognition abilities. The health of the majority of participants proved to be rather good than poor: 47.6% self-rated their health as "very good" or "reasonably good", compared with those 17.5%, self-rating their health as "fairly bad" and "very bad". The corresponding figures of the physicians' health ratings were 66.3% and 6.5%. Conclusion: The research evidence contradicts the widespread stereotypes in accordance with which the majority of aged people are thought to be in a poor physical and mental condition, frail, and needing help and supervision.

**PD6 727 PROVIDING CARE TO MORE THAN ONE RECIPIENT AS A DETERMINANT OF CAREGIVER BURDEN**  
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Introduction: Research on informal caregivers has paid little attention to persons who provide care to more than one recipient (multicarers). However, it is plausible that multicarers may be more susceptible to overburdening. This study explores the determinants of burden in relation to caring for more than one recipient. What matters more: the number of care recipients or the characteristics of additional care situations? Methods and materials: Data come from the 2007 nationally selected sample of adult informal caregivers in the Netherlands. The sample consists of 1,403 caregivers of at least one older person (aged 65 and over). 25% of them provided care to more than one care recipient in the previous 12 months. Caregiver burden is examined using a 14-item scale on time restrictions and emotional involvement. The number of care recipients and characteristics of the caregiver, the main care situation and the main care recipient are included in the analyses. Results: Multivariate regression analyses reveals the number of care recipients as a determinant of burden. Preliminary results for the sample of multicarers show that the explained variance in burden increases when characteristics of a second care recipient are added. At the same time, the number of care recipients remains a determinant of burden. Conclusion: Persons who care for more than one recipient run a higher risk of being burdened. This risk is not only determined by the number of care recipients but also by the characteristics of the additional care situations.

**PD6 728 EFFECTS OF GREEN CARE FARMS ON ELDERLY PEOPLE WITH DEMENTIA**

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Introduction: In the Netherlands an increasing number of "green care farms" (GCFs) provide day care to community-dwelling elderly people with dementia. They offer an innovative and more home-like form of day care, contrary to regular day care services (RDCSs) that are often incorporated in residential homes. An earlier study showed that older persons with dementia at GCFs are more outdoors, participate in more domestic and outdoor activities, and are physically more active than those attending RDCSs. It was therefore hypothesized that GCFs are more beneficial than RDCSs in preventing deterioration of cognitive functioning and emotional well-being, and in preventing worsening of behavioral symptoms. The aim of this study was to compare the longitudinal change in these parameters between older people with dementia attending day care at GCFs and those attending RDCSs. Methods: In this cohort study 47 older persons with dementia from GCFs and 41 from RDCSs were followed during 1 year. Data were gathered at three times (at 6 months intervals) by interviewing the older persons with dementia themselves and their primary family caregivers at home. Results and discussion: During the course of the study, visitors of both types of day care showed a decrease in cognitive functioning and an increase in the number of behavioral symptoms, whereas minor changes were observed for emotional well-being. We could not demonstrate GCFs to be more beneficial than RDCSs. However, this study is one of the first evaluating the effects of this new care modality. The current policy of the Dutch government is to keep frail elderly, including the demented ones, at home as long as possible. Therefore supportive initiatives for these older people and respite possibilities for their family caregivers are important to delay or prevent early institutionalization. Future studies will yield insight into their ultimate effects on patient outcome.

**PD6 729 FAMILY CARE FOR SENIORS AS A "LABOUR OF LOVE" – NEW ARGUMENTS.**

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Abstract: Introduction: This paper compares the concept of "care as a labour of love" [Hilary Graham 1983] in contrast with the concept of the "defamilisation of care" [Evelyn N. Glen 2000]. The authors test the evidence for a relationship between the BADL and IADL indexes and the amount of family care (measured in hours of care) and the burden of caring person. Methods and materials: A survey of Czech adults caring for seniors in the family was made in 2006/2007. 435 standardised interviews were conducted with households that are caring for a dependent senior in the family. The main caregiver responded to questions concerning the amount of hours of informal care provided in the family for the well-being of seniors by all the family members and by professionals in home care. IADL was measured with 18 items about the instrumental activities of daily living for each senior. BADL was measured with 18 different items about the basic activities of daily living for each senior. The psychological and financial burden was measured for the main caring person. Results: The authors find that more demanding family care, measured as the level of IADL or BADL, is reflected in a growing number of

hours spent on family care. The authors also reveal significant differences in the psychological and financial burden experienced by the primary caregivers in relation to how demanding the level of care required is. Conclusion: The paper presents evidence of the existence of "collective family care" in situations where demanding personal care for a senior is required. The participation of other family members in providing care for a senior in situations of demanding personal care demonstrates some features of family cohesion. Keywords: BADL, IADL, family care for seniors, informal elderly care, labour of love

**PD6 730 COMBINING WORK AND CARE OF AN ELDERLY RELATIVE: CONSTRAINTS AND FEELING OF PRESSURE**  
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Combining work and care is mainly documented about childcare and very little, in France at least, concerning elderly care. In this paper we propose to develop the results of a qualitative research and to distinguish two main factors: the level of "objective" constraints imposed by this double front and the feeling of pressure experienced by the carers in their everyday life. What are the determinants of this feeling of pressure? In the literature, work family conflict is often operationalised through time, stress and pressure related measurements (Crompton, 2006). The quantitative analyses led on this subject (mainly on childcare), are often based on questionnaires which distinguishes objective elements which contribute to the pressure (the lack of free time for example, or the number of children to care for, or the non standard working hours) and the feeling of stress or pressure. The qualitative analysis of the interviews proposed in this research is also based on this distinction. Considering the 18 cases analysed, different elements contributing to the feeling of pressure can be questioned: the conception of one's role as a carer, the ambivalence of one's relationship with one's parents and also within the sibling, the closure of the social network, the relation to work.

**PD6 731 LOSSES, AUTONOMY AND DEPENDENCY IN THE AGING PROCESS**  
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The aim of this study is to describe how elderly persons perceive their aging process, and how they see losses and situations of dependency. It is a qualitative study which uses the content analysis method described by Bardin (1979) and Moraes (1994), and the narrative interview technique. The criteria for sampling selection were: gender; rural and/or urban origin; marital status; various occupations; educational level; to be over 60 years of age; physical and mental capability to give an interview and accept an informed consent. Thirty elderly persons were interviewed and distributed by a priori defined variables. Three analytic categories emerged from the narrative interviews, namely biological losses, affective losses and social losses. Among biological losses are corporal restrictions and decrease of functional capacity, which indicates cases of dependency. Concerning affective losses, not all of them were due to aging. The following came up: loss of children, premature losses, loss of parents, loss of loved ones, frustrations, and loss of affection. Among social losses, work is highlighted since for some elderly persons ceasing to work definitely was seen as the end of a social life. Retirement is appreciated by many of them, but it also represented loss of prestige and social status. Narratives show that elderly persons are aware of the losses they went through in the aging process, how they coped with them, and the relationship with dependency on family, relatives and friends. Further, the analysis points to contemporary issues such as understanding changes of social roles and the need to keep up to date in order to minimize generation conflicts and create support systems within the own family.

**PD6 732 KT-EQUAL : PUTTING AGEING AND DISABILITY RESEARCH INTO PRACTICE**  
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INTRODUCTION: EQUAL ([www.equal.ac.uk](http://www.equal.ac.uk)), introduced by EPSRC in 1997, and subsequently SPARC ([www.sparc.ac.uk](http://www.sparc.ac.uk)), funded by EPSRC/BBSRC, both aimed to stimulate a multidisciplinary, collaborative, user-engaged approach towards ageing research. This encouraged high quality, novel research which addressed the needs of older and disabled people so that they could live full and active lives. Successful transferability of the products of this research necessitates sustaining relationships with industry, with professionals in health, housing and social services, with older and disabled people and their representatives, with health and social care staff, with national policy and decision makers, and with other research disciplines. This is the focus of the KT-EQUAL (Exchanging Knowledge – Extending Quality of Life) consortium. METHOD: The KT-EQUAL consortium is the product of proposed activities related to thematic areas of health and wellbeing, independent living and self management; links to three existing consortia

SMART, i'DGO Too and i-design; ensured continuity with EQUAL/SPARC programmes; and members highly experienced in public speaking, media engagement and other advocacy roles. RESULTS: The resulting KT-EQUAL Consortium has objectives: (1) work with stakeholders to identify knowledge needs; (2) encourage and enable world-class knowledge creation, analysis and storage; (3) facilitate exchange of knowledge between creators and users; (4) advocate the use of knowledge as a driver for change. Partnerships for knowledge exchange will be extended through close working with commissioners of health, social care and other public services, suppliers, technologists, designers and manufacturers, users and user advocacy groups. The views of the older person are central to the KT-EQUAL philosophy and its success. CONCLUSION: This paper will clarify our philosophy and how we will deliver an innovative programme reflecting the expertise and knowledge developed over the last 11 years but also be responsive to policy-led changes and other factors likely to influence stakeholder motivation and involvement, research activity, outputs and uptake.

**PD6 733 WAITING TO DIE:A STUDY OF WIDOWS IN VARANASI**  
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In Indian society, attaining "moksha" (liberation from the cycle of birth and death) has traditionally been the ultimate aim of human existence and all kinds of human activities have been directed towards this end. Kashi, the city of lights, has a unique distinction of being a place about which it is said that those who die here, attain moksha. According to mythological sources, Kashi is situated at the upper end of the "trishool" (weapon of Lord Shiva) of Lord Shiva. Therefore, the city has the blessings of Lord Shiva and thus, those who die here go directly to heaven and become free from the cycle of birth and death. The mythological saying combined with the low status of women in India has given rise to a unique custom unparalleled in the world. Earlier, widowhood was considered to be a curse in Indian society. A widow had to spend her life in a miserable condition. She was expected to spend her time worshipping the God so that after death she attains moksha. This practice has made Kashi the abode of many widows who had been left by their family members. The present paper is based on the study of such widows of Kashi. Based on the case study method, the paper explores the family background of these widows and the present condition in which they are living and concludes that the desire to attain moksha is not the main reason behind their stay in Kashi but apathy of their family members is the major factor which has forced them to spend their life like beggars in an unknown city. The paper further analyzes if the proposed 'Senior Citizens Bill 2007' could be of any help to these widows.

**PD6 734 ELDERLY, FAMILY AND CULTURE: A STUDY ON THE CONSTRUCTION OF THE CAREGIVER ROLE**  
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INTRODUCTION: Intercultural studies are useful for generating knowledge about the meaning assigned to dependency and family care to the elderly. This research aimed to understand how the carer role is among members of two different cultural groups and which are the meanings attributed to the experience of care between those families. METHOD: Qualitative research with ethnographic focus using participant observation and semi-structured interviews applied to six families of Japanese-Brazilian origin and six Brazilian families. Convenience sample, whose participants were matched by educational and economic criteria. Data collection was performed in their homes by scheduling and prior consent of the subjects. Data has been got through field registries, representations of relationships and interviews content transcriptions. We have used content analysis for data analysis. RESULTS: The examination of such material produced a hierarchy of meanings categories, from which we have extracted five major thematic axes: the construction of dementia as disease and the relative as a sick person; the family carers in their plurality; the complexity of the caring process; the domestic group and dynamics of interactions with family carers; tensions, dilemmas and conflicts experienced by caregivers. CONCLUSION: In both studied groups, the family is considered as the preferential locus of care. The tasks of care are basically shared by closest relatives and secondarily by other people who keep some type of relationship with the family nucleus. We call this extended group as domestic group, which may be described structurally as a network of carers. The main difference observed between the two groups of families consisted in the meaning attributed to family support, care by itself and aging care. The Japanese-Brazilian families mentioned, more than the Brazilians ones, their cultural references. Key-words:Elderly; cognitive impairment; family caregiving;culture.

**PD6 735 AGEING IN A PURPOSE-BUILT RETIREMENT COMMUNITY: TOWARDS A LONGITUDINAL STUDY**  
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Introduction: Purpose-built retirement communities are increasingly being promoted as positive alternatives to traditional forms of housing and care in Britain. Such developments have been cited as suitable for both 'fit' and 'frail' older people, offering a home for life.

However, we know little about their ability to meet the diverse needs and expectations of residents over time. This poster outlines a study exploring such issues at Denham Garden Village (DGV) – Anchor Trust's flagship retirement development in the UK. The initial 3-year phase of the Longitudinal study of Ageing in a Retirement Community (LARC) began in 2006 and forms part of a 10-15 year longitudinal study. Methods: LARC adopts an innovative, mixed methods approach, reflecting the partnership between researchers from critical gerontology, medicine and health. Methods comprise biennial quantitative surveys and qualitative methods including ethnographic observation, diary-keeping, in-depth interviews, Directives, collating contextual documentation and photographic/audiovisual work. Collaboration between the research team, residents and staff at DGV and senior management at Anchor Trust reflects the participatory-action nature of the study. Results: Opportunities inherent in developing a mixed method longitudinal study such as LARC will be identified alongside a range of ethical, theoretical and practical challenges. These include building and sustaining relationships with participants and stakeholders, collecting, archiving and triangulating large data sets, maintaining high response rates and retaining as many original respondents as possible in subsequent samples. Conclusions: The development of a truly longitudinal study such as LARC provides a unique opportunity to undertake a ground-breaking and innovative programme of work. It has the potential not only to assess the extent to which DGV can address the challenge of providing housing and care for a diverse and changing population of older people, but also to inform evolving theory, policy and practice in the field of care and accommodation for older people.

#### **PD6 736 SOCIAL RELATIONS WITH NEIGHBORS AMONG THE OLD-OLD LIVING ALONE IN TOKYO**

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In Japan, living alone becomes a common living arrangement in old age for both men and women. For seniors living alone, neighbors may possibly be important sources of social support. In this study, we observed neighborhood relationships of the old-old living alone in a Japanese urban area. Home-visit interviews were completed for 441 seniors, aged 75 years or older, randomly selected from the residents' registration of Sugimami City, Metropolitan Tokyo. Among the respondents, 16.8% were men; 71.0% had children living apart; and 73.9% had relatives with whom the respondents had contacts. Social interactions with neighbors were measured with availability of social support and feeling of emotional closeness. About 40% of the respondents had available sources of instrumental, informational, and emotional supports in their neighbors, and 50% had neighbors to whom they felt emotionally close. These percentages were significantly different between men and women: women were more likely than men were to have available sources of supports and to feel emotionally close to some of their neighbors. Further, men preferred to have distant relationships with neighbors, while women were more sociable. Gender differences in social relationships in old age have been frequently reported by social gerontologists. This study confirmed the gender differences in neighborhood relations of the old-old living alone who were supposed to need proximate sources of social support. The results of this study seem to indicate the necessity of special attention to senior men living alone who are likely to be at risk of serious social isolation.

#### **PD6 737 FUTURE ELDERLY IN POOR HEALTH AND LIVING ALONE: HOW CAN THEIR CHILDREN SUPPORT THEM?**

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Introduction As we get older, both the probabilities of being in poor health and finding ourselves without a spouse increase sharply and unevenly by gender. Children may become key providers of support to their parents, but failure to provide such assistance may increase the need for formal support or institutionalization. Methods and materials This study examines elderly persons aged 75 and over in Canada and some European countries and presents projections up to 2030. Models used here differ from traditional cohort component projection method. In fact, microsimulation models were used, i.e. LifePaths in the case of Canada and LIPRO (Lifestyle PROjections) in the case of the European countries under study. By using these models, it is possible to project simultaneously a great variety of individual characteristics like age, sex, marital status, living arrangement, surviving children, etc. Results The population aged 75 and over being in poor health increases by more than 1.5 times in Europe and by almost 3 times in Canada between 2000/1 and 2030/1. From this population, we look at the most vulnerable ones in term of family support. We observe an increment of 2.1 times in the case of European men compared to 3.2 times for Canadian men between 2000 and 2030. For women, the situation is totally different as the European countries do not show a significant increment compared to a twofold increase for Canadian women. Conclusion This paper analyzes the future evolution of the minimal family network needed by elderly in poor health and living alone, this group being one of the most vulnerable in our societies. Results demonstrate that

Canada will have a higher proportional increase in vulnerable persons both in terms of poorer health and available family support than European counterparts. Our findings are demonstrate the way in which the demographic history of these countries have consequences both on the evolution of the number of elderly who cumulate these disadvantages and on the hazards to be submitted to these conditions.

#### **PD6 738 NAVIGATION IN FAMILIAR AND UNFAMILIAR TOWN CENTRES**

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As downtown and city landscapes change through regeneration or decline, the use of space changes and previously familiar places may become unfamiliar. Unfamiliarity can lead to insecurity, disorientation, fear over personal safety, social exclusion and loss of independence. Enabling navigation and orientation in built environments is essential to ageing in place and the increasing numbers of older people travelling the world as tourists. The present study investigates visits to familiar and unfamiliar town centres by two groups of participants aged 60+ years. Participant's who evidenced difficulty in following directions (as defined by a direct assessment of their functional ability to follow directions,) stayed in populated areas and relied on street signage. The participants who evidenced no difficulty with following directions would use landmarks in the built environment and ask local people for directions. Both groups expressed concern with visiting town centres in the evening. In a social network analysis, participants who follow directions were more "adventurous" travelling to more unfamiliar towns using different modes of transport and travel arrangements. The research informs spatial planners about how to improve navigation of periodically accessed built environments that contain services and facilities that are important to older adults continued independence.

#### **PD6 739 FAMILY CARE WITHIN THE SYRIAN-ORTHODOX COMMUNITY**

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Introduction Family care for older people is often associated with problems, i.e. lack of family caregivers, stress associated with family care, and insufficient professional support. In some non-Western communities, family care of older people seems to be experienced more positively. The present study aims at exploring and comparing the experiences of family caregivers within the Syrian-orthodox community in the Netherlands and Dutch family care givers. Methods Semi-structured interviews were held with 15 family care givers within the Syrian-orthodox community. Interviews were held in Syrian language by a trained representative of the community. Interview topics involved, the care giving situation; the caring network; and qualities, experiences and motivations of the caregiver. Interviews were translated and transcribed verbatim by the interviewer and coded by the researcher. Both negative and positive experiences were analysed within the context of the care giving situation. Interviews involving the same topics will be held with 15 Dutch family care givers in order to compare the experiences of both groups. Results Conditions for good family care involve good health; being present, understanding and patient towards the older person; and speaking the (Syrian) language. Motivations to provide care involve the expectation to be rewarded in the hereafter, setting an example to their children with respect to family care, and the idea of paying back for the efforts undertaken by their parents. Through family care caregivers give meaning to their lives. Difficulties in the care giving process involve the burden of being the main caregiver and frictions within the relation with the older person. Conclusion Family care is associated with both positive and negative experiences, some involving ethnic or religious dimensions. This information will be confronted with information from the Dutch interviews in order to report recommendations to professionals supporting informal care givers and policy makers.

#### **PD6 740 QUALITY OF LIFE, DEPRESSION AND STRESS IN CAREGIVERS OF ELDERLY WITH DEMENTIA IN JALISCO, MÉXICO.**

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In Mexico, most of the patients with dementia continue to have a home-based care, given by their relatives. To give care to a patient with dementia has been associated with deterioration of the physical and mental health, social isolation, depression, overload and low quality of life. Purpose: To assess the impact in the quality of life related to health, depression and the load perceived by the primary caregivers of elderly with dementia in Jalisco, Mexico. Material and methods: Cross-sectional design (CONACYT52580). 184 primary caregivers of elderly with dementia that lived in communities in the state of Jalisco, Mexico, were studied. The Self Reporting Questionnaire 20-SRQ for psychiatric

disturbance, Spanish Center for Epidemiologic Studies Depression Scale (CES-D), Zarit Burden Interview (ZBI) and Quality of Life Index (QLI) were applied. Sociodemographic characteristics of the caregiver and the care given to the elderly were included. Results: The 78.9% of the caregivers were women. Mean age of  $50.5 \pm 15$  years, being single 31.3% and married 57.2%. Relatives without remuneration were 98.9% and the relationship with the patient is of son (46.4%) or husband (26%). The 90.6% were direct primary caregivers, 52.2% full-time. The 57.2% of the women were housewives and the 62.6% of the men were working or retired (21.1%). 55% of the caregivers showed pathological symptoms of mental health (60.6% women and 34.2 men), 81% reported depressive symptoms (84.5% / 68.4%). In relation to the ZBI, the 16.7% presented overload (19.7 / 5.3) and low QLI 17.2% (20.4% / 5.2 %). Conclusions: We found high prevalence of mental health problems in the caregivers. Their sociodemographic characteristics are very similar to other studies. We must consider the binomial ill-caregiver for the prevention and treatment of the dementia to give better quality in the health attention and improving quality of life for both.

**PD6 741 THE MEASURE AND MEANING OF DAILY LIFE: USING MIXED METHODS TO EXPLORE DISABILITY AMONG OLDER ADULTS IN NEW YORK CITY.**

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Introduction: While quantitative measures of disability and dependence in later life invariably focus on the number of ADLs or IADLs that are "difficult" or require "assistance," much less is known about the social and cultural factors that influence the self-assessment of abilities, the need for help, and preferences for care. Methods: An ethnically diverse set of 64 community-dwelling adults in New York City (42 women and 22 men) were interviewed using standardized ADL and IADL indexes. Ages ranged from 69 to 91 (mean = 79, SD = 5.6). In addition to items on self-reported difficulty, open-ended questions explored preferences for care and the availability of daily support from family members and others. Descriptive statistics were used to compare frequencies and means. Results: A number of important distinctions emerged. While 91 percent needed no help preparing meals, 64 percent had moderate to advanced difficulty shopping for groceries. While 91 percent needed no help with mobility at home, 31 percent said mobility was difficult and 25 percent used canes or walkers often at home. While 83 percent needed no help to bathe or shower, 33 percent had difficulty and 19 percent bathed less often. While 80 percent never needed help getting dressed, 44 percent said it was difficult. Only 19 percent had any amount of paid home help, but 56 percent said that no family members would be able to help "over a sustained period of time" with basic daily activities. Yet, in qualitative comments, individuals expressed definite limits for when and how they would accept help and the involvement of close family members with different ADLs. Conclusions: Mixed methods can reveal important and often contradictory distinctions between "needing help" and "having difficulty" and reveal important social factors that influence daily negotiations over independence and the need for assistance.

**PD6 742 CAREGIVERS AND VIOLENCE AGAINST THE ELDERLY**

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INTRODUCTION: Today Brazil has a population of 18 million elderly people. Projections for 2020 indicate a 15% growth to 32 million, placing Brazil in sixth place among the countries with the largest population of elderly people that year. Studies reveal that currently 12% of the Brazilian elderly population suffer some form of violence and that their children are often the perpetrators of the aggression, the main victims being women. Aggressions usually occur at home. Violence against the elderly is connected to social violence. It is a universal concept and concerns violation of human rights. Traditionally, families in Brazil are in charge of caring for their dependent elderly. Family caregivers are usually exhausted from such a task and find themselves socially isolated. This may trigger violent behavior and the victim may be a disabled and frail elderly person. Our research regards the maltreatment perpetrated against the elderly population, and focuses on family caregivers and their dependent elderly. METHOD: Exploratory-descriptive and qualitative study using the Caregiver Abuse Screen (CASE) to screen caregivers' violence against the elderly among 10 subjects recruited from Public Hospitals in São Paulo. ANTICIPATED RESULTS: Provide knowledge on how and when maltreatment occurs; confirm the assumption that caregivers may perpetrate maltreatment resulting from their past history when they may have experienced violent situations, and obtain information from caregivers on the different forms of violence inflicted upon the elderly. CONCLUSION: The relationship between caregivers and the elderly is highly influenced by life situations that occurred prior to the dependence situation. It is thus imperative to gain an in-depth knowledge of the biopsychosocial traits of family caregivers who abuse their dependent elderly with a view to identifying the perpetrator and implementing public policies to address this issue.

**PD6 743 A SUBSTANTIVE THEORY OF CARERS' NEEDS POST STROKE.**  
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Introduction: Family carers are vital to successful community care globally (Hanson et al 2006), especially post stroke; a major cause of disability internationally. U.K. policy gives carers the right to a needs' assessment and an expectation that they will become 'real partners' with services in care provision (Audit Commission 2004). Despite MRC (2000) recommendations that complex interventions should be underpinned by theory, a systematic review found interventions for carers post stroke lacked a theoretical basis (Brereton et al 2006). This paper presents a substantive theory that may inform future interventions. Methods & Materials: One hundred semi-structured, face-face, audio recorded interviews were conducted in a three phase, longitudinal constructivist study using Rodwell's (1998) guidance. Phase I – involved seven experienced spousal carers. Phase II – sixteen 'new' carers from two NHS Trusts were interviewed within a month of the stroke, then every two-three months for up to 18 months. Twenty four health and social service staff took part. Interviews were transcribed verbatim. Units of data were identified, 'sorted' 'lumped' into categories and constantly compared to assist theoretical sampling. Phase III - comprehensive member checks gained consensus on the co-constructed theory. Results: 'Seeking partnerships' with staff formed the core category. Carers' needs related to three themes: 'What's it all about?' – seeking to understand the situation 'Up to the job,' – seeking the best care for their relative initially from staff, then with regard to their own ability to provide care 'What about me?' – seeking respite from caring to meet their own needs. The extent to which carers' needs were satisfied influenced, and was influenced by, their relationship with staff. Satisfied carers trusted staff and engaged in partnerships with them. Dissatisfied carers met their own needs by 'going it alone' when possible. Conclusion: This substantive theory could inform future interventions for family carers.

**PD6 744 INFORMAL CAREGIVER PROFILE OF ELDERLY PEOPLE IN SOUTHWEST MUNICIPALITY OF SAO PAULO/BRAZIL.**

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The population aging is an emergent concern in Brazil, mainly for the change in the morbimortality standards, that raise the percentage of fragile elderly, and it brings an extensive social impact. With the current trend of the domiciliary treatment, it is common to find relatives exerting the caregiver role. Studies show that the most of them suffer from caregiver syndrome, which has as main symptoms, depression and stress in high degree. Objective: to characterize the informal caregiver profile of elderly people dependent in the domiciliary context, in the municipality of Palmital/SP. Material and Method: qualitative and quantitative-descriptive study, with not-probabilistic sample, in south-west municipality of São Paulo/Brazil, that has a medium size. For data collection, we used a semi-addressed interview, the Waldow scale and Caregiver Burden Scale (CBS), held in the residence of 89 dependent elderly. Statistical analysis was performed by the equivalence between reason and proportion of the found results. Results: informal caregivers of elderly are the most female (90.7%), sons (43%) or spouse (24%), with incomplete elementary school (77%), performing this function for over 5 years (46%), with no guidance as for cares (96%). According to the caregivers interviewed 61% of elderly were very dependent, however only 11% were classified as grade III dependent on the Waldow scale. In the CBS result the variable that most influenced negatively on the quality of life of caregivers, was the Isolation. Conclusion: the results point out informal caregivers that need health team support and information on the accomplishment of cares, as well as orientation relating to environment adaptation as a way to ease the physical burden imposed. We hope with this study awakening attention for these caregivers, providing subsidies for public policy in the development of projects aimed to improve the quality of life of caregivers and quality of care given.

**PD6 745 IN SEARCH OF THE RECONCILIATION BETWEEN THE WESTERN AND THE ASIAN VALUES: A CRITICAL APPROACH TOWARD THE RELATIONSHIP BETWEEN THE SENIORS AND THE PROFESSIONAL CARE-GIVER IN SOUTH KOREA**

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South Korea has developed since 2005 various kinds of social policies addressing the challenges of its rapid aging society and deteriorating economy. Social services and Long-term care insurance systems are the main social policies not only in South Korea but also in other advanced capitalist countries. Some common issues related to the institutionalization of care-giving to the seniors include the social fixation of gender role and the colonization of life world. Unlike other countries, however, South Korea has met with different and various dilemmas and conflicts, such as individualism versus familialism and professionalism versus senior-respect social minds. The purpose of this paper is to examine various kinds of dilemmas that are happening in South Korea and to build a new perceptive framework toward the care-relationship in which possible antagonism between care-giver and care-receiver can be transformed to co-reliance and co-respect. Based on in-depth interview, participatory observation, and literature review on

feminist theory and Confucianism, this paper argues that both the principle of mutual-recognition between care-receiver and care-giver and the principle of open relationship between family and the state are critical to the successful running of social care systems.

**PD6 746 FROM HOME TO INSTITUTION : MENTAL HEALTH AND BURDEN OF FAMILY CAREGIVERS**

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Studies highlight the negative impact of the burden on the mental health of caregivers of a demented relative living at home (in France, Andrieu, 2003; Thomas, 2005). The Principal Component Analysis of the Zarit Burden Interview shows differences depending on the caregiver status. Spouse suffer from the consequences of caregiving on their personal and social life, while children feel more guilty (Ankri, 2005). When the care receiver live in a nursing home, few studies explore the caregivers mental health, although the burden seems to stay high (Lieberman, 2001). This study aims to determine the relationship between the burden's components and the mental health of French family caregivers, taking into account the differences between spouses and children of demented older adults living at home and in institution. It secondly explores the role of the perceived social support. In a sample of 264 family dyads, 176 care receiver living, at home and 88 in institution, self-rating scales were applied measuring : Burden (22 items Zarit Burden Interview; 27 items Sense of Competence Questionnaire), Depression (BDI-II), Anxiety (STAI-Y), Hostility (STAXI-II), Well being (Satisfaction With Life Scale), Perceived social support (SSQ), Other psychiatric disorders (Symptom Checklist SCL-90). Principal Components Analysis of the ZBI and SCQ showed differences in the nature of burden and mental health between spouse and children, at home and in institution. When the care-receiver is institutionalized, anxiety is lower but burden and depression stay high. Moreover both spouses and children feel more guilty and less competent in their caregiver's role. Specific differences among spouses and children also exist. At home, social support seems ineffective in reducing burden and depression among spouses and children living with the care-receiver. This study is supported by France Alzheimer ("young researcher in social sciences grant" in 2006).

**PD6 747 MOBILE LINK SERVICE – THE USE OF ICT AND CRM IN HONG KONG'S UNPRECEDENTED OUTDOOR SUPPORT AND CARE SERVICE**

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Introduction Senior Citizen Home Safety Association (SCHSA) rendered a new outdoor support and care service, the Mobile Link Service (MLS), in Hong Kong in December 2008. It leverages on its 12-year experience of providing indoor emergency assistance service which has saved senior citizens' lives for more than 171,171 times and attended to more than 3 million assistance calls. With the use of information and communication technology (ICT), customer relationship management (CRM) and Mobile Link Device, senior citizens can seek assistance outdoor by simply pressing the one and only button to reach SCHSA's 24-hour operating call centre for timely assistance. They can enjoy their freedom and peace of mind in an outdoor environment, which fosters Active Ageing in the community. This could benefit both healthy and disadvantaged senior citizens whose mobility may have been hampered by chronic diseases, disability and dementia. Method and Materials An ongoing monitoring and evaluation exercise on the service usage and impact is being conducted regularly, including customer satisfaction surveys and interviews with users, their family members, internal staff and stakeholders. It is aimed at understanding the users' experiences and evaluating service impact in the public. Lessons learnt and customer feedback are collected timely and systematically for service improvements. Results and Conclusion Two months since the launch, there are 87 active MLS users, whose average age is 76. Some of them are in the early stage of dementia. A total of 47 surveys were completed, of which 25 were active users and 22 were user's family member. Most of the interviewees felt satisfied with the service and device. Comments and user experiences were shared providing insights for service improvements. More results of this ongoing service evaluation will be released and consolidated by coming summer. (For details of MLS, please refer to [www.mobilelink.hk](http://www.mobilelink.hk))

**PD6 748 THE INFLUENCES OF RESIDENTIAL RELOCATION ON FALL, PHYSICAL ACTIVITY AND QUALITY OF LIFE AMONG OLDER ADULTS**

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Introduction: Prolonged life expectancy and changed societal and family structure increase the possibilities of relocation in older population. The information of residential relocation in this decade was rare, and the lower level of evidence quality in existing literature was also found. The purposes of this study were to examine the influences of residual relocation in older adults with leprosy. Methods and materials: A prospective observational

design was applied to evaluate the adaptation of voluntary residential relocation among older adults. Those residences who with inclusive criteria, without exclusive criteria, and voluntarily move to from their colony residential to retirement apartment complex were assigned to the experimental group. Those residences who choose to stay their colony residential were the subjects of control group. The data of personal information, fall (number and fall efficacy), physical activity (Chinese version of Modified Baecke Questionnaire) and quality of life (Chinese version of World Health Organization Quality of Life) were collected prior and post 6 months of relocation in both groups as the pre and post tests. Results: 250 subjects participated in this study (169 in experimental group and 81 in control group). After adjusted the age, number of disease, ADL, perceived health status, and the data of pre-test, the positive influences of relocation on fall efficacy, overall and psychological aspects of quality of life were found. Conclusions: This study enriched the higher level of evidence of interaction of aged and environment. The different findings of this study and other literatures were discussed from the points of decades, voluntary willing, and the familiarities with relocation situations (settings, neighborhood, and care providers). Observation the long term effects of voluntarily relocation was suggested. Voluntarily relocate to more supportive and personal based living settings could improve the fall efficacy and quality of life among older adults was identified.

**PD6 749 PRACTICAL RESEARCH OF THE HOME ENVIRONMENT IMPROVEMENT FOR ELDERLY PEOPLE WITH DEMENTIA**

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1. Background and purpose In Japan, half of the elderly people with dementia who need to be cared for live at home. However, the practical applications of home environment improvement for their family caregivers are not established. For this issue, we organized the workshop for the house environment improvement for elderly people with dementia. The workshop not only consists of researchers in social welfare, psychology, and architecture, but caring experts, case manager, and architects. From 2005 to 2008, we had practiced eight group case studies in cooperation with family caregivers and demented elderly. The purpose of this report shows the concrete examples of home environment improvements for elderly people with dementia from eight case studies. And we show characteristics and significance of the workshop for the home environment improvement for elderly people with dementia. 2. Result Group case studies were conducted by the following process: 1) collect case examples; 2) analyze the cases; 3) feedback the analysis; 4) share the studies in the group. From eight cases, we had about one hundred home environment improvements. One of the main characteristics of the workshop is that various experts participated and studied one common topic, home environment for family care givers, together. Through the workshop, each researcher re-discovered the value of their specialty and the need for understanding other areas of study.

**PD6 750 RESPONSIBILITY AND AFFECTION IN FAMILIAL ELDER CARE: A CASE STUDY OF DIASPORIC CHINESE FAMILIES, VANCOUVER, B.C.**

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In North America, elder care in the context of ethnic minority families has focused on the influence of cultural values and norms vis-à-vis caring attitudes and roles and responsibilities. For diasporic Chinese families, filial piety or responsibility continues to be a dominant theme. This emphasis on responsibility neglecs, however, the importance of relational aspects of care. That is, despite growing interest in the care relationship, there exists a gap in the literature in relation to culturally diverse families. Emerging findings from an ongoing study suggest that responsibility and relationship are intimately connected and cannot be separated out. This paper will present findings from a qualitative investigation using case studies of three Chinese families living in Vancouver, British Columbia, Canada. Multiple in-depth interviews were conducted with familial carers to explore their everyday care experiences in general, and in particular, how they make sense and meaning of providing care for their elderly relatives. Interestingly, all familial carers attributed care provision immediately and directly to responsibility. However, this responsibility did not stand alone or apart from the relationship. Responsibility was enmeshed with feelings of love, affection and warmth, albeit in harmony at times and in tension at others. Best illustrated by one spousal carer, mutual responsibility fed into the build-up of strong affectionate bonds and she called these "ganqing". These bonds are found in close and usually long-term relationships that solidify over time and manifest themselves as responsible and affectionate relations in the everyday care of the partner.

**PD6 751 EMOTIONAL EXPERIENCES OF KOREAN URBAN ELDERLY IN EVERYDAY LIVES**

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J. JOO

The purpose of this study is to examine emotional experiences of Korean elderly in everyday lives. Specifically, this study is to explore the effect of place/locations of activity

and companions on emotional experience of daily activities. Data were collected from 144 urban elderly (men=74, women=70) in Seoul, using Experience Sampling Method(ESM). Along with ESM data, socio-demographic characteristics and information on overall quality of life are gathered using structured questionnaire. Cellular-phone is used as a signaling device, collecting ESM data. Respondents reported eight times a day for a week. They provided 5,398 self-reports, which were used as the unit of analysis of this study. Emotional experience was assessed with the 6-item adjective checklist which included 3 positive (happiness, contentment, relaxation) and 3 negative (stress, depression, irritation) categories. The statistical methods used for the data analyses were descriptive statistics, t-test,  $\chi^2$  verification, and ANOVA. Results show that the urban elderly in Korea spend quite substantial portion of their time in home where they feel most happy and relaxed. They spend largest share of their time in company with their spouse. Time with spouse seems to be emotionally positive experience than negative. Interesting gender differences are observed: Women report higher intensity of stress and irritation than men in terms of overall emotional experience. Emotional experience of daily lives and overall quality of life are shown to be related. Theoretical and policy implication of the results are discussed.

**PD6 752 A RESEARCH ON THE PROMOTION OF URBAN COMMUNITY CARE OF THE ELDERLY BY THE DEPT. OF SENIOR CITIZEN CENTER AT YMCA (A NON-PROFIT ORGANIZATION) IN SOUTH URBAN CITY OF TAIWAN**

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Having considered the land and construction costs of residing in an urban community, it is difficult for non-profit organizations to plan and implement an integrated community service for the elderly. However, non-profit organizations that have practical experience in offering diverse and continuous elderly care services are capable of relocating the existing services from the suburb to the urban community. Consequently, this research provides a set of guiding principles and serves as a future reference. This research is based on literature reviews to discuss how community-based and non-profit organizations have developed active participation in elderly social welfare services in recent years. Non-profit organizations provide the coordination of services for the elderly according through three basic principles: the characteristics of non-profit cultural organizations, the community setting where welfare services are provided, and the continuity and quality of community-based services to the elderly. Questionnaires were administered to elderly participants at the YMCA, a non-profit organization that provides a five-year elderly care and community development program, to assess its effectiveness in helping the elderly to age in the community. The results indicated that non-profit organizations have to follow the three basic principles and comprise six crucial components in order to offer effective elderly care services in the urban community. The components are as follows: (1) the goals and objectives of setting up non- profit organizations (2) the ability of non-profit organizations to learn and grow (3) the integration of community resources (4) the continuity of elderly lives in their own communities (5) the diversity and continuity of elderly care services and (6) the flexibility and integration of various types of care services. In conclusion, non-profit organizations not only play a significant role in providing long-term care for the elderly, but also aiding the elderly to build a continuous social support network and help them to age in their own communities.

**PD6 753 GENDER DIFFERENCES IN THE EFFECT OF HEALTH ON OLDER ADULTS' SOCIAL RELATIONSHIPS**

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Introduction. Despite considerable health problems in old age, few studies have examined how deteriorating health conditions may influence older adults' social relationships. This study examined (1) the extent to which older adults' health conditions affect both structural and qualitative aspects of social support from children, family, and friends and (2) how these effects differ by gender. Methods. Using longitudinal data from Health and Retirement Study, a national probability sample of older adults aged 51 and over and their spouses, the analyses examined how self-rated health and the number of functional limitations in 2002 affect the frequency of social contact and support from various sources (e.g., children, other family members, and friends) in 2004 and 2006. Results. Findings suggest that for men, poorer self-rated health is associated with fewer contacts with children and lower levels of support from all sources both in the short and in the long term. The frequency of contact with friends was also negatively affected by poor health in the short term. For women, poorer self-rated health did not have a significant influence on support from children but it was associated with fewer contacts with and support from friends in the short term. Greater functional limitations were associated with lower levels of support from children in the short term for both men and women. Conclusion. Findings suggest that deteriorating health conditions in later life may negatively affect one's social relationships especially among older men. Interventions to minimize such disruptions and

implications of gender differences in social support in the face of declining health will be discussed.

**PD6 754 IMPACT OF THE FAMILY FUNCTION ON QUALITY OF LIFE AND FATIGUE IN KOREAN ELDERLY POPULATION**

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Background: This study was attempted to evaluate the impact of family function on quality of life and severity of fatigue in Korean elderly population. Method: Cross-sectional survey was performed in randomly selected 534 elderly subjects of nationwide sample of Korea Longitudinal Study of Ageing (KLoSA) in 2008. In this survey, family function level was assessed using the family APGAR, which was categorized as highly functional, moderately dysfunctional, and severely dysfunctional family. SF-36 is frequently used survey tools to evaluate quality of life, and it is consisted of eight objects which are PF(physical functioning), RP(role physical), BP(bodily pain), GH(General Health), VT(vitality), SF(Social function),RE(role emotional), and MH(mental health). We used Korean version of Brief Fatigue Inventory (BFI-K) to estimate fatigue level. We calculated crude means and adjusted means of both SF-36 and BFI-K items according to the family APGAR level. Results: Of 534 subjects, 526 subjects who completed each questionnaire were included in analysis. In the dimensions of SF-36 such as PF, RP, BP, GH, SF,RE, and MH, subjects with severely dysfunctional family showed lower adjusted mean scores of quality of life than those with highly functional family ( $P<0.001$ ). Only adjusted mean scores of VT were not different according to the family APGAR level. Subjects with severely dysfunctional family were more likely to have severe fatigue level than those with highly functional family ( $P<0.001$ ). Conclusion: Our study showed that elderly population with severely dysfunctional family was likely to have impaired QoL and severe fatigue. More attention is needed to identify this vulnerable population and to develop intervention programs for them.

**PD6 755 EXPERIENCES OF PEOPLE LIVING WITH EARLY STAGE DEMENTIA AND THEIR SIGNIFICANT OTHERS**

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Introduction: The incidence of dementia will increase along with the ageing of the population. Dementia has diverse psychosocial impacts on the life of the patient and the family and there is a need to develop rehabilitative and supportive nursing practices for people with dementia and their significant others. Most of the studies concerning peoples' subjective experiences of living with dementia are cross-sectional studies and there is a need for more longitudinal research. Materials and methods: This paper presents the ongoing longitudinal study that follows subjective experiences of both people living with early stage dementia and their significant others during the early phase of the illness. Research data consists of semi-structured in-depth interviews of both people with early stage dementia (n=8) and their significant others (n=8). The data has been collected at regular intervals during 1.5 – 2 years and is analysed using grounded theory -method. Results and conclusions: This study yields insight into the experiences of living with early stage dementia from the viewpoints of both people with dementia and their family members. Longitudinal research design enables to reach the people's experiences during the early phase of the illness. Findings can be used to develop nursing practices that involve both people with dementia and their family as an active participant in their care. This study confirms that it is necessary to hear the voices of people with dementia and their significant others through research.

**PD6 756 ELDER FINANCIAL ABUSE: ANALYSIS FROM PROFESSIONAL'S PERCEPTION**

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Introduction. The current research focuses on what the literature called « elder abuse » or « elder mistreatment ». Due to the aging of the overall population and greater concentration of wealth among older people, the number of elderly victims of mistreatment is increasing. Despite the methodological difficulties, recent studies provide information on the incidence of elder abuse. Faced with the importance of the phenomenon, others studies focus on the characteristics and the means to prevent or manage elder abuse. Aim and questions addressed. From a prevention perspective, the purpose of this research is to analyse the principal problem encountered by the previous studies: the difficulty to state a definition of elder abuse. Which elements allow to define a situation as a situation of mistreatment? From which moment do a situation become a situation that which can describe as a situation of mistreatment? Methods and materials. In order to answer these questions, we survey 50 professionals (paid caregivers, bank workers, insurance agents, judges and

notaries), witnesses of a situation of elder abuse. We gather and analyse two set of information: (i) their general perception of elder mistreatment and (ii) the characteristics of cases of elder abuse that they were personally witness. We focus the survey on financial abuse, one of the most common types of elder abuse. Results. The survey will be terminated shortly, but results available at this time allow (i) to define a conceptual framework of financial elder abuse, (ii) to construct a typology of elder abuse situations and (iii) to identify situations at risk. Conclusion. Elder abuse, in particular financial abuse, has serious implications for the victim's well-being and quality of life. This research highlights some preventive means and allows us to pave the way to a more extensive survey.

**PD6 757 NEEDS AND USAGE OF SUPPORT SERVICES TO AMELIORATE PSYCHOLOGICAL BURDEN AMONG JAPANESE INFORMAL CAREGIVERS**  
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Introduction: Since Long-term Care Insurance for the elderly was introduced in Japan in 2000, care services have helped informal caregivers by reducing the amount of physical care at home. On the other hand, caregiver's mental health has been largely neglected. Thus the prevalence of depression has been reported to be high among caregivers. The aim of this study was to describe the needs and usage of support services for mental health among caregivers. Also, the correlates of the needs and usage were examined. Methods and materials: The study was conducted using a convenience sample of 166 informal caregivers obtained through 34 home service organizations in metropolitan area of Tokyo. Self-administered questionnaire survey was conducted to ask the needs and usage of support services, such as telephone counseling, peer support group, and lectures to enhance care information. The physical and psychological burden of caregiving was also evaluated. Results: 69.3% were women, and average age was 62.3 ( $\pm 13.0$ ). 30% were daughters of the care recipients. 82% of the caregivers were willing to use at least one of the support services, suggesting potential needs for the services. On the other hand, 54.8% of the caregivers had not used any sort of the services at the time of the survey. Also, the data indicated that a person who had used one service was likely to use the other services as well. Conclusion: One of the reasons for not using the support services might be the lack of information on available support. Providing the opportunity of the services and persuading the use by care staff might increase the recognition of the services. Moreover, these interventions should target non-users of the services.

**PD6 758 EXPERIENCE OF WIVES WHO LIVE WITH ELDERLY APHASIC PATIENTS AFTER STROKE**  
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Introduction: To describe the experience of families who are living with elderly stroke patients with aphasia for understanding the life of them. Subjects and Methods: Ten patients (mean age: 71.9years, 9 with cerebral infarction and 1 with hemorrhage) over 6 months after onset or 3 months after discharge were included in the present study. Interview to their wives (mean age: 65.2years) were performed regarding the transition of emotion, affection and attitude against the patients from August to October, 2008. Results: Mean duration of staying home since discharge from hospital was 3.5 years. As a result of data qualitative analysis, the experience that wives did that divided into five categories. (i) Irritation and frustration caused by insufficient communication; (ii) Evasion out of the irritation of the husband. Recognition of aphasia; (iii) Grief and confidence after struggle; (iv) discovery of a space; (v) Maintenance of their lives and interest to go forth. The categories of these experiences were changed step by step. Conclusion: The above data suggest that wives of the elderly aphasic patients accumulate their experience prospectively for them to live as they like.

**PD6 759 INTERGENERATIONAL RELATIONSHIPS OF GRANDPARENT-HEADED FAMILIES AND ADJUSTMENT OF GRANDCHILDREN IN RURAL KOREA**

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Background & Purpose: There has been a sharp increase of grandmothers raising grandchildren in contemporary Korean Society. This phenomenon is mostly due to the increase of labor force participation of married women with children and also due to the recent increase of divorce and family dissolution. Rural area, especially, has more grandmothers raising grandchildren result from family dissolution than urban area. However, there is a lack of empirical research looking at the experiences of custodial grandmothers, intergenerational relationships and adjustment of grandchildren who is raised by grandmother without parent generation. In this regard, this study attempts to capture the effect of intergenerational relationships on adjustment of grandchildren. Methods: The data were gathered from 311 grandmothers raising their grandchildren in rural area as a primary care-giver, using structured questionnaire. The statistical methods used for data analysis were descriptive statistics, cross-tables, t-test, and regression analysis with SPSS WIN 12.0 programs. Results: There are differences in the factors influencing the level of grandchildren's adjustment in rural grandparent-headed families. Educational, economical and health status of the grandmother and health status of

grandchild are significant variables predicting the adjustment of grandchildren. Especially, the relationship between Grandmother and grandchildren is the most important factor on the adjustment of grandchildren. It suggests that the intergenerational relationship helps to identify grandchildren in trouble in rural grandparent-headed families. Findings highlight the importance of professional assistance and community services in minimizing the negative impact on grandchildren's well-being who is raised by grandmother in rural area.

**PD6 760 FAMILY CARERS OF OLDER PERSONS WITH STROKE – NEEDS AND RECEIVED SERVICE**

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Introduction Family carers (FCs) of persons with stroke often provide much care and have high strain/burden. The aim of this study is to examine what FCs perceive as important service and service quality in relation to experienced strain/burden due to caregiving, and also explore to what extents FCs' receive these service and quality characteristics. Methods and materials The present data emanates from a sub sample of the Swedish part of the EUROFAMCARE-project focusing family caregiving of older people. Inclusion criteria in the present study are; someone who is 18 years of 65 $\geq$ age or older and care at least 4 hours per week for a person who is years that have had stroke not living in sheltered housing or institutional care. The final study sample includes 183 FCs, a comparison is made between 64 FCs with lower strain/burden and 119 FCs with higher strain/burden. FCs were interviewed following a structured assessment. Results FCs consider it important that services improve their quality of life, that service is individualised and provide information, relief, counselling and good quality concerning interaction. There are few differences between FCs' with higher and lower strain/burden concerning their preferences of important service and quality characteristics and to what extent they receive these. Often less than 60% receives important services. FCs with higher strain/burden provide more care and perceive less wellbeing and quality of life. Conclusion The level of FCs' strain/burden of caring doesn't settle what type of service or quality characteristics that are most important to them. Though only about half of the FCs receive service important to them. The fact that there are almost no differences between the compared groups to what extent important service meet their needs might elucidate that FCs strain/burden has little influence on service organisations' (mostly public) decisions on their provision of service.

**PD6 761 OLDER PERSONS IN MULTI-GENERATIONAL HOUSEHOLDS IN SOUTH AFRICA - "THIRD AGE" IDEALS; "SECOND PARENTHOOD" REALITIES.**  
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Introduction: Entrenched inequality and pervasive poverty, exacerbated by an estimated 1, 2 million so-called HIV/AIDS orphaned children, set the overall context in which the majority of older persons in South Africa live. Sixty percent of these affected and/or infected children reside in grandparent households, thus obviously placing on the research and policy agenda the continuous asymmetrical dependency and needs of younger generations on older generations. Methods: Based on 46 narratives of HIV/AIDS affected and non-affected multi-generational households in urban and rural Mpumalanga, this contribution qualitatively explores the complexity of this asymmetrical dependency through thematic content analysis: How is it understood and perceived by older persons in relation to their understanding of the "traditional" intergenerational contract; what are the impacts on them? Results: The experiential aspects of these intergenerational relationships and how they relate to older persons' understanding of the intergenerational contract will be conceptualised and discussed to elucidate the multi-faceted and ambiguous nature of the intersection between the vulnerabilities, rights and contributions of these older generations.

**PD6 762 FAMILY SUPPORT OF ELDERLY FEMALES: THE IMPACTS OF MIGRATION AND HOUSEHOLD COMPOSITION ON SUPPORT NETWORKS IN VIETNAM**

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Family support for the elderly in Vietnam, like many Asian nations, remains a central mechanism for the care of this growing population. Similarly, Vietnam shares the growing concerns associated the increased flows of rural to urban migration that can strip rural communities of working aged adults; typically the backbone of family support networks. In many Asian nations, these migration flows leave elderly in rural areas with a reduced pool of potential caregivers while often placing increased burdens on the elders as grandchildren often remain in family home when parents migrate for work. This paper present research on the change in household structure that contain aged females in Vietnam using data from the 1989 and 1999 Census of population. While considerable work has been done in Vietnam on reproductive behavior and family, little has been done quantitatively to date on the lives of the aged. This paper examines how household support systems have changed in urban and rural areas as a response to internal migration, particularly during the "Doi Moi" period of economic reforms. The paper shows that there have been marked transitions in the composition of households that contained aged Vietnamese females but that they continue to live within an extended household system. These changes do suggest, however,

that Vietnamese women are facing new challenges in the structure of their coresident support networks that may have negative impacts if trends follow that seen for other Asian and Pacific nations. Using the information for the two available time periods we project expected levels of change up to the 2009-2010 period which will allow for the validation or improvement of our predictive models using data from the 2009 Census of Vietnam now under development.

**PD6 763 CARE GIVERS OF PATIENTS UNDER HAEMODYALYSIS: A SOCIODEMOGRAPHIC ANALYSIS**

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Introduction: A high number of patients under periodic haemodialysis are over 75 and they present a significant comorbidity. That situation significantly impairs their autonomy and represents an over pressure over their main care givers. Objective: To study the main sociodemographic characteristics of those patients as well as their health status perceived by their main care givers at home. Methods: Transversal descriptive study on 433 care givers of patients under non-hospitalary haemodialysis. Variables studied included, sex, age, family relationship, work status and perception of health status. When patients were studied we analyzed, age, sex, and level of dependence according to the Spanish Law that establishes three levels of dependence (moderate, severe and high dependence). Other variables relevant for the haemodialysis procedure such as care of the catheter, and administrations of drugs were included in the analysis. Results: The sex of the main care giver is mainly female (77%). Male care givers have a mean age of 76 (range 45-84). Females were 68 (range 38-86). As for their family relationship, 202 take care of their partner, 103 their parent, 30 their parent helped by their children, and 30 take care of another relative or friend. 46 people work outside home and 380 have helped for domestic tasks. The perceived health status by the care givers was fair for 294, poor for 144 and bad for 59. 232 care givers received specific training for taking care of patients under haemodialysis. Statistical analysis showed that the standard care giver was a female under 70 that does not work outside home. Conclusions: Patients under haemodialysis that are in the group of severe dependence are taken care mainly by old females, mainly their partners or daughters that show different perceptions over their health status.

**PD6 764 QUALITY ELDERLY CARE IN NURSING HOMES FROM FAMILY MEMBERS' POINT OF VIEW**

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Introduction The purpose of the research was to investigate the current state of elderly care offered in Slovenian nursing homes, and to ascertain proposals to achieve or improve quality elderly care. There is relatively little within the literature concerning the roles that family caregivers might play following an older person's relocation to the nursing home. Methods Sixteen family members (n=16) from four nursing homes (N=4) in Slovenia have been interviewed. Content method analysis was used to conduct family members' suggestions for quality elderly care. Results Family members were primarily concerned about the quality food residents get served and that liquids should always be on disposal. Additionally, family members expressed the need for good personal hygiene without use of aggressive cosmetics. They also indicated that more technology could increase the quality of life of residents in a manner to decrease waiting times and therefore physically safer environment could be established. Apartments were also issue of quality elderly care since arrangements and furniture proved inadequate. Family members expressed desire for more social gatherings with nursing staff members or heterogeneous social activities in nursing homes. Nursing staff members should also try to improve human relationship towards elderly residents. Conclusion A short model of proposals has been introduced that could lead to improved elderly care without extensive organisational changes or financial costs. Results have been used to produce some research materials and dissemination about family members' perceptions was made. A number of studies suggest that role redefinition is a crucial task for family members following placement of their elderly family members in residential care. Family members possess knowledge in relation to the older person and their desire to convey this to nursing staff members, as a basis for care planning, is increasingly apparent.

**PD6 765 AGE AND GENDER IN A BRAZILIAN MILITARY LONG TERM CARE FACILITY FOR ELTERS.**

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U.S. Bureau of Census (1992) states that the need for long term care for the elder population increases as the phenomenon of demographic transition develops. In Brazil this phenomenon has increased the number of facilities devoted to shelter old people. Gerontological literature indicates that age and gender have strong influence upon life expectancy and health demands, therefore they can be considered differential factors in terms of the attention to be provided by long term care (LTC) facilities. This study presents

a profile of the dwellers in a Brazilian military facility for elders, the Casa Gerontológica de Aeronáutica Brig. Eduardo Gomes (CGABEG), in terms of age, gender and period of stay. It also compares this profile to literature data. Methods and Materials The profile presented includes all the dwellers officially at the facility in 12.07.08 . Average calculation was applied to calculate average period of stay and age. Data source was the social promptuaries kept by CGABEG's Social Work Department (Seção de Serviço Social). Results POPULATION PROFILE BY GENDER DWELLERS BY GENDER NUMBER OF DWELLERS AGE (average) TIME OF STAY (in years MEN 29 84 4,29 WOMEN 85 82,91 7,44 TOTAL 114 83,19 6,64 Conclusion In this study men are, in average, 1 year older than women. This is opposed to Brazilian's life expectancy. Unfortunately, there's no available data concerning to life expectancy among Brazilian military personnel in order to verify if this discrepancy is a professional trait or a distinctive feature of the studied facility. Further studies about the clinical profile of these subjects may bring some light to the question. Women's period of stay in the facility is, in average, 3 years longer than men's. As it is at most Brazilian facilities, women stay longer and go younger to LTC facilities.

**PD6 766 FILLING THE GAP IN CARE: CUSTODIAL GRANDPARENTING IN THE PHILIPPINES**

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Introduction In Filipino family, it is common for grandparents to take an active role in raising grandchildren. This is facilitated by multi-generation living arrangements, and socio-economic and demographic trends such as increased participation of women in the labor force, improved health expectancy, high birth rates and the continued appeal of overseas labor migration. Methods and materials Based on the 2007 Philippine Longitudinal Survey of Aging, this study looks at the phenomenon of custodial grandparenting. It provides baseline on the proportion of older people involved in custodial grandparenting, and explores differences across socio-economic indicators. The 2007 PLSOA is a national survey of older people aged 60 and over. Results More than half of Filipino grandparents reported involvement in the care of their grandchildren. The most common form of care given by older people is babysitting and feeding. However, 35 percent of those who are involved in their grandchildren's care act as surrogates or custodial grandparents. Various reasons cited are employment of parents, including overseas work, child's own preference to live with them, marital separation of single parenthood. There is gender difference in the assumption of custodial grandparenting role, with slightly more females involved in grandchildren care than males. Results also show that custodial grandparenting is more pronounced in families with overseas migrant workers. Conclusion The involvement of older people in the care of grandchildren is expected of societies that emphasize strong family ties where high intensity of support is extended to family members. This also manifests Filipinos' concept of parental obligation that goes beyond one's nuclear family. The pattern however has important implications on older people's well-being.

**PD6 767 THE BURDEN OF FAMILY CARE GIVING SEVERE DISABLED POOR OLDER PEOPLE IN CHILE**

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Introduction Chile is placed among the ageing countries of Latin America with LEB, fertility and mortality rates similar to European countries and the USA. The increasing age-associated health problems although limited resources for caring the elderly in a context of poverty, face government to a significant demand of health-care and social support. The aim of this study is to examine family care giving of poor elders in Chile Subjects and Methods Cross sectional study conducted in 2006-2007 in 221 home-bounded elders 35.8% men and 64.2% women (mean age 79.7y and 83.5y respectively) and their carers (89.6% women, mean age 53.1y). Socio-demographic, health, nutrition and living condition variables were gathered. The burden of care-giving was estimated through Zarit's burden of care-giving scale Results Main causes of dependency were stroke (38.1%) dementia (23.7%), and muscle-skeletal diseases (22.1.3%). Disabled subjects seldom lived alone (4.1%), 81.8% had <6y or no education, 93% received professional medical care and 68.4% have good nutritional state. The care was performed mainly by women (89.6%, 18% spouse, 53.8% daughters), 38.6% of carers have been the main caregiver for > or equal 6y and had no vacations during the last 6 years. Half of caregivers had received training or share the care with other relative. Care-givers self-perception of health was no good in 58.6%. A low burden of care-giving was associated with receiving help (OR 4,3 95% CI: 2,0 – 9,1) and negatively with dementia (OR 0.47 95%CI:0.2– 1.0). Taking care of severe disabled, being aged and taking > or equal 3 medications/day are negative factors for having good health perception (OR=0,42, OR=0,96 and OR= 0,43 respectively) Conclusion. The study depicts a high burden of care for women affecting their psycho-social

wellbeing. Initiatives supporting family caregivers are crucial to ensure the status and quality of care at home for both the recipient of care and the caregiver.

**PD6 768 COMPANIONSHIP, AFFECTION AND SEXUALITY AT END OF LIFE: ADAPTIVE NETWORKS FOR INTIMACY**

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It is generally believed that affection and physical contact represent important aspects of providing care and support to individuals facing life threatening health situations. Unfortunately very few representative sample surveys address both the issues of affection and sexuality in conjunction with declining health. This poster presents new finding on this subject using the recently released National Social Life, Health, and Aging Project (NSHAP) from the University of Chicago. Recognizing that the health of older adults is influenced by many factors, one of the least understood is the role that social support and personal relationships may play in healthy aging. NSHAP represents the first population-based study of health and social factors on a national scale, aiming to understand the well-being of older, community-dwelling Americans by examining the interactions among physical health, illness, medication use, cognitive function, emotional health, sensory function, health behaviors, and social connectedness. It is designed to provide health providers, policy makers, and individuals with useful information and insights into these factors, particularly on social and intimate relationships. Due to the unique design of the NSHAP, these data offer a unique opportunity to compare the measures and constructs of affection and sexuality among elderly in declining health as compared to those still in good health. The paper will reflect the evolving definitions of affection and sexuality and how these definitions evolve to incorporate, physical frailty, sexual dysfunction, and the emotional costs of care giving on the partner of the sick elder. We argue that the results reflect the positive benefits of affection and sexuality to overall health and emotional satisfaction even when behaviors normally defined as "sexual" become difficult and emotional satisfaction is achieved through other pathways that reflect affections and intimacy.

**PD6 769 THE STRENGTHS OF A „WEAK PROFESSION“—GERONTOLOGICAL SOCIAL WORK IN THE HELPLESS ENABLING STATE—THE CASE OF GERMANY**

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Introduction: In the discussion about professionalism Social Work is seen as a “weak” profession. Furthermore Gerontological Social Work often is seen only as an appendix to medical and healthcare professions. Especially in the care focussing work however, specific “weaknesses” are possibly turning into strength that is particularly asked for: the multi-professional cooperation, the multi-perspective and integrative view on “the case”, the systematic reference on people in their social environmental context and network relations. Methods and materials: The contribution argues (a) on a theoretical and analytic basis (i.e. welfare mix, social work as co-production, research on social networks and social support). It analyses (b) some important historical developments in Germany since the 1960s – including (c) own empirical research of some innovative network-intervention-models (i.g. “senior cooperatives”) and takes the international references into account. On this basis the contribution outlines (d) some programmatic conclusions. Results and conclusions: The presentation emphasizes cooperation, co-production and contextualizing in welfare mix as basic goal orientations – under the perspective of an impulse towards high quality work beyond professional boundaries rather than Social Work as a niche. It is argued that, based on the example of Germany, the situation in the sector of Old People’s Welfare represents a particularly suitable model for the examination of the concerning discipline-challenges and –chances of Social Work. It is outlined, that Germany in the face of the demographic changes turns into a “helpless enabling state” when not strengthening and implementing modern modes of “unprofessional professionalism”. As regards this development, the outlined approach of Gerontological Social Work could become an important pioneer, (a) also for other fields of Social Work and (b) for developments which are necessary for other professions in the realm of personal social services.

**PD6 770 CARING FOR NURSING HOME RESIDENTS WITH ADVANCED DEMENTIA: FAMILY INVOLVEMENT MATTERS**

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Introduction: Optimal care for nursing home residents with advanced dementia is more likely to take place when resident, family and staff work in concert toward that end. The resident's voice, however, may not be heard when faculties become impaired by dementia. Family involvement in care thus becomes that much more essential. In this study we explore the relationships between family involvement and changes over a one-year period in resident cognitive function, verbal and physical agitation and aggression, social skills, expressive language skills and affect. Methods and materials: Eighteen nursing homes in British Columbia, Canada participated in this study. Longitudinal data collection procedures were employed: at admission, at 6 months, and at one year following

admission. Sample size at admission was 198 residents. Relationships between family involvement and resident outcomes were measured at the individual resident and facility levels. Results: At the individual level, family involvement (e.g. as measured by trust in staff members, involvement in decision making, being informed about changes in resident condition) was related to less decline in cognitive function and social skills. At the facility level (i.e. family involvement and resident outcomes were aggregated for each facility), increased family involvement was associated with fewer residents who maintained good social skills but with a higher proportion of residents with lowered physical aggression but higher physical agitation. Conclusion: These results indicate that family involvement in care of dementia residents is important and complex, both at the resident level and at the facility level. The causal direction, however, for some of the associations requires further assessment.

**PD6 771 ETHNIC DIFFERENCES IN CAREGIVER BURDEN, SELF-EFFICACY, AND REWARDS AMONG WORKING ELDER CAREGIVERS IN UNITED STATES**

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INTRODUCTION: The aging of the population will increase the costs to employers and employees caring for older adults and require family supports that may vary across different ethnic groups. Research has shown that providing elder care has physiological and psychosocial effects on working caregivers. This study examined the differences among White, Black and Latino working caregivers in caregiving skills, caregiver burden, caregiver self-efficacy, and caregiver rewards as well as the effects of caregiving on quality of life, health and well-being. METHODS AND MATERIALS: Using convenience sampling, 276 working White, Black and Latino adults who were providing elder care were personally interviewed. RESULTS: The typical working caregiver was a 47-year-old woman caring for her 77-year-old mother. In the past six months, she had taken off work more than twenty hours and used the telephone at work between 1-5 times a week for caregiving responsibilities. Caregiver Self Efficacy was positively related to Caregiver Rewards ( $\beta=.424$ ,  $p<.001$ ) and negatively related to Caregiver Burden ( $\beta=-.310$ ,  $p<.001$ ). Regarding Caregiving Skills, Blacks rated their skills in communicating with their older loved one more highly than other groups ( $\beta=.332$ ,  $p<.001$ ) and were more likely to have taken more than 20 hours off work ( $\beta=.201$ ,  $p<.05$ ). Both Blacks and Hispanics remained less confident of finding caregiving information and resources ( $\beta = -.175$ ,  $p<.05$  and  $\beta = -.183$ ,  $p<.05$  respectively). Those caregivers with greater self-efficacy and greater Caregiver Rewards reported greater quality of life. There were significant differences in Caregiver Burden ( $F=7.35$ ,  $p=.001$ ) with Blacks feeling greater levels of burden. CONCLUSION: An increasingly diverse workforce might have differing needs for caregiver supports. Programs that raise the knowledge, skills and self-efficacy of working caregivers may reduce caregiver burden, increase caregiver rewards, and have a positive effect on the working caregiver's quality of life.

**PD6 772 EXPECTANCY AND PERCEPTION REGARDING AGING IN A COMPANIONSHIP CENTRE FOR THE ELDERLY**

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Objective: Analyse the expectancy and perception about the aging process of the members, and the staff who go regularly to a companionship centre. Representation: The descriptive research of the transversal kind: Materials and Methods: The Study was realized with 83 members and 18 employees who attend the activities developed in a companionship centre. The data was collected by a planned interview semi-structured based on the bibliographic review and in the results of the pilot project. The participants signed the term of free and cleared consent. The analysis of the interview was based on the technique of speech analysis proposed by Bardin. Results and Discussion: According to the samples, it became evident most of the female gender, married and with predominance in the average age between 60 and 70 years old. It was confirmed that the expectancy of the members and employees refer to the aspects of continuing, growing and improvement in the activities developed by the companionship centre, what distinguish the theme of belonging to the group was, it was more significant with elderly widows who live alone. Analysing the perception of the users about aging, it was verified that 22% of the employees and 48% of the members have a vision relatively negative, emphasizing speeches of unpleasant state of spirit, and the non recognition of aging. Conclusion: The expectation of the elderly directed to the colette stimulate the active participation in the companionship centre, corroborating the social integration and the identification of the potentialities. The negative perception about aging must be exploited and discussed in order to modify bias related to the moment with the employees and the members live. Educational gerontologic programs under the view of the permanent education, contribute to the end of mystification of myth related to aging.

**PD6 773 INTERNATIONAL FAMILY CAREGIVING: NEW TRENDS AND ALLIANCES**

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Nine countries have significant family caregiving infrastructure—Canada, Australia, UK, New Zealand, Ireland, Sweden, Finland, Taiwan, and the US—and they have been meeting for the past few years to develop an international alliance of carer organizations. This past

December, several of the countries were represented at the United Nations on a program to highlight caregiving issues. Gail Hunt of the National Alliance for Caregiving (US) has been spearheading the effort to incorporate the organization so that it can establish a formal relationship with the World Health Organization and the UN. This session will describe the mission of the new organization and how the group plans to share advocacy information through its website, and encourage more countries to develop their own carer organizations. Ms. Hunt will also describe recent caregiving legislation within these countries and new areas being researched, including support to carers in the workplace, young carers, and carer health.

**PD6 774 DOES PROVIDING SUPPORT FOR CHILDREN ENHANCE THE LIFE SATISFACTION OF OLDER ADULTS IN URBAN CHINA? THE ROLE OF PERCEIVED FILIAL PIETY OF CHILDREN**

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Introduction This study investigated 1) whether providing monetary and instrumental support for children enhances the life satisfaction among older adults in urban China, and 2) whether older adults' perception of children's filial piety influences the relationship between support provision and parents' life satisfaction Methods and materials Data used in this study were from a large, representative national survey: The Sample Survey on Aged Population in Urban/Rural China(SSAPUR) in 2000. This study consisted of 10,171 Chinese elders aged 60 and over in urban areas. Multiple regression analysis was conducted to predict older adult's life satisfaction with two sets of variables entered sequentially: 1) socio-demographic variables of older adults, monetary and instrumental support provided by older adults to their children; 2) interactions of monetary and instrumental support with perceived filial piety of children respectively. Results It was found that helping children with housekeeping and caring for grandchildren were associated with enhanced life satisfaction among older adults. However, the positive relationship between providing support and life satisfaction was moderated by parents' perception of whether their children are filial toward them. It's only when parents viewed their children as filial that providing support to their children enhanced parents' life satisfaction. Conclusion Although previous studies have showed that actively participating in intergenerational support plays a key role in the well-being and social connectedness of older adults, the findings of this study shed lights on the importance of perceived parent-child relational qualities and the sense of children's filial piety in realizing the potential positive effects of support provision on older adults. It seems that only when parents view their support as "worthy" or rewarding that their supports to children enhance their own psychological well-being.

**PD6 775 ELDER MISTREATMENT AMONG CHINESE AND KOREAN IMMIGRANTS IN THE UNITED STATES: AN EXPLORATORY STUDY**

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Introduction: Elder mistreatment (EM) has emerged as a serious public health problem affecting millions of elderly individuals in the United States. One of the greatest challenges in extant research is the lack of precise definitions and operational terms to facilitate the reliable assessment of elder mistreatment. Although sociocultural contexts significantly influence definitions about mistreatment, a paucity of data is available on Asian immigrant elderly, hindering the development of effective, culturally sensitive protocols for detection, identification, and intervention. We conducted a qualitative pilot study of definitions, perceptions, and experiences of elder mistreatment among Chinese and Korean immigrants in order to refine theoretical and conceptual constructs of elder mistreatment. Methods and Materials: The study was conducted in the San Francisco metropolitan area, California in the U.S. Data was collected concurrently from various participants through: (1) Phase 1: 20 in-depth interviews with mistreated Chinese and Korean elders (10 from each ethnic group) in partnership with the Department of Aging and Adult Services; (2) Phase 2: five focus groups (6 to 8 for each focus group; N=30-40)—(a) two groups with non-abused elders (one with each subgroup [Chinese and Korean]); (b) two groups with caregivers and non-caregiving adult children (one with each subgroup [Chinese and Korean]); and (c) one additional group with local professionals and interdisciplinary experts; and (3) Phase 3: 10 follow-up interviews with service providers who participated in the focus groups and agreed to be contacted for individual follow-up. Results: The findings suggested that the concept of elder mistreatment is quite complex and is intricately intertwined with the elder's cultural beliefs and attitudes about family, filial piety, caregiving responsibilities, and tangible and emotional needs. These beliefs impacted the perceptions and types of specific behaviors that are considered abusive or traumatizing to an elder. Conclusion: The findings of this study suggest the critical needs to capture the nature of elder mistreatment in cultural context and to integrate into existing elder mistreatment instruments. Social policy and government intervention must address the dire needs for the development of

culturally appropriate and specific definitions and operational terms to facilitate the reliable, valid, and generalizable assessment of elder mistreatment.

**PD6 776 LIVING AT HOME WITH DEMENTIA : THE RELATION BETWEEN BEING IN ONE'S OWN HOME AND HAVING A SOCIAL LIFE**

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INTRODUCTION The importance given in living in one's own home is generally admitted even when care is needed as in old age. Habitat is an habitus (Bourdieu 1980), and this habitus is an essential part of well being. Does this apply for people with dementia? On another hand, continuing to take part in family or social life is supposed to provide spatial and temporal landmarks which can represent a caring and securing cocoon for those with Alzheimer. This better understanding of the relation between living in own home and maintaining social links led to the development of a study project. METHOD Our study was based both on 8 focus group meetings with 30 professionals from social, medical, and management background working either in domiciliary care, in a hospital or in a nursing home and 12 study cases and 9 interviews were realized . The results and key points were then discussed within a pluridisciplinary research seminar including a philosopher, an anthropologist, a lawyer, and a psychologist. RESULTS As dementia gets more severe, people living in their own home experience an increasing lack of social relations, putting them at risk of social isolation. According to the person's situation, to the stage of the disease, living in own home seems often to be less important than having relations and a feeling of familiarity with those around. Social links become then the main reference points and moving to an institution may become a suitable solution. CONCLUSION Trying to meet the needs of a person with dementia and proposing a relevant solution implies considering the interaction between the living place and social surroundings. Interaction between the different professionals is thus required to avoid an over-simplistic vision, in order to build a more refined approach.

**PD6 777 EVOLUTION OF THE CONCEPT OF RESPITE AND RESPITE CARE SERVICES: AN INTERNATIONAL PERSPECTIVE**

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INTRODUCTION Respite care is a priority of the third French Alzheimer Plan 2008-2012. On behalf of the governmental follow-up committee, Fondation Médéric Alzheimer established a typology of the different respite care services, based on a French and international literature review. METHODS Our study is the result of two national focus groups with 30 professionals from social, medical, psychological background, 10 interviews of family carers and people with dementia, and on field visits for practice and projects observation. This approach was completed by a systematic analysis of more than four hundred articles published between 1990 and 2008. RESULTS The key points of our analysis are that the most effective programs are those directed jointly towards people with dementia and their carers, combining several approaches and methods of interventions (Brodaty, 2003 – Mittelman, 2006). We observed a real paradigm change about respite care design and implementation over the past few years. One of the major features is the new consideration of quality of life for both people with dementia and their carers and not only the satisfaction of carers respite needs alone. Moreover, respite care services are more and more targeted and adapted to the individual situation. To illustrate these new trends, we will present different initiatives, for example, offering mobile community services to get closer to both users, preserving relationship between people with dementia and their family carers. CONCLUSION These new pragmatic approaches allow to diversify intervention modes and to adapt them to complex life situations, within different family contexts. These new solutions attempt to create more accessible, acceptable and effective respite care services.

**PD6 778 RISK FACTORS FOR MENTAL ILLNESSES IN ELDERLY IN A ROMANIAN DISTRICT**

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Objective: The evolution of the mental illnesses in Romania presents an ascending trend, from 507.4‰(1970) to 975‰(2007). We have identified the risk factors regarding to the demographical and social-economical Romanian context in subjects aged of 65 with mental illnesses. Material and methods: Our study was performed, according to ICD-10 diagnostic codes, on independent groups, using a randomized study group of 93 patients, comparing the data on two age categories(16-64 years; over 65 years), and appreciating the central tendency, variation, dispersion, and the degree of association between the variables. The data was statistically processed using the SPSS12.0forWindows. Results: Between 2005 and 2008, in the Arad County, we noticed a high frequency for anxious(143.75) and depressive disorders(104.25), numbers below the European, or world reported averages. The average of hospitalization days in psychiatric services during 1970-2007 is 26.8 days

for Romania, and 46.7 for the Arad County. The incidences of the mental illnesses in males present a high rise(0.22%oo(2005); 8.98%oo(2007)), due to the loss of socio-economically status(economical restructuring, unemployment). The median incidences on age categories increase from 38.26 in 16-64years group to 61.33 in the over 65years arm. In respect to cognitive decline, including dementia, this increase is steep in the over 65years arm, meaning 76.22vs.4.39. Age is a positive associate risk factor in women ( $p=.001$ ) and men ( $p=.041$ ), corroborated with the absence of professional activity(retirement). The risk rate for mental disorders is 8.33 in married and 2.92 in divorced people. Co-morbidities, such as HTA(24.7%), ischemic disease (18.3%), surgical trauma (17.2%) and metabolic syndrome (16.5%) are frequent associations in mentally ill subjects, when compared to the general population. Conclusions: The shortening of the hospitalization period with rapid family, social and eventually professional reintegration by the mean of the social support networks is of a high necessity. The treatment of co-morbidities may be beneficial by the lowering of the frequency of mental illnesses in elderly subjects.

**PD6 779 INEQUALITIES IN THE MORTALITY RATE AMONG ELDERLY INDIVIDUALS IN THE CITY OF SAO PAULO:SABE STUDY**

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Introduction: The ageing of the population occurs at an accelerated rate in developing countries, offering important new challenges. Longitudinal studies on the elderly allow the analysis of living conditions and health status in various cohorts over time. Studies on the inequality of morbidity, access to services and mortality rates are fundamental to identifying intervention needs regarding the prevention of premature death. Methods: The SABE Study on health, wellbeing and aging was carried out in 2000, in which 2143 individuals in the city of Sao Paulo aged 60 years or older were interviewed. In 2006, the study became longitudinal. Deaths were identified and inequalities in survival rates were analyzed in relation to health status and socioeconomic factors. The statistical analysis involved adjusted mortality rates, multivariate regression models and survival analysis. Results: A total of 649 deaths occurred in the study period (22.9%). The likelihood of death was greater among those with a more advanced age, males (29.2%), individuals with no schooling (32.0%), those in the lowest quintile of income (31.5%), those with self-reported bad health (41.6%), those having reported two or more chronic illnesses (28.5%), those reporting three or more difficulties in basic activities of daily living (62.1%) or instrumental activities (42.5%), those underweight (34.3%), those having fallen in the previous year (28.3%), those with cognitive deterioration (46.9%) and those hospitalized in the four months prior to the interview (34.2%). Conclusions: Social determination in the mortality rate among elderly individuals reflects inequalities in living and dying. Under the same health conditions, early mortality is identified as a function of probable unattended needs and difficulties in access to healthcare. The Brazilian healthcare system is a public policy focused on equity, but should seek to improve access to integrated care for chronic conditions and the early identification of frailty and vulnerability among older.

**PD6 780 FRENCH LEGISLATION IN END-OF-LIFE CARE: PARLIAMENT EVALUATION.**

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Introduction: The French law of April 22, 2005, relating to the rights of patients and of the end of life -also called Leonetti law- clarified medical practices concerning situations of end of life and brought new rights to the patients. Three years after its promulgation, Leonetti law has been evaluated. The main three questions for investigators were: Is the law well known? Is it well applied in all France? Do we have to change the law to improve medical care in end-of-life situations? We present some results of this evaluation. Methods and Materials: The French Parliament mission has been organised during spring and summer 2008. Four members of the National Assembly gave an audition to 64 speakers: dying patients, disabled persons, their families, doctors, nurses, psychologists, and some sociological, juridical, philosophical and economical experts. We attended to each one of these auditions at the National Assembly. Then we analysed all interviews. Results: Leonetti law clarifies medical care in the great majority of end-of-life situations. 95% of speakers asked not to change the law, but to make it better known and better applied all over France. Only 22% of all health professionals have been educated about this law, although 46% think they're well informed about it. In geriatric concern, it appears that society is not aware to the fact that old people often die alone, whereas some tragic rare medical cases benefit from exceptional media coverage. Conclusion: Although France tries to improve its legislation, to clarify medical practices in end-of-life situations, its laws remain insufficiently known and applied by professionals and people. The whole society needs long awareness campaigns for having the Leonetti law be better known, so as to improve medical care in most of end-of-life situations.

**PD6 781 GENOCIDE IN RWANDA AND ITS EFFECT ON THE WAY OF LIFE OF OLD PEOPLE**

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Introduction: The question as to how far the genocide has changed the social structures of the rural country of RWANDA should be discussed. It is also important to consider possible consequences of this for daily life of the people living in extended families. Methods and Materials: I carried out ethnological field research during eight visits to RWANDA between 1990 and 2008. The results are documented on numerous tape recordings, slides, videos. Results: The genocide of 1994 has changed RWANDA, the system of government and social structure were destroyed, extended families were torn apart. Murder was committed within the families. The state was rebuilt, however the social order of the extended families never recovered. Traditional life of extended families broke down. Young people live in the towns, murderers were in prison or in other countries outside RWANDA. The separation of young and old in rural societies has serious consequences, as old people have always been cared for within the family according to an unwritten generation agreement. This states that "a hare that has become old is suckled by the young". However, old people are now left to care for themselves through hard work on the fields. Loneliness, weakness, hunger and despair have led to an increase in suicide, and there is no new generation agreement in sight. Conclusion: Today RWANDA is keen to modernize and develop economically, but is not willing to provide for the elderly. The government insists on this traditional system of caring for the elderly within the family, although the young and old drifted apart a long time ago. RWANDA must confront this dilemma and find a solution to suit the changed economic and family conditions of the country.

**PD6 782 "WHO AM I? THE PHYSICAL EDUCATION ASKS IN THE WORK WITH ELDERLY AGE"**

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Introduction. This project presents partial data of a research developed by Universidade Federal de Santa Maria, at south of Brazil, it was funded by network CEDES of the Ministry of Sports, it aims to diagnose the work developed by physical education professionals with the elderly population. Material and methods. The first step consists in the definition of the included cities, and it starts from following data: I. cities with at least 170 thousand habitants (this number was provided by Instituto Brasileiro de Geografia e Estatística – IBGE, representing the midsize cities which can create an impact in a reading of national coverage, it was researched more of 5500 brazilian cities); II. Cities with Physical Education Course with actions for the elderly population; III. Availability on line of the information. After, the instruments for data collection were prepared for prefectures, state governments, universities and systems "S" (SESC, SESI, SENAI, etc.), that subsequent were presented in a site on internet, in which the employees put the data and they can view a part of general results, establishing interlocution with others projects. Results. 31 cities are being investigated, where happen the actions through 38 higher educational institutions, prefectures, state governments and the system "S", 371 periodics are being searched, whose are inserted in the so-called "quals" in the qualifications of the Brazilian government (national and international) beyond analysis of 124 dissertations and 7 doctoral theses, they were produced within 1997/2007 and they talk about physical activities and elderly people. Conclusions. Some regional differences are perceptible, as the concentration of universities at south and southeast, and also the articles authors and research groups. The pioneering of the universities' work is also perceived.

**PD6 783 ACCURACY AND RELIABILITY OF THE SHORT-FORM 36 HEALTH SURVEY IN CHILEAN ELTERS. THE ALEXANDROS STUDY**

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Introduction: Older people quality of life (QoL) is central in societies like Chile undergoing a rapid ageing. QoL validated instruments are required to guide the design and implementation of elder public policy. This study seeks to evaluate the validity of the Short-Form-36 Health Survey (SF-36) in a large sample of Chilean elderly. Methods and materials: Cross-sectional study in 3489 community-living subjects aged 60-92y (33% men and 67% women) conducted in Santiago de Chile, in 2005-2008. A structured interview including SF-36 was applied to the whole sample. Score of 8 subscales, Physical-Function (PF), Role-Physical (RP), Bodily-Pain (BP), General-Health (GH), Vitality (VT), Social-Functioning (SF), Role-Emotional (RE) and Mental-Health (MH), was calculated using the Standard method. Factor analysis was used to estimate scoring coefficients to build two summary measures from the 8 subscales. Lin's concordance coefficient was used to compare summary measures calculated by the Chilean-Specific and the Standard (US-based) scoring algorithms. Logistic regression analysis was used to estimate variables associated with the scores. Results: The subscales internal consistency was high and homogenous (Cronbachs alpha 0.84-0.85). Concordance between the Standard and the

Chilean-Specific scoring was very high (0.94). Factor analysis yield two factors -mental health (MCS) and physical (PCS)- accounting for 65.3% of total variance (MCS 55.1% and PCS 10.2%). High correlation (0.74-0.93) between MCS and MH, V, RE and SF were obtained. PCS correlated highest (0.78-0.85) with RP, PF and BP. Depression (GDS-15>5) was the main variable explaining low scores in both MCS and PCS (adjusted OR=16; 95%CI: 9.3-27.7; OR=2.1; 95%CI: 1.6-2.8, respectively). Conclusion: These results support the reliability of the SF-36 two-dimensional model. The SF-36 factor structure evince that MCS is more important than PCS among Chilean elders confirming the relevance of depression in this age group. Evidence is provided for using Standard algorithm as an accurate scoring for Chilean elder population. Funded by Fondecyt grant 1080589

**PD6 784 FACTORS THAT INFLUENCE THE CHOICE OF LIVING ALONE BY THE ELDERLY IN BRAZIL**

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Introduction: Family arrangements, socio-economic status (economic participation, schooling) demographic characteristics (age group, gender, family size) and health status may affect the reason why an older person lives alone. This study used the data from a 2005 population-based study performed in the southern city Porto Alegre, in Brazil to understand how these factors influenced living arrangements of the elderly. Methods and materials: The cross-sectional study involved 1,078 (777 women, 301 men) urban subjects (60 years and older) who answered a questionnaire exploring their life-conditions in a multidimensional approach. We constructed frequency tables of each factor by living arrangement (living alone, with spouse, with kids, with other relatives or with other people), and tested by chi-square test. Results: The mean age of the 1,078 participants was 71.8 years. Almost a fourth (23.5%) of the elderly in the sample lived alone. Having or not having kids ( $p<0.001$ ), gender ( $p<0.001$ ), age group ( $p<0.001$ ), and schooling ( $p=0.003$ ) were significantly associated with living arrangements, whereas self-assessed health was not. Specifically, living alone was more common for those who did not have kids (42%); for women (26% of which lived alone, against 18% of the men); for the older (32% of those 81 and older lived alone, against 18% of those 70 and younger) and for the better educated (25% of those with college education lived alone, against 16% of those who are illiterate). Conclusion: Living arrangements are influenced by age group, gender, and schooling. Living alone may be a choice of the elderly as a way to preserve independence and autonomy.

**PD6 785 IBADAN STUDY OF AGEING – RATIONALE, METHODS, AND CHALLENGES**

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Introduction: The elderly population in sub-Saharan Africa has received very little research attention. This presentation describes the rationale and method of a large community-based study of the profile and determinants of healthy aging in a developing country. Method: The Ibadan Study of Ageing (ISA) is a prospective study of non-institutionalized elderly persons, aged 65 years and over, residing in the community in eight contiguous states in the south-west and north central regions of Nigeria. Selection was based on a multi-stage clustered random sampling of households. One eligible person per household was administered face-to-face interview. At both baseline and follow-ups, physical and mental health status (including cognition and depression), quality of life and supportive social network are assessed. Blood pressure, anthropometric indices as well as motor performance are determined at each wave of follow-up. Verbal autopsy is conducted to determine cause when death has occurred. Results: Baseline assessments were successfully conducted on 2152 persons in 2002-2003 (response rate = 74%). Of the projected 3 wave prospective follow-ups, 2 have been completed in 2007 and 2008 with the third on-going in 2009. Other than from death, attrition has been low. Community engagement has been found to facilitate recruitment and retention in the study. Inclusion of basic physical evaluation and the offer of incentives are added factors for respondent cooperation and compliance. Difficulty accessing some villages and seasonal movement of some groups are challenges. Conclusion: The ISA demonstrates the feasibility of a cohort study in a developing country. It shows also provides examples of ways to surmount challenges in the conduct of such study.

**PD6 786 SOCIAL INEQUALITY AND ORAL HEALTH: AN EPIDEMIOLOGIC STUDY OF CEARÁ'S ELDERLY POPULATION, IN BRAZIL**

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Introduction: The Unified Health System research program: shared management in health (PPSUS), in the biennium 2004/2005 funded the study about the aging Ceará's population and their implications in the health system of the state. Part of the results will be shown with elderly of 60 years or more attended in Basic Unit of Family Health. Material and Methods: It is a study about (household – observational – cross) kind with probability sampling in the 22 regional health cells of the State of Ceará, involving 44 counties and

1069 elderly respondents through a structured questionnaire. The analysis of data was made by the program SPSS 10.0 for windows. Results: The results showed that the gender's ratio of Ceará (81.7) was superior than Brazil's, indicating the predominance of female on male, surpassing it in 22.4%. In education, it was found that 34.1% never studied, 27.5% were literate, 7.5% had completed elementary school, 26.4% started but not completed, while 4.1% reached the high school. Among men there is preponderance of retirees (82.4%), whose situation which is higher than women's (61.1%). For problems in oral health the majority (59%) found that the teeth were more affected, especially for residents in Fortaleza (71.3%) in comparison to the inside of Ceará (53.3%). The dental prosthesis was the most sought service between the various types offered, with 20.3% and 21.4% for males and females, respectively. When asked about access to dental services, 73.3% of elderly people without any financial income showed not had access. Conclusion: We conclude that the precariousness of the labor market, offering few or none chance of employment, ally to the livelihood of many families that are solely on account of public benefits and lack of offer of dental services, has provided a framework for dental mutilation and progressive exclusion of the elderly in Ceará.

**PD6 787 THE SPECIFIC AND UNIVERSAL ASPECT OF GETTING AND BEING OLD UNDER THE CULTURAL GERONTOLOGY PERSPECTIVE: A COMPARATIVE STUDY BETWEEN BRAZIL AND GERMANY**

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Until the middle of the last century the aging process was almost considered a characteristic of the industry nations. This tendency begins to change since the 1960s, when the non-industry nations, such as Latin American countries, began to experiment this process in a very fast way. Sure that the perspective of being and getting elderly in both realities differs quite from another, but is there something universal and specific in it? How much the cultural aspects can influence the phenomena of getting elderly? The main goal of this study was to investigate the cultural influence on the elderly process into two different regions, such as Europe (Germany) and Latin America (Brazil), in order to get to know cultural peculiarities and universal aspects of this period of life. To attain the aim of this study, 50 seniors, aged 60-100 years, were previously select in both countries, 25 seniors in Brazil and 25 in Germany, according to a list of criteria: successful aging, longevity, widowhood, old and sickness, old and family, old and nurse home, old and profession, old and poverty, old and wealth and so on. The 25 criteria were selected in order to make possible the comparative study and to stabilize a "prototype" related to the aging itself. The 50 seniors were interviewed in both countries and become the same questions to answer, according to their native language. The questions were related to follow themes: old and identity, definitions of being old, positive and negative aspects of age, family and relationship, elderly and social rights, generation relationships, sickness and aging etc. The Interviews took more than one hour by each senior. They were transcribed and analysed with the support of the Win Max Program for qualitative data. In general the seniors from both countries do not recognise themselves as elderly persons, they have a good relationship with their parents, the half of them accept age and its decline, however women have more difficulties in doing it, specially the common-wealth ones. On the other hand, the elderly men have more difficulty in accepting the retirement as they women do, especially in Germany. German seniors are more concerned about memory declines and loosing their independency. The Brazilians are also concerned about it, but not in an intensive way as they Germans do. The Brazilians seniors are more concerned about the well-being of their family and physical aspects as the Germans. Finally, the cultural aspects have lots of influences on getting and being elderly, this is also a result of the image of aging in both countries.

**PD6 788 CAUSES OF HEALTHY YEARS LOST DUE TO LIVING WITH DISABILITIES IN OLDER POPULATION IN THAILAND**

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Introduction: Longevity has shown substantial increase in developed world while mortality rates from chronic diseases increased faster in developing world. Thailand is a lower middle income country with rapid rising of older population and declining fertility rates during the last four decades. This paper aimed to examine the longevity and disabilities in older population in Thailand during 2004. Method: Years lived with disabilities were estimated for common 110 diseases in Thailand through incidence and prevalence data from secondary sources. Disability consequences from diseases were categorized into different weights according to severity-weighted disability from the Global Burden of Disease Study. Health Adjusted Life Expectancy was estimated based on Sullivan's method as in the Australian Burden of Disease Study. Result: Total years lived with disabilities in 2004 were 14 and 16 per 100 population for older men and women respectively. Their top three causes were similar in both men and women, i.e. cataract, deafness, and osteoarthritis. The following causes in men were COPD, and dementia while those in women were dementia, and diabetes. Expected lost healthy years (LHE) at age of 60 were 3.3 and 4.1 in men and women respectively. Conclusion: This study showed that expected healthy years lost decreased with increasing age but with higher proportion in years lived with disabilities. There is a gender difference that women were expected to live

longer than men but will spend a higher proportion of their life in poor health. Not only the results demonstrated how long is expected to live with disabilities, but also they highlighted its top three causes on which interventions should be focused in order to improve quality of life in older age.

**PD6 789 HOW TO PROMOTE THE ACTIVITY OF A MOBILE TEAM OF GERIATRICS?**

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Introduction: It becomes necessary nowadays to show the added value which brings such a team for their respective hospital and concrete arguments in relation to tutelage to reinforce their composition. Methods and equipments: • Subjective Valuation by a questionnaire addressed to the patients, families, nurses, doctors, social welfare • Objective Valuation by the statement of our activity reinforced by the data of the Department of medical computer science. Results: • By the first method: collection of 395 questionnaires - Availabilities of the team: good in 80 % of answers - Pertinence of the contents of valuation: good in 90 % of answers - Effectiveness of the team: 95 % of answers families, 80 % for IDE, 50 % for the hospital doctors • By the second method: valuation of 2414 patients over 4 years (2005-2008) with an average of age of 85 years and in total 4353 consultations —> geriatrics diagnoses: Malnutrition : 85 % , Falls with repetition: 70%, Cognitivo-behaviour Cloudy : 55 % , Anxio-depressive syndrome: 40 %, Bedsores: 20 %, State bedridden invalid: 10 % Their codification is a concrete added value which brings back for the hospital if proposals are indeed followed. —> avoided costs for the hospital from our activity in the emergency service: - Reduction of the medium length of stay: - 2 days versus patient hospitalized not seen by the team. (between J8 and J10). - Avoided hospitalizations: 29 % of P.A. seen in Emergency are directly orientated in Services of following care and readjustment and 10 % at home Conclusion: The promotion of our activity is especially recovering from our involvement in Emergency but the follow-up in service is important to diagnose the associated comorbidities .

**PD6 790 COMPARING ORAL-HEALTH-RELATED-QUALITY-OF-LIFE IN ELDERLY OF THREE SOUTH-AMERICAN CITIES. SABE STUDY**

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Introduction: Given the fasting ageing process and the scarce resources in Latin-American countries, improving the oral health status of elderly is very concerning. To describe inequalities of oral-heath-related Quality of Life (OHRQoL) in the three Latin-American countries at the most advanced stage of demographic transition process: Chile, Uruguay and Argentina Methods' & Materials: Data were collected in a cross-sectional study (SABE, 2000) conducted in 7 Latin-American capitals assessing elderly health and wellbeing. OHRQoL measured using GOHAI - a 12 items 5-Likert scale scoring 12-60. Analysis based on representative-probabilistic samples of Santiago-Chile (n = 1301), Buenos-Aires-Argentina (n = 1043) and Montevideo-Uruguay (n = 1450) of independent-living elders 59+y (35% men and 65% women; mean= 70y in three-cities). Descriptive statistics was used to characterize relevant variables, non-parametric test Kruskal-Wallis to compare results, and linear regression to estimate variables associated to OHRQoL. Results: The majority of elders in the three-cities are partially- or totally-edentulous (95%-99%). Elders needing dental prostheses ranged from 15% (Buenos Aires and Montevideo) to 19% (Santiago), with inequalities by gender (men:18.3%-27.2% and women:11.1%-15.2%, p<0.001) and years-of-education (33% no-schooling elders versus 5% >12y, p<0.001) in the three-cities. The GOHAI-scores percentile distribution is lower in Santiago (50%-percentile: 52, 75%-percentile:56, range: 13-60), than in Buenos-Aires (50%-percentile: 55, 75%-percentile:59, range:18-60) and Montevideo (50%-percentile:56, 75%-percentile:60, range: 20-60). Applying GOHAI-Spain scoring criteria (>57) as a cut-off point for an acceptable oral health, 85.5% elders in Santiago, 62.8% Buenos-Aires, and 56.1% in Montevideo require dental care. Gohai-scores are associated with lacking-natural-teeth in Santiago (-2.36, 95%CI:-3.46,-1.2) and Buenos-Aires (-1.4,95%CI:-2.32,-.44) and years-of-education in the three-cities (1.27, 95%CI:0.66-1.89; 1.56,95%CI:0.92-2.21, 1.17,95%CI:0.77-1.56 for Santiago, Buenos-Aires, and Montevideo, respectively). Conclusions: Results show a very bad oral health status, particularly among Santiago-elders. Social gradients are observed suggesting that policy promoting OHRQoL should just not focus in the biomedical and clinical aspects but in socioeconomic factors as education through the lifespan.

**PD6 791 PERCEPTION OF HEALTH FACTORS AFFECTING THE QUALITY OF LIFE IN ELDERLY PEOPLE IN SANTIAGO, CHILE.**

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Introduction: The perception of factors influencing the quality of life in elderly people in Chile has not been sufficiently analyzed. The aim of this study was to identify key domains

of health affecting the quality of life in this group. Material and Methods: A study with focus group was made in older than 60 year old, from different socioeconomic status living in Santiago, Chile. Participants of 16 groups were asked "factors that influence the quality of life"; areas related to health are described. The analysis was conducted with support of the Atlas ti 5.1. Results: With regard to health dimension, four major areas were perceived like factors affecting the quality of life: a) Acquisition of physical or mental illness affecting mobility, daily activities or the recognition of their surroundings and loved ones. The participants describe fear of progression of diseases associated with aging, also were identified process of adaptation to their present health situation. b) Medical Care: positive and negative perceptions are related to medical treatment, especially negative respect to drugs consumption, c) Quality of healthcare services: different possibilities of medical care support are perceived depending on the socioeconomic status. Healthcare is costly for their income, d) Prevention: It is related to physical activity, maintaining a daily routine of activities, having a good nutrition and avoids smoking and drinking. Several participants had recently purchased their negative life style behaviors and they describe as a personal responsibility to care for their own health. Conclusions: Older people recognized as determinants of health dimension affecting the quality of life, the likely future limitations of their physical and mental status and the healthcare support. Frequently, they describe the concern for their own healthcare for a future aging with best quality, assuming a personal responsibility. Programa Domeyko, Vicerrectoría de Investigación, Universidad de Chile.

**PD6 792 THE CONSTRUCTION OF CARE TECHNOLOGY FOR PARKINSON**

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Purpose: Interinstitutional nature project which had the purpose of developing care technologies promoter of autonomy and social inclusion of elderly patients with Parkinson's disease. Methodology: Four subprojects have been part of the study: functional rehabilitation technology, corporal experience, music therapy and group mutual assistance. Reconstruction, testing and assessment of the technologies were performed in a period of two years (2007 – 2008), replicated in two socio-geographical various contexts: Florianópolis, located in the southern region and Jequié, in the northeast of Brazil. The study happened in the context of local universities by recruiting participants – the parkinsonians aged - that comprised a casuistry of around twenty, on each context. The research execution experience of methodological type that requires relatively long fieldwork time has been both a challenge and rewards. Results and Conclusion: The computational electronic resources currently available contributed significantly to the success of the research, making agile the procedures implementation of the study and retorting, at the same time, in two articulated environments. The expertise of the research team, both the object of the study and the methodology adopted, has been the highest point of the study. Lastly, the proposal of the study had adherence to the interests and needs of parkinsonians who remained assiduous in testing the technologies and they certainly benefited from the experience of care. Key words: Care, Technology, Elderly, Parkinson's disease.

**PD6 793 PASS'AIDANT: AN INSTRUMENT TO IDENTIFY THE NEEDS FOR HELP OF CAREGIVERS OF ALZHEIMER'S DISEASE PATIENTS.**

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Background: Help for caregivers (CG) is a major component of the management of Alzheimer's disease (AD). Health care professionals and social workers who are not familiar with AD face difficulties to identify the needs of CG and to build a plan for help. Methods: We gathered a multidisciplinary groups of 10 persons involved in the AD patients care and caregiver education to list the needs of CG they identified in their practice. Questions were elaborated to exhibit one or several of these needs. Questions were formulated to be used as an autoquestionnaire. The needs were formally linked to one or several answers to questions and were implemented in a software. Results: Thirty one needs were listed and grouped into six dimensions: physical health, mental health, everyday life, knowledge, burden related to AD, relational environment. In addition, 9 factors of vulnerability were listed, as potential elements for weighting. The final questionnaire comprised 56 questions. It has been filled by 20 CG and was found to be easy to complete in less than 30 min. Minor clarifications were operated after this trial. In addition a simple software named Pass'Aidant was developed in order to automatically provide the needs from the CG answers, as well as personalized directions for helping them. Conclusion: Pass'Aidant might greatly help health care professionals and social

workers provide relevant advices to CG of AD patients. A formal validation process of this instrument is ongoing.

**PD6 794 SUPPORT NETWORK TO THE FAMILY CAREGIVER OF ELDERLY PATIENTS WITH ALZHEIMER**

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Introduction: The complexity of the caring process of a demented elderly in the family environment in continuous and lasting ways is a challenge for his quality of life and also the relative caregiver. It is added the public health service deficiency in dealing with the matter in an effective and efficient form. Objective: Building a state network to support the carer family of the elderly in demential conditions from 2002 to 2008. Methodology: From the involvement of professionals and carer relatives it has been stimulated the creation of groups of mutual assistance tied to Academic Institutions, Municipal Secretaries of Health and Non Governmental Organizations in the state of Santa Catarina to the assistance for carer families of elderly patients with Alzheimer's disease or similar diseases. The targets of the proposal consisted of: granting mutual support to the relatives; professional guidance on specific care for the elderly at home and stimulate the groups for a legitimate claim to their social rights and health. Results: With this work we have expanded the supporting group existing in the city of Florianópolis, Capital of the State, to 12 more municipalities of the interior of Santa Catarina. Thus, we currently attend, on average, eight hundred carer families of demented elderly per month through the supporting network. In addition, we are articulated with the Alzheimer Brazilian Association and we represent it in the state, as an organization of civil society. Conclusion: The organization of a network, still expanding, can provide support for relatives to seek creative solutions for home care from the exchange of personal experiences in the care of his relative and the access to orientation. In addition to monitor the provision of health services that meet the specific needs experienced by the elderly and their families in general and local levels.

**PD6 795 ORGANIZING FOR INTEGRATED CARE IN THE NORWEGIAN HOSPITAL SECTOR**

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Introduction In line with the Scandinavian welfare model Norway has a public health system with universal access and coverage which is predominantly tax financed. The state is owner of the hospitals and responsible for providing and financing hospital care. On the other hand the municipalities are responsible for institutional and home based long term care. Old patients are recognized as one of the most vulnerable groups in the transfer from hospital to municipal care. Different efforts have been made in order to reach the goal of Integrated Care. Materials and methods We approached 11 of totally 66 hospitals in Norway. Our cases represent both large and smaller institutions in four different health regions throughout the country. Information was collected through semi-structured interviews with managers and clinical leaders on different levels. Information was also collected from the hospitals' web pages. Results Organization All the hospitals have an "Integrated Care committee" consisting of representatives from both the municipals and the hospital. The daily activities are mainly managed in two different ways. Either they have a department (with great variation in staffing and tasks), or the responsibility is "in line" in the hospital organization. Although the sector is managed by central authorities a lot of local "grass root" initiatives were found. Agreements Formal agreements were negotiated in all cases. Some have an open agreement, mainly stating the mutual interest in Integrated Care and the common efforts needed to reach this goal. Others have a more specific agreement, describing different parts of the cooperation more in detail. Conclusions Various solutions in the challenge to reach Integrated Care in the Norwegian health sector have been developed. We plan a next step to study strengths and weaknesses of the different models.

**PD6 796 ANALYSING HEALTH PROMOTION DETERMINANTS FOR OLDER PEOPLE THROUGH SENTIMENT ANALYSIS**

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Introduction Our research was based on the national reports produced in scope of the healthPROelderly project (2006-2008) that aimed to promote health promotion for older people through producing evidence based guidelines with recommendations – on EU, national and local levels. Methods and materials Data analysis presented in this study was conducted on textual descriptions of country specific models of good practice in the area of health promotion for older people. A novel technique in gerontology – i.e. sentiment analysis was used to analyse the data. Sentiment analysis is used for identification of specific psycho-social categories in textual documents and depends on writer and content of the document. Results Analysis of sentiment in documents from 10 countries resulted in some interesting statistical measurements for selected psycho-social word groups. Analysis of general positiveness in text, that was calculated as ratio of positive words which was reduced by the number of negative words, shows the highest degree of optimism in

description of Czech and the lowest degree in Austrian models. Another interesting group of words that was included in analysis included pain related words. Italian and Dutch models expressed the highest degree in this category while Spanish and Slovenian models show the lowest values. Sentiment analysis of other determinants shows the great diversity between countries in a single determinant and also in the importance of various determinants. Conclusion It has been shown that sentiment analysis can be used as a research tool for analyzing textual documents in the field of gerontology to assess trends, compare models and countries. However, due to relatively small amount of text one should take care at categories with small frequency of included words as the variance of results may seriously influence the results in such cases.

**PD6 797 EVALUATION OF THE USE OF PHYSICAL RESTRAINTS IN A GERIATRIC FACILITY**

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Introduction The use of physical restraints for hospitalized patients with the aim of reducing the risk of falls and managing behavioral disorders is a frequent practice. The High Healthcare Authority had issued recommendations for the best practice of the physical restraints. Materials and Methods A study undertaken in 2002 over 21 facilities in the region of Nord-Pas de Calais has reached an assessment for the practice of physical restraint. And since then, awareness building trainings have been implemented. In 2008, a prospective and comparative study was done over a model of the clinical audit in order to assess the evaluation of the use of physical restraint. Results 1244 patients were included in the study. The prevalence of physical restraints was of a 65% increase in the three sectors of hospitalization (convalescence care, home care, and long-term home care facilities). The pathologies that were directly linked to physical restraint were falls (78%) or the fear of falls (79.6%) and dementia (60%). The decision to use physical restraint was taken after an agreement among the health care professionals in 74% of the cases. Reassessment of the interest in the use of physical restraint was of 47.2% and 93.6% of the means of physical restraint were adapted to the needs. Bed bars represented the majority of the restraints (96%) with a night prevalence of 66%. File traceability was of 64% and 26.5% were registered in the files. A 24-hour reassessment was performed in 14% of the cases. Discussion This study proves that awareness trainings lead to an improvement in the reflexes, in the team work and in the reassessment of the means of restraint. Conclusion This improvement in the approach is done in some facilities in the context of the evaluation of professional practices along with training sessions that should be pursued in order to provide high health care services for often frail patients.

**PD6 798 END OF LIFE CARE IN LONG TERM CARE INSTITUTIONS IN HONG KONG**

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Introduction: Long term care (LTC) institutions will increasingly face the issue of death. In Hong Kong, most dying residents of LTC institutes are sent to hospitals, which causes unnecessary interventions to the dying patients. Quality of care and quality of life would be much improved if end of life (EoL) care could be practiced in LTC institutions. This study examined the attitudes of stake-holders including the residents, their family members and service providers of LTC institutes toward EoL care and the prerequisites should EoL be implemented in the institutes. Methods and Materials: Five focus groups and two round table discussions were held in 2008. Thirty stake-holders were invited to the focus groups to explore their attitudes toward EoL service and to identify their concerns in implementing EoL in care homes. Twelve participants from four NGOs were then invited to participate in the first Round Table to explore the support required in launching EoL care in their institutes. Another twelve important stake-holders, including policy makers, professionals and NGO administrators were invited to the second Round Table to suggest ways to handle issues raised in focus groups and Round Table 1. Results: The older people and their family members supported EoL care. Respondents of different levels of care homes were also positive about implementing EoL care in their institutions; they had, however, three main concerns: (1) logistic arrangements that require support and planning (e.g. death certification, transferal to mortuary, manpower and space); (2) legal and policy issues that require clarification (e.g. coroner ordinance, advance directives); and (3) training and support for staff. Conclusion: Though there is a need to clarify uncertainties with policy-makers, to advocate policy change and to develop an operation protocol, the participants generally supported launching a pilot project on EoL care in LTC facilities.

**PD6 799 PROFILE OF ELDERLY PACIENTS ASSISTED IN A PRIVATE GERIATRIC ASSISTANCE IN HOME-VISITS IN THE CITY OF SÃO PAULO, BRAZIL**

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**Introduction:** The care of the rapidly aging population that represents a major challenge to the health system, especially the accelerated growth of the portion of elderly and very frail elderly. This group has a great rate of chronic and disabling diseases, when compared to other age groups, resulting in an increasing demand for health services and new methods of approach, such as managed care and home care. The objective is to describe the profile of the elderly for medical service demand in a private home care (HC) in the metropolitan area of São Paulo in the period from January to July of 2008. **Material and methods:** Retrospective descriptive study through review and analysis of medical records. **Results:** We treated 63 patients with a mean age of 80.3 years ( $SD = \pm 10$  years), 25 men (39.7%) and 38 women (60.3%), totaling 99 treatments. Of these, 64 were recorded in 48 records found. The highest frequency of visits was in patients aged 80 to 94 years (56.25%), with prevalence of females (63%). The most frequent causes of attendances were due to neuropsychiatric disorders (25%), cardiopulmonary decompensation of disease (4.7%), infectious processes (26.5%), osteoarticular disorders (14%) and monitoring of clinical routine (34, 3%). There were 7 hospitalizations (11%). There were no deaths in the home. **Conclusions:** The analysis showed a prevalence of elderly care at home to very old, female, with a significant number of infectious and neuropsychiatric complications, highlighting the fragility of this population lead to multiple diseases and various degrees of functional dependence. The low number of hospital admissions suggests effectiveness of early intervention at home, and clinical control through constant monitoring of cases.

**PD6 800 MOVING TOWARDS THE ELDERLY-FRIENDLY HOSPITAL. A PARADIGM SHIFT FOR THE HOSPITAL-BASED CARE OF THE ELDERLY.**

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**INTRODUCTION:** Patients 65-years and older accounted for over 1/3 of all acute care discharges and over 7 of all acute hospital bed days in Canada in 2006. Up to 1/3 of the cohort of frail elderly loses independent functioning in one or more activities of daily living as a result of the "hostile environment" that is present in the acute hospitals. **METHODS:** We propose a paradigm shift in the culture and practice of event-driven acute hospital-based care of the elderly which we call the Elderly Friendly Hospital (EFH) concept. Guiding principles include: a favorable physical environment; zero tolerance for ageism throughout the organization; an integrated process to develop comprehensive services using the geriatric approach; assistance with appropriateness decision-making; and fostering links between the hospital and the community. **RESULTS:** The implementation of the EFH concept is in progress in our multi-site, academic healthcare institution. Key actions include: a) integration of Geriatrics into the highest levels of planning for the hospital redevelopment to ensure that the new physical environment and approach to care will adhere to the guiding principles; b) promotion campaign to communicate the EFH concept and catalyze change; c) early identification of patients in the ER at risk for the development of delirium, falls and functional decline, coupled to a systematized program to prevent and manage these problems; d) implement an interdisciplinary team to assess elderly patients prior to high risk interventions and surgeries; e) develop an acute care for the elderly unit and co-management with Orthopedics, Cardiology, Oncology and f) development of alternative care pathways for post-acute care. **CONCLUSIONS:** The EFH concept we propose may lead the way to enable hospitals in the fast-moving healthcare system to deliver high quality care without jeopardizing risk-benefit, function, and quality of life balances for the frail elderly.

**PD6 801 PARAMEDICS ASSESSING ELDERS AT RISK FOR INDEPENDENCE LOSS (PERIL) – DERIVATION OF A CLINICAL DECISION RULE**

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**INTRODUCTION:** Older adults use emergency medical services (EMS) five times more than younger adults, and may depend on EMS as a safety net. Paramedics most often are called to provide care in older clients' homes. The study objective was to develop a clinical decision rule, using Paramedic observations, to identify older people at increased risk for adverse outcomes. **METHODS:** We conducted a prospective observational cohort study of people >65 years. We trained paramedics from 3 Canadian urban EMS services to complete a structured checklist of 40 predictor variables observed in the client's home. The primary outcome was death, hospitalization, or return to the Emergency Department within 1 month of the initial EMS encounter. Predictive variables were linked to population-based administrative databases to determine outcomes. We conducted multivariable logistic regression to identify a predictive model, and compared the final model to the

previously validated Identifying Seniors at Risk (ISAR) screening tool. **RESULTS:** Complete follow-up data are available for 571 subjects to date. The mean age was 80.1 years, and 61% were female. The two most common complaints were pain in (28.0%) and falls (21.8%). A multivariate predictive model with four independent predictors was significantly associated with our primary outcome (Goodness of fit Chi  $2 = 3.08$ , df=8,  $p=0.9292$ ), and performed better than the ISAR (AUC 0.65 vs. 0.59, -2log Chi sq =13.3, df=3,  $p< 0.005$ ). The PERIL decision rule is positive if a patient used EMS in the past 3 months, needed help with the activities of daily living, had chronic renal failure, or were judged by paramedics to be at high risk. The rule sensitivity was 87%, and specificity was 28%. **CONCLUSIONS:** Paramedics can identify a higher risk population of frail older adults. Future research will validate the PERIL decision rule and extend the follow-up period to one year.

**PD6 802 A RESEARCH OF CARING MODEL BY "EMPOWERMENT OF OLDER PEOPLE" APPROACH: AN EXAMPLE OF A NURSING HOME OF YMCA AT TAINAN CITY IN TAIWAN**

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"Empowerment of older people" has become an essential concept when we address "ageing in place". Older people began to act the role of self-management in their lives instead of being cared for by others. This is also an important transition for the social welfare field to explore long-term care for older people from the point view of empowerment. This study is a combination of analysis of existing documents and five months (from 1st August, 2008 to 15th January, 2009) observation data in a nursing home that was established by the YMCA in Tainan city in Taiwan. The nursing home was designed by applying the concept of "unit care" and "living place" for taking care of older people. The study divides "empowerment of older people" into three aspects, including empowerment of older people themselves, education and training of staff members in the nursing home, and coordination between families and communities, as the main research cores to explore the outcome of unit care in the nursing home in Taiwan. Addressing older people living in the the home in community and providing empowerment care and management in the nursing home, the results of this study indicate the following points are important in empowering seniors: 1. reconstruction of life in the unit, 2. interactions with the neighborhood and communities and establishment of a network, 3. improvement of daily healthy life, 4. professional integration between nursing and social work, 5. supports and flexible reactions of multiple care services, 6. extension and strength of the family network, and 7. establishment of community network and creation of holiday. In conclusion, older people can develop their maximum capabilities to manage their lives using their own choices and meanwhile can strengthen their interactions and networks with families and communities by implementing the concept of "empowerment of older people" and providing the "new" home for older people in the community. As older people recognize the "new" home, the nursing home can help older people rebuild their lives in the community.

**PD6 803 A MULTIFACETED APPROACH TO IMPLEMENTING HEALTH POLICY FOR IMPROVING THE CARE OF OLDER PEOPLE IN HOSPITAL**

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Introduction Older people are significant users of health services and in many instances an older person's functional independence deteriorates as a result of the hospital experience. Health policy articulated the direction required to enable older people to receive improved access to evidence-based care with an increased focus on the individual needs and understanding of the impact of ageing within the hospital setting. Methods A statewide approach to implementation was developed based on the need to demonstrate change in five key impact areas being: refocusing culture towards person-centred care, specific care needs, physical environment, training and development; and partnerships and networks. The changes involved for health services to deliver against the policy were significant and therefore a multifaceted and incremental approach to implementation was adopted. Results Significant improvements in the care of older people have been achieved. This required multifaceted change management at a number of levels including: - philosophical level, requiring a cultural reframing of how we understand and work with older people receiving health services to place the patient at the centre of their care; - clinical level, ensuring that we address the specific care areas that underpin the complexity and functional decline of older people in hospital; - physical level, making sure that our hospitals provide an environment that is conducive to maximising clinical care, self-care and access to services; - capacity building level, ensuring staff, patients and carers have the skills and resources required to address the changing needs of older people; - service system level, supporting health services to work within partnerships to achieve the best outcomes for older people. Health services have demonstrated a readiness to undertake the practice changes required to prepare for the increasing number of older people likely to require care and treatment in

the future. This has required a multifaceted and incremental approach to change management.

**PD6 804** REALISING THE POTENTIAL OF ICT: LESSONS FROM THE ACTION PROJECT

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Governments globally are promoting investment by health and social care providers in Information and Communication Technology (ICT). It is widely believed that ICT will enable people with long-term conditions to remain living independently in their own homes for longer improving their quality of life and that of their carers whilst reducing costs. However, despite numerous technological advances, the short history of research and evaluation in the field has demonstrated that the widespread adoption of ICT has yet to happen. The introduction of new technologies requires an understanding of the complex processes of 'innovation diffusion and adoption', increasingly known as 'translational research'. This means closes engagement with a variety of stakeholders including practitioners, providers, users and carers. This paper distils the lessons learned during the first 12 years of the ACTION project. ACTION uses ICT to support older people and their family carers in the community. It began life as a five country EU funded project (1997-2000) but since then has been through successive phases of development and refinement in Sweden. It has been adopted as a mainstream service in the municipality of Borås, West Sweden and is currently being piloted in 26 other municipalities. Central to the successful introduction is the active engagement and support of practitioners in the form of a 'community of practice' (CoP). The CoP is being facilitated by two experienced practitioners from Borås (Paul Svensson & Fredrik Arvevik) and delivered across diverse regions of Sweden using ICT as the medium. As a result, some of the complexities of 'translational research and how they can be addressed are being revealed. Lessons for wider application in other innovative scenarios will be shared.

**PD6 805** TESTING AND ADOPTING FLOOR-SENSOR SOLUTIONS IN DAILY PRACTICE FOR PATIENT SAFETY IN KUSTAANKARTANO NURSING HOME

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Patient safety is a prominent issue in nursing homes where falls, fractures and other injuries are unwanted outcomes of independent locomotion, particularly in presence of shortage in nursing staff. Technological devices for nurses to use in fall prevention programs need testing in living laboratories. Helsinki City Innovation Funds donated a 5-year grant to test and adopt technological solutions in Living Lab surroundings at Kustaankartano Nursing Home, Helsinki. In the first phase floors of ordinary two patient rooms were covered with movement sensors produced by ELSItechnologies, then an alarm system, functioning through cell phones, was tested. In the second phase, in connection with a large renovation work, ELSI technologies were installed under the floors in every patient room and all the living rooms in a three-floor nursing-home building for about 60 residents. In the poster, the sensitivity and specificity results of the step-by step testing process to detect and prevent falls are presented together with the results of a user-satisfaction survey.

**PD6 806** HOME CARE USERS CLUSTERS OF ACTIVITIES OF DAILY LIVING PERFORMANCE

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Background. Patients' functional capacity and social network are two of the most important variables to consider in home care healthcare plan. Generally, at the patients' needs assessment, Scales of Daily Live Activities are employed. The aim of the study was to detect home-care users' clusters with similar functional performance. Methods. Basic Activities of Daily Living (7 items) and Instrumental Activities of Daily Living (5 items) were measured in 166 home-care users for seven organizations that promoted home-care. Biographic variables were measured too. Clusters analyses were used to create homogeneous groups of users. Parametric (t-students tests) and non-parametric test (chi-square) were used to validate differences between the groups created. Results. Two clusters emerged from non-hierarchical clusters analyses. In the first group, with 37 individuals (30,3% of the users), the individuals appeared to have low levels of functional capacity. Opposing to it, in the second group 85 individuals (69,7% of the users) had excellent functional capacity. 44 users (26,5% of the users) were excluded of any groups. There weren't different between of different groups on all the biographic variables (sex, age, education and civil status) and the time as home care users. Conclusions. The heterogeneity on patients' functional capacity may imply that the home care is deeply dependant on offer than on demand. Low incapacity levels' patients represent an important

subgroup (Cluster 2) and they are lower cost to the organizations. Although this study doesn't consider random sampling, conclusions are consistent with other similar studies.

**PD6 807** MODELS OF NURSING HOME ADMINISTRATION: EFFECTS AND IMPLICATIONS

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In order to reduce personnel costs in nursing homes some welfare organisations in Germany are trying to implement new models of nursing home administration: Instead of employing one nursing home administrator (NHA) and one director of nursing (DoN) for each nursing home ("standard model") they have one NHA responsible for more than one nursing home (model "A") or a NHA which is responsible for the tasks of the DoN at the same time (model "B"). Up to now there is no empirical data available, if these new models of nursing home administration have an effect of nursing quality. Therefore we started in 2008 an explorative field study in 75 randomly selected nursing homes (25 for each administration model) in Bavaria (Germany) with a multimodal approach combining the assessment of subjective views of residents, staff and relatives as well as NHAs and DoNs. N=404 rest home residents, N=468 members of nursing staff, N=417 relatives and N=140 NHAs respectively DoNs volunteered for the study. The results of the study show some differences between the administration models. Residents living in "model a" rest homes complained more often about lack of contact to the NHA. Their relatives also rated the contactability of the NHA lower in these institutions. The nursing staff in these rest homes reported lower levels of job satisfaction and assessed the job competence of the NHA as lower as in "model b" rest homes. On the other side we did not find similar results for "model b" rest homes. The NHAs and DoNs saw clear advantages of the standard model of nursing home administration. The two other models were associated with a higher workload and having not enough time for needs of the residents. Summarizing the results, the "standard model" should be preferred, especially in large institutions.

**PD6 808** SUPPORTING PEOPLE WHO ARE AFFECTED BY BOTH DEMENTIA AND SIGHT PROBLEMS: TOWARDS A MORE INTEGRATED SENSORY MODEL OF PRACTICE

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Introduction The aim of this paper is to report on a scoping study about dementia and sight loss. The study set out to assess the extent to which existing models of best practice in dementia care are sensitive to sight loss issues. A further aim was to identify and propose ways of increasing sensitivity to sight loss issues in existing models of dementia care practice. The paper provides (1) an overview of the range of models deemed relevant to working with people with dementia, including the nightingale-based model, enriched model, preserved implicit memory model, multi level activity based and teleological model and (2) an assessment of the degree of sensitivity given to sight loss issues in these models and psychosocial and cognitive interventions such as reminiscence, multi-sensory stimulation and cognitive stimulation. Methods and materials Medline was searched using the terms 'models' and 'dementia care' and texts on dementia care were reviewed for sensitivity to sight loss issues. Results Insufficient consideration is given to sight loss issues in existing models of dementia practice and the dementia care literature generally, and the particular needs, rights and entitlements of people who are affected by both dementia and visual impairment are not made explicit. Conclusion Existing models of dementia practice need to take more account of visual impairment. A more integrated sensory model of practice is proposed and discussed.

**PD6 809** CLIENT INVOLVEMENT IN IMPROVING INTEGRATED SERVICES: THE NETHERLANDS DEMENTIA CARE PROGRAMME

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Introduction Dementia is a multi-faceted problem, which requires well targeted interventions at multiple domains of life of clients and their informal carers. At regional level this implies a wide range of coherently operating and collaborating services. However, practice is far from this objective. Therefore, the Dutch government implemented a four year nation-wide programme to improve regional collaboration in dementia care. The views and needs of clients and their carers were taken as a point of departure at regional level and they were actively involved in the improvement process. Regional networks of care providers and health insurers were supported by a nation-wide collaborative project-structure. Methods and materials The views and needs of more than 600 service users were assessed in more than 100 regional panels, and by more than 1,700 questionnaires. Moreover, documents and questionnaires among clients, informal carers, participating organisations and supporting experts were analysed to describe the processes and outcomes of the programme. Results The regional explorations of views and needs of service users revealed – in 'layman' language – five main categories of problems: being fearful, angry and confused; it is getting too much; resistance against institutionalisation; there is something wrong (what is going on and what might help?); miscommunication

with professionals. Based on the regional inputs of carers and clients, the 57 networks (covering more than 90 % of The Netherlands) developed regional plans and implemented 206 improvement projects. The paper addresses the types of projects and processes of this nation-wide approach. Conclusions The role of clients and carers in regional improvement processes appeared to be significant and the collaborative approach proved to be very supportive. However, a risks of too limited endurable implementation was also observed as a consequence of insufficient involvement of management and boards of organisations as well as fragmented funding and policy frameworks.

**PD6 810 CARING INSTITUTIONS FOR THE ELDERLY. A SOCIOLOGICAL INVESTIGATION**

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I am carrying out sociological investigation of care practices in nursing homes for the elderly. The investigation is informed by studies in contemporary moral and political philosophy. It also comes in the wake of recent developments in the ethics of care. The field survey is based on a qualitative methodology. It is so far based on a lengthy immersion in a nursing home. My survey examines in particular the scope of legal and ethical tools when it comes to the quality of care in institutions. For the literature basically points to two main ways to affect the quality of institutional care to improve the resident's overall welfare, namely, the setting of legal standards and requirements on the one hand and reliance on the moral resources of empathy on the other hand. My hypothesis is henceforth that, besides legal and moral standards, the quality of overall care requires "emotional work" (A. Hochschild), which must be studied for its own sake. This care work, given its attention to singularity, is refractory to formalisation. It seems to be transmitted primarily through on-the-job experience, by imitating peers during immersion in work situations. My investigation is striving to observe this unformalised transmission, such learning through mimetic immersion. I will present the results of this long qualitative observation in a nursing home and develop the hypothesis that should be deepened later on a comparative way.

**PD6 811 COMBINING WORK AND CARE: INTEGRATING CARE POLICIES WITH LABOR MARKET POLICIES**

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In the numerous studies of combining work and care, the focus is either on issues relating to labor market conditions or issues relating to care issues. A study of carers in Denmark that combined survey and qualitative interview indicates that it is necessary to think these two sets of policies together to be able to develop sustainable policies for carers and to insure frail people integrity and choice. This study comes from a country in which frail people are able to remain in their own homes (pensions allow this), in which home care is highly developed and in which the flexicurity model of labor market relations is advanced. It is also a society in which about 77% of women and even a greater percentage of men of working age are active on the labor market. The results of the study indicate that the home care services enable family members to keep their jobs and to supplement the care services. The labor market policies, on the other hand, while providing mechanisms for taking legitimate time off, are often structured in ways that do not recognize the specific carer needs. The paper will conclude with reflections about broader issues of thinking these two policy sets together.

**PD6 812 INVOLVEMENT OF A COORDINATING GERIATRICIANS' ASSOCIATION IN THE DISSEMINATION OF A NATIONAL PUBLIC HEALTH PLAN**

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Introduction The ministry of Health (General Directorate of Health) has entrusted the French Society of Geriatric and Gerontology to implement a plan for improving care practices in nursing homes for elderly dependant people (EHPAD) and, more widely, in healthcare facilities. Its name: MobiQual ( Mobilization to improve Quality of care practices). Methods and materials A multidisciplinary team has designed awareness, training and decision aid tools about pain, palliative care, "well-treatment" and depression. To spread this public health mission amongst the various EHPAD, which differ in terms of statutes, operating mode, management and internal functioning, this program must be presented to the largest possible number of healthcare facilities throughout the country and carried out by coordinating geriatricians, specialists in these facilities. Several dissemination strategies were considered to carry out these objectives, with a view to suiting this large inter- and intraregional variability. Meetings between administrators, relevant institutions and health professionals were held to decide on a dissemination strategy that takes into account local dynamics. Coordinating physicians' regional associations were part of that strategy. The experiment we present here was conducted in the South of France by a Coordinating Physicians' Association. Results It started on

December 2007 and all the kits were distributed after 10 months. A thematic approach for each meeting and a pedagogic presentation of the tools were found effective, with more participants at every meeting and an enlargement to include head nurses, hospital managers and gerontological networks. We still need to assess the benefits of these kits for their pertinence in helping health teams and improving care practices. Conclusion This dissemination plan also shows some limits: the EHPADs that never attended association's meetings weren't all able to benefit from MobiQual. A complementary dissemination strategy should be considered and improved by the assessment of dissemination and use of these kits.

**PD6 813 INTEREST OF A GERIATRIC POST EMERGENCY WARD WITHIN AN INTERNAL GERIATRIC MEDICINE WARD OF A TEACHING HOSPITAL**

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Because of the ageing of the population and the increase of the morbidity, the attendance of the emergencies ward by the old persons is growing. A geriatric post emergency ward (GPE) was created in 2005 within an internal geriatric medicine ward (IGM). Ward of 8 beds welcomes the persons of 75 and more years old with polyopathy admitted in emergencies. Descriptive, retrospective study of patients admitted in 2006 GPE and IGM. Statistics realized by software STATA. In 2006: 652 admittances in GPE representing 8.35% of the persons of more than 75 years care for emergencies. Average age is of 85.5 years (+/-6.07) with sex ratio of 1,7 women to man. Average duration of stay is of 4,64 days (+/-2,14). Admittances are made for 96,8% via emergencies. Main met pathologies are: cardiovascular (25%), infectious (17%), cerebrovascular accidents (8%), fall (4%), dementia (3%). Majority of the patients got back to its home (51.5%), for the others, they were directed towards a following geriatric care (33.1%), towards a not geriatric specialty ward (1%), towards psychiatry (1.1%). Rate of death is 5.8%. Rate of another hospitalisation unless 28 days is 11%. IGM and GPE are not statistically different ( $p>0.005$ ) in term of age, sex, place of life and exit orientation but they are different ( $p<0.005$ ) in term of average duration of stay, of rehospitalisation. Rate of rehospitalisation of IGM (15%) is more important than the rate in GPE (11%) this although the duration of hospitalization is shorter. Patients of both wards get back to their home in a dominant way to avoid break autonomy. Hospitalization is short, lower in 5 days to avoid the break of autonomy. Psychosocialmedical evaluation is realized facilitating direct home returns without rise of rehospitalisation. The nearness of the unit of IGM allows a reorientation of patients requiring etiological investigations.

**PD6 814 CONCEPTION OF A NEW HEALTH CARE STRATEGY FOR THE ELDERLY IN HUNGARY**

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In Hungary recently elaboration of a new aging strategy has got onto agenda of the government. This strategy will include all respects of aging population and extends to next decades. HAGG participates in the preparations of it, mainly of health chapter. This strategy is urgent on the basis of recent facts: 1. 21,6% of the population are 60 years old or older 2. Life expectancy is less than that in Western Europe (by 8-10 years) 3. Difference between the total and healthy life expectancy is large (about 8 years) 4. 45% of the elderly are restricted by their health status in everyday activities. Elements of the new strategy: 1. Prevention: launched in middle-age. a. Primary prevention: retardation of aging process and prevention multimorbidity (mental hygiene, motion, gymnastics, nutrition, dwelling, education, etc.) It is task for all sectors of the society. Main responsibility is at general pratical. b. Secondary prevention: obligatory introduction of so-called milestone-screening at age 60,70, etc. Participation of the elderly in general screening program e.g. cancer. c. Tertiary prevention: it is part of the treatment on all levels with special attention in order to prevent progression, complications. 2. Special experts with geriatric knowledge in all medical disciplines 3. National geriatric care setting with 3 levels of health provision: a. Geriatric consultation for outpatients b. Mobile geriatric team: for all departments in hospital, for nursing homes, etc. c. Geriatric hospital department with acute, readaptation and day hospital subdepartments. A regional, territorial system is needed, with a geriatric center with all subdepartments, in other towns only post-acute and day hospital subdepartments. 4. Integrated health and social care system with common leadership and task distribution. 5. Education of staff, suitable infrastructure, legislation. The final approval is expected this year.

**PD6 815 DESCRIPTION OF HOME CARE SERVICES OF THE CITY OF BELO HORIZONTE, BRAZIL**

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INTRODUCTION This work is part of the research "Home Attention: cartographies of management and care". Home Attention constitutes an institutionalized health practice that is spreading worldwide because of the population aging, the augmentation of chronic

illnesses and the raised cost of hospital attention, making possible to reduce costs, to promote the dehospitalisation and to humanize the assistance. For a better understanding of Home Care working process and organization structure, a historical rescue of some services was proposed. METHODS AND MATERIALS Qualitative study that aimed to characterize relevant Home Care services in Belo Horizonte, Brazil. The services were selected based in the researchers experience in the field. An informer-key of each of six services that provide or have provided Home Care assistance was interviewed. RESULTS The analysis show that the oldest service appeared in 1972, offering patients removal from their houses to hospitals and, later, taking care of patients in their homes. Currently, three services stopped providing Home Attention and two continue to offer. The studied services were organized to assist patients with chronic illnesses or out of therapeutical possibilities and all had multiprofessional teams. The services presented various modalities of attention and one of them had even a Home Intensive Care service; another one use to rent medical material and removes patients from home to the hospital. The analysis discloses that all services had inclusion criteria such as having a care-giver, users with walking disabilities, need for multidisciplinary assistance, among others. CONCLUSION The resurgence of Home Care in Belo Horizonte confirms a tendency to valorize this modality of assistance in Brazil and in the world, principally in the search for care humanization. It was observed the maintenance of some common characteristics among the services, such as team composition and patient's profile.

#### **PD6 816 WHY THE ELDELY GO AT THE DOCTOR'S OFFICE?**

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**Summary:** The demographic and epidemiologic transition obligate to health programs around of the world to take into account adjustment that guaranteed the health attention suitable. The present study analize which is the principal cause of attention in the consultory. In two years, ours checking files pertaining to the poblation of the Hospital for chronic sick in Tepexpan, México. The first complain will be associted at symptom related with depression. Study type: Transversal, Retrospective. Method: Checking files, analize the first reason mentioned by the patient or your family. Analize in tendency central measurement. Results: The firts on account of consult will be the symptoms related with the depression, following to articular pain, arterial hypertension, demencia and metabolic diseases between others. Conclusion: The epidemiologic transicition obligated to the health workers haven knowledge of the diseases prevailing in the elder population for guaranteed an health attention suitable and active aging.

#### **PD6 817 PUBLIC POLITICS IN AGEING AND CARE: IDENTIFICATION OF HEALTH AND SOCIAL NECESSITIES AMONG LOW INCOME OLD ONES IN SAO PAULO-BRAZIL**

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This research was developed from a partnership of the university, represented by four institutions- FM/USP, EACH/USP, FCM of the Saint Marries of SP and PUC/SP-with the National Association of Gerontology-SP and Municipal General offices of Health and Social work of Sao Paulo. We carried out a quantitative study - financed by FAPESP for four years from 2004-2008- of population base integrated to qualitative approaches to identify necessities of health and social work to be included in public politics of attention for 60 year old ones of low income. We have interviewed a sample of 780 old residents in two regions, 352 in the centre and 428 in the periphery of Sao Paulo city. We have also approached health and social work services wokers and elderly of low income of these regions by qualitative techniques (interview, observation and focal group). The results point to the necessity of the development of intersectorial public politics in partnership between university institutions, public power and not government organization compromised in this research. Besides it may contribute to definition of priorities to application of regional strategies of implementation of the International Plan of Action on Ageing of Madrid, respecting the responsibility of the governments in accordance with his legal landmarks of promoting and offering social services and basic health services considering specific necessities of old people.

#### **PD6 818 THE FRENCH NATIONAL PLAN "AGING WELL"**

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**Subject:** In France, the publication of the national Plan, "Aging well", in 2007, shows the ambitions in the field of preventive gerontology. Mission: The national Program "Aging

"well" preceded the national Plan of the same name and was launched in 2003. It emphasised the idea of proximity as an element of success in initiatives in the field. Becoming a genuine public health Plan in 2007, based on nine points of development uniting thirty-two measures, the national "Aging well" Plan (2007-2009) is placed under the aegis of the ministry of Health, Youth, Sports and Community life and the ministry of Employment, and family and solidarity social relations. Its target population is "seniors", and more particularly, people between the age of 55 and 75. This public health Plan provides preventive gerontology. It is in agreement with European recommendations within the "Healthy aging" plan. The French "Aging well" Plan is financed by a global budget of 168 millions euros over three years. But this amount integrates the cost of some measures intersecting with other plans and financed otherwise. 3 millions euros are added every year for call for tender, financed by the CNSA (the National Solidarity Fund for Autonomy). Results: Today, 21 of the 32 measures of the plan are a reality or on the point of becoming one. Three regional calls for proposals for projects have been made in 2005, 2006 and 2007. A total of 350 projects, proposed by actors have been selected according to chosen criteria and then financed. Evaluating these actions represents an essential point. The evaluation of the Plan's measures themselves is in progress. In addition, an evaluation of the selected projects over the last three years, assesses, in particular, their impact on health and socialisation; making it possible to propose practical and specially, procedural recommendations.

#### **PD6 819 FILIAL RESPONSIBILITY NORMS AND SUPPORT PATTERNS AMONG NORWEGIAN SONS AND DAUGHTERS**

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**Introduction** It is often assumed that women hold stronger filial responsibility norms than men, that daughters provide more help to parents than sons, and that filial norms predict provision of support. Are these assumptions confirmed in Norwegian data? Together with the other Nordic countries, Norway has been a vanguard regarding gender equality. This raises the issue of whether gender contrasts will be less pronounced among Norwegians than what has been observed in other countries. **Methods and materials** The analysis is based on data from two waves of the Norwegian longitudinal study of life course, ageing and generations (NorLAG). The first wave of data collection (T1) was carried out in 2002/2003, the second (T2) in 2007/2008. A total of 3796 persons (40-79 years at T1) have participated in both waves. This presentation will focus on those with at least one parent living at T2 (n=1306). We analyse filial norms, actual support and the correlation between adherence to such norms at T1 and support behaviour five years later (T2) among adult daughters and sons. **Results** Preliminary analysis suggests that sons are more positive to filial norms compared to daughters, more daughters provide support to mothers but more sons provide support to fathers, and adherence to filial norms has a positive effect on actual support for sons but not for daughters. **Conclusions** Gender contrasts in filial norms and support among Norwegians are only partly in line with common assumptions. More daughters than sons are involved in help and support for parents. However, when analysing support to mothers and fathers separately, we see that this is only the case for support to mothers. Sons are more positive to filial norms and agreement with norms at T1 is a much stronger predictor of provision of support at T2 for sons than it is for daughters.

#### **PD6 820 ON THE DYNAMICS OF INTERGENERATIONAL FAMILY RELATIONS IN LATER LIFE: WHAT INDUCES TRANSFERS BETWEEN OLDER PARENTS AND THEIR ADULT CHILDREN?**

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**Introduction** Research on private intergenerational transfers has gained more and more attention within social gerontology. It has become apparent that the allocation of private cash and non-cash benefits is salient, not only for the family as such, but also for the broader issues of social inequality and social policy. Analyses to date on the extent and the preconditions of private intergenerational transfers have remained cross-sectional, and have shown that resources of the giver, needs of the recipient, and relationship quality correspond in equal measure with familial support. Yet a reliable examination of theoretical assumptions being developed within the fields of social gerontology requires information on the dynamics of inter-generational support: can private transfers between adult generations in the family be described as reactions to shifts in resources or needs? **Method and materials** Analyses are based on the German Ageing Survey, a representative study on the German population aged 40 and older. Logistic regression is used to compare the structure of predictors (characteristics of parents, children and the relationship) of transfers cross-sectionally. Multilevel multinomial logistic regression is used to predict changes in transfer behaviour within parent-child-dyads by changes in the living situation of both generations involved and changes in the relationship itself. **Results** The predictor structure of transfer behaviour is consistent over a 6-years timespan. Longitudinally, shifts in parents resources are the strongest predictor for the dynamics of transfer behaviour – e.g. if there is a decrease in income, it is twice as likely that parents stop to support their children. On the other hand, if the child gets divorced or the relationship intensifies, it is less likely for transfers to cease. **Conclusion** The longitudinal results affirm that

intergenerational transfers can be seen as a function of resources, needs and relationship quality. Further research on intergenerational transfers should focus on its dynamic aspects.

**PD6 821 A TRASH-BODY: THE OLD-BODY FROM THE CHILDREN'S PERSPECTIVE**  
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**Introduction** Children have a lot to say about the social culture surrounding them. Through their background, children enable us to discover their habits, their day-to-day life, their games, as well as their wide knowledge of the society they live in. In this research, children are asked to emphasize their experiences regarding the elderly. During a period in which we live a verticalization of the familial relationships and a progressive multigenerational coexistence, it becomes fundamental to know the imaginations that different generations have of each other; in this case, the imaginations of the children about the elderly. **Methods and materials** This research has been performed with a Focal Group composed of sixteen boys and girls, between eight and ten years old, resident in Porto Alegre periphery, southern region of Brazil. Over eight meetings, the children drew, wrote and debated about the elderly, pointing out several aspects of their life, such as retirement, day-to-day life, diseases, intergenerational exchanges and the old-body. **Results** For this presentation, I propose to analyze the most outstanding and determinant part of this research, that is that one which tells about the old-body. We are old because our body gets old and we assign several social meanings to this ageing. In this research, children consider the old-body as a weak, dependent, wrinkled and ugly body; a body which is not desired, and which needs to be constantly improved and reset. **Conclusion** The children's knowledge is always the result of their own experience and the place where they live and is enriched by infantile ways of discovering and describing reality. Therefore, children's knowledge shows a wide cultural curriculum wherein they are included. This relates the old-body to certain attributes, which influence their way of being, acting and living, opposing it to the agile, muscled and desired young people's body.

**PD6 822 A COMPARATIVE ANALYSIS ON SUPPORT WITH PARENTS AND PARENTS-IN-LAW FROM MARRIED WOMEN IN KOREA, JAPAN AND CHINA.**  
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1. The purpose of this study The social security system and public support play a significant role in the financial well-being of old people, especially those with low income, but elderly people are still willing to accept financial and non-financial support from their families. On the end hand, Korea, Japan and China have both similarities and differences in their respective traditional family systems and kinship organizations. In Korea and China, filial obligations and expectations of kin support generate consensual agreement that only sons should provide the necessary security for elderly parents, while in Japan, daughters also have support for elderly parents. The purpose of this study was to comparatively examine whether financial support given to parents and parents-in-law by married women in Korea, Japan and China. 2. Methods. We analyzed three data sets, summarized below. The Korean National Family Survey (KNFS03) was conducted from September to November 2003 by the Korea Women's Development Institute. There were 5,412 original household questionnaires and the completion rate was 64.7%, yielding 3,500 respondents. A National Family Research of Japan Survey (NFRJ03) was conducted from January to February 2004 by the National Research Committee of the Japan Society of Social Family Sociology. The research population was aged 28-77 years and the total sample size was 10,000 and the completion rate was 63%, yielding 6,302 respondents. The family survey of China was conducted from September 2006 to February 2007 (FSC06). The primary sampling locations were Dalian, Shanghai, Chengdu, and Nanning. The research population was aged 30-75 years and the total sample size was 4800 ( 2400 from Chengdu, 800 each from the other cities) 3. Results and Conclusion. In Korea there was a higher discrepancy between giving and receiving financial support to parents-in-law, but receiving support from parents is similar to those who are providing financial support to parents. In contrast, in Japan, married women receiving financial support from parents and parents-in-law was a little higher than those who are providing financial support to parents and parents-in-law. But in China, married women receiving financial support from parents and parents-in-law was higher than those who are providing financial support to parents and parents-in-law.

**PD6 823 INTERGENERATIONAL SUPPORT AND SELF-RATED HEALTH FOR CHINESE OLDER ADULTS IN ONE-CHILD FAMILY—THE DIFFERENCE BETWEEN URBAN AND RURAL AREAS**  
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**Introduction:** As a result of the one-child policy, increasing number of older adults has only one child in China, which puts pressure on the traditional family-based support system for the elderly. This study is aimed at investigating the relationship between intergenerational support and self-rated health of one-child Chinese older adults, and examining whether there is a difference between urban and rural areas. **Methods and Materials:** Data (N=1101) were from a sub sample of people aged 60 and over who participated in the nationwide 2000 Sample Survey on Aged Population in Urban/Rural China (SSAPUR). Intergenerational support was measured through four dimensions of structural, instrumental, financial and emotional support. T-test and Chi-square analyses were first

conducted to exam the urban/rural difference on main variables. Hierarchical multiple regression was then used to test the effects of these four dimensions of intergenerational support on Chinese older adults' self-rated health in urban and rural areas. **Results:** Results of t-test and Chi-square showed that there were significant differences in terms of age, gender, education, marital status, and financial strain between urban and rural older adults who have only one child. In terms of the dimensions of intergenerational support, the results indicated that except the structural support, the other three dimensions of intergenerational support were significantly different between urban and rural one-child older adults. However, the findings from the hierarchical multiple regression analysis showed that only emotional support directly influenced older adults' self-rated health ( $t=3.93$ ,  $p<.001$ ) in both areas after controlling the demographic variables. Intergenerational support explained 28.8% and 30.7% variances in self-rated health for urban and rural older adults respectively. **Conclusions:** The results suggested that health benefits from emotional support should not be ignored when developing elder care policy in China to meet the needs of the one-child older adults in the coming years.

**PD6 824 FROM PATRILINEAL TO BILATERAL? : INTER-GENERATIONAL RELATIONSHIPS IN KOREA**  
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With rapid societal changes and consequent changes in family values and norms, intergenerational relationship dynamics changed dramatically in recent Korea. Main question underlying this study is whether intergenerational relationship changed from a patrilineal to a bilateral one in contemporary Korea. In order to answer this question, we examined whether there is a lineage differences in the types of intergenerational relations and related factors. Data are gathered from 552 adult children with at least one own parent and one parent-in-law alive. The latent class models are used to determine the minimum number of unique groups needed to represent the intergenerational relations. Multinomial logistic regressions are performed in order to identify the factors related with the probability of being in a particular relationship type. All the analyses are done separately by lineage and results are compared between maternal and paternal line. Main results are as following: Three types are identified both in the relationship with paternal and maternal parents. Yet, prevalence of relationship types differs by lineage. There also are lineage differences in the factors affecting levels of contact and support exchange between generations. Characteristics of maternal parents influence the relationship with paternal parents and vice versa. About 53% of the respondents keep close relationship both with paternal and maternal parents while only 20% have traditional, patrilineal type of intergenerational relationship. Results are interpreted as an empirical evidence of weakening of the patriarchal/patrilineal emphasis on intergenerational relationships in Korean family. Theoretical and policy-wise implications are discussed.

**PD6 825 THE ELDERS AND THEIR NEW ROLES: FROM DEPENDENT TO SUPPLIER AND THE MAIN HEAD OF THE FAMILY.**  
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**Introduction:** The peoples increase in the age group above 60 years is transforming the profile of the Brazilian families. Commonly in the past the elder was seen as a dependent person, but this tendency is being modified. Nowadays the elders are sustaining or helping to sustain the family and many elders are becoming the main head of the family. This research intends to investigate the new family configurations and the relationships between the aged and their relatives. **Methods and materials:** The elders of different social classes that seek the services of a Brazilian University were interviewed. In a first phase it was studied the 1098 registered seniors profile and of this universe a senior aleatory sample of 217 was selected who compose the qualitative part of the study. At the end of the data collection, being taken into account the saturation criterion the sample was composed by 34 elders and 34 family members. In the sample two instruments were applied: a semi-structured interview and Thematic Aperception Test - TAT (MURRAY, 1995). The results were analyzed through a technique of the content analysis. **Results:** It was verified a significant number of elders in the condition of head of the family, several family configurations with many children living with the elder parents, divorced sons and daughters returning to live with their parents, besides elders who help other relatives. **Conclusion:** The elder is playing a new role in the family, receiving the family's recognition for being the provider and being valued as somebody important that takes care, that welcomes and that takes responsibilities in relation to their relatives. These aspects reinforce the autonomy and the independence of these elders ones, that continue deciding about their lives, maintaining a social life activates and participating in their communities.

**PD6 826 THE ATTITUDES TOWARD SUPPORTING PARENTS IN TAIWAN: DO GENDER AND MARRIAGE OF CHILDREN MAKE THE DIFFERENCE?**  
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**Purpose:** The cultural norm of supporting elderly parents varies by society. In Chinese culture, following patriarchal system, sons and daughters-in-law take on the main responsibility of family giving. However, as the pattern of intergenerational transfer from

parents to daughters changes due to the social trend of low fertility, improvement of gender equality, etc., the social norm regarding daughters' responsibility may change. This study examines public attitude towards sons' and daughters' responsibility for supporting parents. In addition to gender, social norm regulating children's responsibility may be conditioned by their marital status. Furthermore, this study seeks to identify the factors that affect the attitude. Data and Methods: Data came from Taiwan Social Change Survey (2006). A sample of 2102 respondents was interviewed. Analysis was to compare the attitudes towards married sons, unmarried sons, unmarried daughters, and married daughters. Moreover, hierachic regression model was employed to analyze data. Results: Firstly, gender of children has the effect on the responsibility for supporting parents; controlling marital status, sons are expected more to support parents than daughters. Secondly, the effect of marriage of children on the responsibility for supporting parents was not found for sons, whereas, there is substantial difference between married daughters and unmarried daughters. Married daughters are least likely to be expected to supporting parents. Implications: The results indicate that married women gave the priority to play the role of daughter-in-law, rather than to play the role of daughter; and consequently provide less assistance to their biological parents. Social policy should address the unmet needs of the elderly with no children or no sons.

**PD6 827** RESPONSES TO AN ARCHITECTURAL INNOVATION FOR AGING IN PLACE

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The aging population is becoming a serious risk burden to the future of Korea faster than any other in the world and jeopardizes the future of the rest of Asia which constitutes a considerable chunk of world population and furthermore causes the stagnant rest of the global world which also suffers from Aging population. The elderly is no longer the minority and will be the majority in the future. To cope with this risk, architectural innovation is also needed among many other alternatives, such as smart home, community integrated group home, cohousing and etc. In the presentation, an architectural innovation was developed and the responses to the plan were identified and evaluated as a means to promoting aging in place. The innovative plan was "unit building insertion system" where elderly housing facility unit can be easily inserted as the number of the senior residents grows enough, into the existing building. In this case, older residents can remain in their existing community, while maintaining diverse demographic characteristic. The major research methodology was web survey. The survey instrument was made of graphics showing the system and a series of questions about its utilization. Graphics were developed by professional architects and designers according to the guidelines given from researchers. Data were collected from 300 respondents, and analyzed using SPSS package. As results, people's responses were favorable and found slight differences according to respondents' socio-demographic backgrounds. This research indicated that the Unit Building Insertion System has a great potential to alleviate social exclusion problem of the elderly, especially in low income public apartment. In conclusion, to cope with fast growing number of the elderly in Korea, the architectural innovation can be expected to play a significant role in integrating the elderly into existing community effectively. The details will be discussed in the conference.

**PD6 828** TOWARDS CONVERGENCE IN LONG-TERM CARE ALLOCATION PRACTICES? DETERMINANTS OF LTC USE IN EUROPEAN COUNTRIES.  
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Introduction In recent years several European countries have fundamentally reformed their long-term care (LTC) systems. However, levels of protection still vary substantially, one of the main differences being the extent to which a needs-based right to public services/allowances is effectively guaranteed. Our aim was to study what impact these institutional differences have on the way care-dependent individuals are cared for, by examining cross-national differences in determinants of care use. Methods and materials We used data from the 2004 Survey of Health, Ageing and Retirement in Europe (SHARE), which covers eleven European countries. Our analyses included respondents aged 65+ living at home (N=12,173). We examined cross-country differences in the effect of functional limitations, household composition and availability of children on formal LTC utilisation (household help, home nursing, any type), using multinomial and logistic regression models, and controlling for other needs indicators and socio-structural and enabling factors. Results Using Belgium as reference category, we found evidence of a more needs-related utilisation of formal care services in the Nordic welfare states, where allocation criteria have been tightened, and in such Continental welfare states as Austria, Germany, the Netherlands and France, which have (recently) introduced a needs-based right to care services/allowances. In these countries, France excepted, services also seem to be targeted more at elderly without informal support, albeit through fundamentally different mechanisms: tighter formal allocation criteria in Scandinavia and the Netherlands versus a stronger familialistic culture in Germany and Austria. Conclusions Long-term care allocation practice and the resulting profile of long-term care users seem to be converging towards greater targeting according to need and informal care availability in the Nordic and in most Continental European welfare states. Any evaluation of this trend must take due

account of the consequences for elderly people and their carers in terms of health and quality of life.

**PD6 829** THE ROLE OF LEADERSHIP IN FACILITATING SUSTAINABLE CULTURE CHANGE IN IRISH NURSING CARE SETTINGS

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Introduction The Irish Health Service Executive is supporting an evaluation of the Teaghlaigh Model on the culture of two of its nursing homes and to compare it with two traditional nursing homes, matched for size, location and leadership. The Teaghlaigh Model promotes person-centred care and a homelike environment, with domestic style units or households where residents direct their own lives, supported by consistent and valued teams. While person-centred care is acknowledged as the best outcome for patients (Farley, 2001) and nursing care staff are increasing expected to deliver the necessary changes in the culture of organisations (Health Information and Quality Authority, 2008), sustainable cultural change remains largely an aspiration of many nursing homes. Patterns of work can be so deep-rooted, inter-connected, and invisible, that attempts at change frequently do little more than scratch the surface (Price & Akhlaghi, 1999). The aim of this study is to explore the role of leadership in facilitating sustainable change in nursing home settings. Method A mixed-methods approach will be used to gather data pre-and-post implementation (November 2008 to February 2009). This will include interviews, observations, and focus groups with staff, residents and family members to provide an insight into working practices and attitudes to interventions. Data analysis will be based on grounded theory, which is an appropriate tool for studying organizational cultures (Strauss & Corbin, 1990). Results Preliminary results suggest care staff are supportive of the underlying ethos linked to culture change, but have many concerns around health and safety issues. Discussion Preliminary findings from this study point to a need for more open debates on the tensions between health and safety and quality of life of residents. Ongoing support has emerged as an important factor in terms of the meaningful engagement of resident and staff and the sharing of values, beliefs and norms.

**PD6 830** ASSOCIATION BETWEEN DISTURBING BEHAVIOUR IN THE ELDERLY AND THE USE OF RESTRAINTS IN INSTITUTIONAL ELDERLY CARE

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Introduction. The aim of the study was to describe nursing staff's modes of action in situations where they care for elderly people with disturbing behaviour in institutional elderly care in Finland. Methods and materials. The data were collected from nursing staff (n=1,148) working in healthcare wards, municipal and private nursing homes in Finland using a semi-structured questionnaire. The data were analysed using both descriptive statistics and multivariable methods. Results. The nursing staff used three different approaches when confronted with an elderly person with disturbing behaviour: 1) understanding, 2) indifference and 3) use of physical or chemical restraints. 88% of the nursing staff often acted in a manner that understands the elderly person. Restraining was used often by 14% and sometimes by 56%. 44% and 56% of nursing staff treated an elderly person with disturbing behaviour with indifference rarely or never, respectively. The use of physical and chemical restraints showed a highly significant correlation with the number of beds in the unit ( $p=0.001$ ) and the nursing staff's level of education ( $p=0.001$ ). Restraints in the care of elderly people with disturbing behaviour were used most often by nurses and practical nurses, while those with training other than nursing or no training used them least. Conclusion. Based on the results of our study, the use of physical and chemical restraints could be reduced in institutional care of elderly showing disturbing behaviour by limiting the number of beds in the units to no more than 20. The association of nursing education with the use of restraints is an ethically interesting finding that calls for further study. Our finding suggests that in nursing education, more emphasis is put on maximising the safety of elderly patients than on their right of self-determination.

**PD6 831** AMOUNT OF FORMAL CAREGIVING IS ASSOCIATED WITH RISK FOR HOSPITAL AND NURSING HOME ADMISSIONS

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BACKGROUND. Dementia-related declines in functioning increase patients' dependence on others to complete basic activities needed for health and survival. Typically, formal caregiving is used when patients' needs exceed informal caregiving resources. Many prefer home-based formal caregiving over institutional care. Little information exists about whether amount of formal caregiving is associated with patients' risk for subsequent hospitalizations and nursing home placement, potential consequences of insufficient caregiving. METHODS. Indiana Medicaid recipients with dementia were followed after

initiation of formal home-based caregiving. To assess whether amount of personal care and homemaking were associated with time to nursing-home admission, a Cox proportional hazard model was constructed. The Anderson Gill extension of that model was used to assess their association with hospitalizations. Both models adjusted for comorbidities, functional status, age, gender, race, marital status, region, insurance status, and presence of informal care. RESULTS. The median age of recipients was 80.5; 82% were female, and 68% were white. Patients receiving 5 hours of personal care and 2 hours of homemaking per month had lower hazards for hospitalizations compared to those receiving no formal care (HR=0.57; 95% CI= .43 - .77 and HR=0.58; 95% CI=.18 - .89, respectively). These hazards were 40% lower among patients who received 25 hours of personal care and 6 hours of homemaking per month. Each 5 hour increment in hours of personal care per month was associated with a 5% lower hazard of nursing home placement (HR=0.95; 95%CI=.92-.98), and each 5 hour increment in hours of homemaking per month was associated with a 20% lower hazard of nursing home placement (HR=0.79; 95%CI=.03-.65). CONCLUSION. Long-term care policy makers should consider that greater amount of formal home-based caregiving is associated with lower subsequent acute care and long-term care utilization.

**PD6 832 WHO PREFERS "DIRECT PAYMENT"? CLINICAL CHARACTERISTICS OF TWO GROUPS OF LTCI-BENEFICIARIES**  
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Introduction: In many EU states, the "direct payment" has been developed. Individuals that need care get money instead of service, to "purchase" care according to their needs. In Germany, this policy has been tested during the past four years. Individuals eligible for benefits of the LTCI could choose between benefits in kind and in money. The presentation will compare clinical characteristics of receivers of benefits in money and in kind. Methods and Materials: A subsample of the test participants receiving benefits in money (n=303, only persons 65+years) were assessed by trained care managers, who applied the standardized MDS of the RAI HC (Morris et al 1997). A control sample (n=608) selected of "regular home care users" underwent the same assessment. Results: No significant age and gender differences were found. The living arrangements were different: The service users more often lived alone and in housing of good quality than the receivers of the direct payment. Striking differences were found in the prevalence and distribution of disabilities (measured by ADL, Cognitive Performance Scale, Communication Scale), co-morbidities and symptoms. The prevalence of Alzheimer amounted to 31.8% in the sample of the money receivers (4.5% in the control group). 31.7% of money receivers, but 17.6% of the control group suffered from other dementias. The prevalence of "somatic" diseases (Hypertension, Heart failure, Diabetes) was higher in the control group. Conclusion: Persons who chose "money" were more disabled than clients of "normal" home care, and were characterized by a high degree of disability, clinical complexity, diseases, and symptoms, that required more than "just care and nursing", but counselling, support for informal caregivers, and rehabilitation. Reference: Morris J, Fries B, Steel K, Ikegami N, Bernabei R: Comprehensive clinical assessment in community setting. Applicability of the MDS HC. Am Geriatr. Soc.(1997) 45, 8, 1017-24

**PD6 833 MANAGING THE AGED CARE MARKET: THE CASE OF LONG-TERM CARE FOR ELDERLY IN JAPAN**  
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It is often said that the market mechanism does not enhance service quality in care market as there is information asymmetry between users and the providers. This research investigates the three arguments for this proposition by following methods: a) "Contract Failure" model claims that in care market the users can not choose a provider based on its service quality as there is the information asymmetry between users and providers. Thus, the user see the ownership of providers as the signal of service quality. To see if this "contract failure" model is valid, it needs to investigate the correlation between the actual service quality and the market share by ownership. b) Medical Arm Race (MAR) model argues that the competition in care market tends to lower the service quality. To be competitive in the market, providers spend money on advertisement or building (or equipment) renovation rather than improving the service quality itself. To see if this is happening it is valid to compare the performance between the providers in a competitive area and the provider in a non-competitive area c) Satake and Suzuki (2001)'s model claims that new entries in care market do not contribute to improvement in the market's service quality. In care market, they may spend resource on advertisement rather than service quality improvement. To test the validity of this model, it is necessary to compare the service quality performance between new and old entries. The methodology for the study utilizes the third party service quality evaluation of Group Home (a type of nursing home) in long-term care insurance (LTCI) market in Japan. Comparing the quality performance by attributes, all three models are not supported. Analyzing the causes, the research has found that the information disclosure of the third-party evaluation was very effective at bridging the information asymmetry.

**PD6 834 CHARACTERISTICS OF PRACTICAL HOME HELP USERS IN DENMARK**  
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Introduction Public practical home help is provided widely in Denmark. The eligibility and range of services are decided at municipality level, primary based on an individual

assessment on cohabitating status, capacity of caring and disability levels. This study aims to clarify whether psychosocial and behavioural factors were related to the use of public practical home help. Methods and materials Analysis was based on secondary data from the Danish Intervention Study on Preventive Home Visits in 34 municipalities conducted in 1999-2001. The study population included 2,990 non-institutionalised 75- and 80-year-old men and women independent in functional mobility at baseline, and psychosocial variables were measured with questionnaires. Information on use of public home help services was obtained quarterly through municipal registration. Logistic regression was performed using practical home help as dependent variable, and age, gender, cohabitating status, tiredness in mobility-activities, conducting light exercise, conducting vigorous exercise, life satisfaction, social diversity, social participation and instrumental social support as independent variables. Analyses were adjusted for intervention. Results 8% of the target population used public practical home help. Receiving home help was strongly associated with demographic variables, cohabitating status and disability level. After adjusting these eligibility-related factors, people with sedentary lifestyle and low quality of life, were associated with larger odds ratios of receiving home help. Variables related to social relations were not associated with use of home help except for instrumental social support. Persons receiving instrumental social support were associated with public practical home help during one year. Conclusion Sedentary lifestyle and poor psychological function in older people were associated with the use of more practical home help, while social relations were not.

**PD6 835 ACTUAL DISCUSSION ON QUALITY OF CARE IN GERMAN NURSING HOMES**  
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Introduction Since the introduction of long term care insurance in Germany, the question of quality of elderly care in nursing homes remains a big challenge. Despite a profound growth in knowledge there is still a lack of transparency especially concerning data with regard to the actual provision of care and quality aspects in nursing homes. Against this background the Institute of Gerontology at the University of Dortmund, the Institute of Nursing Care at the University of Bielefeld and the Institute of Social Work in Frankfurt realised the project 'Reference Models for the Promotion of Quality Development in Nursing Homes' (2004 – 2006). Main objective of this project was the development and evaluation of performance descriptions and quality criteria and their implementation into everyday life of nursing home care to improve the life and accommodation quality of the residents. Methods New developed care concepts were implemented in 20 nursing homes in North-Rhine Westphalia and evaluated. The evaluation process provided data concerning performance measures, actual provision of care and the design of the care process (qualification of staff, expenditure of time for individual care, organisation of care). Results The introduction of the concepts resulted in changes in care performance. With regard to a more intense resource supporting arrangement of care the amount of interventions adopted completely by nurses could be reduced, also an increase of more supportive interventions could be realised. In addition the allocation of psycho-social assistance was ameliorated. Discussion From the results of the project it is able to draw further conclusions for the reform process of the long-term-care -insurance in Germany. The evaluation therefore provides impulses for improved services for residents in nursing homes, a quality orientated assignment of nurses as well as basis for resident assessment and questions on expenditure of staff.

**PD6 836 PERSONAL CARE BUDGETS IN GERMANY AN INNOVATIVE APPROACH IN THE GERMAN LONG-TERM CARE INSURANCE**  
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For five years, the personal care budget has been experimented with as an alternative to care in kind. 900 people participated in seven regions of which 621 were part of the participating group, the accompanying research included regular assessments and re-assessments as well as interviews with the participants and their relatives. Moreover, surveys for a possible implementation were evaluated. The results: The people in need of care had more time and purchased different services than the ones offered by the long-term care insurances. - The relief of strain of family members in the participating group is significantly higher than the relief in the comparison group - The benefits of the personal care budget are a lot more cost-efficient than care in kind-benefits - The option of self-organisation and self-determination is highly important for the feeling of autonomy and thus for the quality of life - The personal care budgets limited feedback is in the first place linked with the resistance of established care providers, but also with budget-related transaction costs anticipated by the care-needing people and their relatives. - Additionally, the German nursing allowance is an alternative not requiring proof of usage - Flanking the grant of budgets by case management proved to be reasonable and effective regarding the quality of nursing care

**PD6 838 AGE AND POOR FUNCTIONAL HEALTH AS LIMITATIONS FOR EMPLOYMENT AMONG SENIORS**  
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Introduction Poor health is a well-documented reason to be out of work. But how poor a functional health is it possible to have and still be gainfully employed? In most industrial

countries there is a need for more workers to remain employed up in higher ages and with poorer functional health than to day. Methods and materials Data are from the Norwegian study of Life Course, Generation and Gender (LOGG). Age groups 40-79 years are included in the analyses (N=9120). Employment is measured as at least one hour paid work last week or temporal absence from paid work. Health is measured by SF-12 (Gandek et al. 1998) with some health dependent functions added, e.g. the distance one is able to walk without taking a pause. SF-12 scores are transformed to a decile scale. Results Health has a stronger effect on employment with increasing age. In the age group 40-54 years 53% of those in the lowest decile (the 10% with the poorest health) are working, compared to 41% of those 55-61 years of age in the same health decile. Thus many are working despite poor health. From 62 to 66 years optional pension is available for the majority of workers and larger proportions of those with good health are out of work. Above the age of 67 the majority are out of work even when their functional health is good. Conclusion Poor health is a limitation for work, but there is no clear cutting point where work becomes impossible. Age adds to the negative effect of health. With comparable health, older persons are more often out of work, even before normal retirement age. This age effect may reflect negative stereotypes of older workers.

**PD6 839 THE INFLUENCE OF AGE AT RETIREMENT ON SELF-PERCEIVED HEALTH.**

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Introduction Because of the ongoing public debate about increasing the age at retirement, it is important to determine the health consequences of age at retirement. The current study is aimed at the influence of age at retirement on change in self-perceived health. Methods and materials The sample for this study consisted of 200 retired persons aged 54-64 from the Longitudinal Aging Study Amsterdam. Retirement was defined as having a paid job of one hour or more at baseline and no paid job at follow-up. Multinomial logistic regression analysis was applied to test the association between age at retirement and change in self-perceived health. Several health measures and demographical, psychological, job and retirement characteristics were tested for possible confounding and modifying influence. Results Persons who retired one year older, had a 37% higher chance to experience a decrease in self-perceived health after retirement. Moreover, persons who had a partner and persons who were recently retired had a higher chance to experience a decrease. Persons who had not planned their retirement in advance however, had a higher chance of increased self-perceived health. Conclusion The current study shows that age at retirement does influence self-perceived health, with an increased chance of a negative effect when retiring at an older age. However, the findings underscore retirement does not categorically influence health.

**PD6 840 THE BIODEX BALANCE PLATFORM IMPROVES THE BALANCE IN ELDERLY**

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Introduction: The accidental falls are the most common cause of injuries in older people, and often result in disability and handicap, emotional distress and greater use of health and social services. The balance or postural stability can be described as the ability to maintain the body's center of gravity on the basis of support or support. Objective: Evaluate the effect of 6 months training with proprioceptive weight changes with the Bidex Balance System on fear of falling measured by the questionnaire FES-I test and risk of falls (Fall risk test) of the Bidex Balance System. Material and Methods: A randomized clinical trial in which analyzed 31 subjects older than 65 years, with a history of falling at least in the last 2 years (n = 17 exercise, control = 14). The intervention consisted of a training program conducted in the Bidex Balance System platform. Measuring instruments were the International Falls-Efficacy Scale (FES-I) to measure the fear of falling, and the level of risk of falls (Fall Risk Test) provided in the software Bidex Balance System Sd. Results: There was an improvement in the rate of risk of falls of 53.3% (95% from 13.5 to 82.8) ( $p < 0.01$ ). It also found a statistically significant improvement ( $p < 0.001$ ) in fear of falling assessed with a questionnaire FES-I, which is 18.6% (95% from -5.4 to 45.1). Both improvements are correlated with a Pearson correlation of .50 ( $p < 0.01$ ). Conclusions: 6 months of proprioceptive training with changes of weight in the platform balance Bidex Balance System produced statistically significant changes in the level of fall risk as measured by this platform in the fear of falling.

**PD6 841 A STUDY ON THE RELATIONSHIP BETWEEN PRE-ELDERLY PEOPLE'S PERCEPTION OF VOLUNTEER AND THEIR VOLUNTARY PARTICIPATIONS.**

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The pre-elderly people are healthier, more highly educated, and more economically stable than the aged of present and past in South of Korea. It would be needed to activate the voluntary work that enables the pre-elderly people to enjoy an independent and successful aging. The purpose of this study is to examine the perception of volunteer and voluntary participation of the pre-elderly who are over 50 and less than 64 years old. The study pursues research strategies: First, how would the pre-elderly people perceive the volunteer services? Second, how would the pre-elderly people participate in the voluntary work? Third, what is the relationship between the perception of volunteer and voluntary participation of the pre-elderly people? This study employed survey method with the questionnaire. Data were collected from 300 respondents who were selected by random sampling. The data were analyzed using statistic methods such as reliability test, frequency, simple correlation, between the recognition and participation of volunteer. As a result, we found as follows; first, in the perception of volunteer, the highest correlation between social exchange and seeking experience was showed. Second, the majority of the pre-elderly people were highly positive to participate in the voluntary work after their retirements. Third, the relationship between perception of volunteer and voluntary participation was moderately positively correlated. In conclusion, this study suggests that 1) it is necessary to publicize the volunteer service programs more actively; 2) Information concerning voluntary work needs to be given to the retiree at the time of retiring. 3) it is necessary to emphasize the social responsibility for aging life, which encourage the pre-elderly to participate in voluntary work.

**PD6 842 DEMOTIVATION OF THE ELDERLY AFTER ENTRY IN NURSING HOME**

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Introduction: The profile of seniors entering institution has evolved over the last twenty years from a person of 70 years, little dependent but wishing overcome daily contingencies, to a very elderly over 85 years dependent and who can no longer remain at home. Therefore entry becomes a decision more imposed than wanted. Method: The purpose of this work is to assess the experience and the psychological determinants of older people entering an institution for less than 3 months. The motivation is a symptom difficultly evaluated by several tools (SHAPE, EAD, Habib scores), which give different results, but partially correlated ; none can be regarded as the reference. Results: Of the 52 respondents, 34 were cognitively preserved (MMSE > 20) and 5 presented with demotivation. The questioning of the person found a correlation with the notion of frailty (Strawbridge scale), including sensory level. The assessment by the care worker correlated with the concept of dependence (GIR scale), especially in locomotion. The medical evaluation correlated with depression (Dep Ger scale). Atheism seems to be a marker of risk. Discussion: Identified determinants of demotivation are age, sensory and neuromuscular deficiency, polypharmacy and in particular a history of depression and, more generally, anything that might undermine the autonomy of the person, such as psychotropic drugs use for example. The lack of religious thinking also aggravates demotivation. However, dependency - as long as it does not provide too mothering care - seems rather a consequence than a cause of demotivation. A parallel can be outlined between somatic frailty and psychic demotivation. These variables were significantly correlated and appeared both as areas of autonomy. A global score is proposed combining the most clinically relevant issues. Then a four items questionnaire is proposed as a screening tool in retirement homes or in general medicine. This approach is justified only to better prepare the institution entering during the initial contact and the personalized individual support after the entry.

**PD6 843 OBESITY, PHYSICAL ACTIVITY, AND LIFE SATISFACTION AMONG RESIDENTS IN AN AGE-RESTRICTED OLDER ADULT PLANNED COMMUNITY**

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Introduction: Increasingly retirees are relocating to age-restricted planned communities that claim to promote active-living lifestyles through community design. Yet few studies have examined the health and healthy aging behaviors, especially obesity and physical activity, of older residents residing in a planned community for multiple years. The purpose of this study was to examine this relationship. Methods: A stratified random sample of residents in an age-restricted planned community in the southwestern United States were mailed a self-administered survey (N = 1268). Six hundred-eighteen residents of age 46-91 years (M = 67.6 +/- 9.6 yrs., men = 247 and women = 371) completed data for assessing body mass index (BMI), physical activity (PA), health status, years of residency, and demographics. BMI was formed into four groups. PA was categorized into three groups: meeting PA recommendations; under-active; sedentary. Chi square and analysis of variance (ANOVA) was used to examine group differences in the data. Results: Of the

residents, 63% meet the recommendations for PA (49.3% men, 76.8% women). At age > 85 yrs., 40.4% meet the recommendation. At age > 70 years, 77.1% men and 70.7% women meet the PA recommendation. Sixty-two percent of residents who lived in the community for > 8 years meet the PA recommendations suggesting continued engagement with PA overtime. The prevalence of obesity for both genders increased with age; however, men (25.5%) were significantly ( $p>0.01$ ) more likely to be obese compared to women (15.9%). Among obese residents, 62.8% were physically active on four or more days/week. Poorer life satisfaction was significantly ( $p>0.05$ ) related to obesity despite PA level. Conclusion: Older adults living in an age-restricted planned community appear to maintain their physical active and health regardless of age or sex. These findings contrast national normative data on retirees, indicating that planned communities can promote health in the aged.

**PD6 844 THE KEY TO A HAPPY, HEALTHY AND SUCCESSFUL LAST STAGE OF LIFE.**

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Introduction: - One effect of increasing longevity is to increase the number of years beyond 65, the traditional retirement age. This period of life may now stretch for decades. This research investigates the optimum way of using these years. Methods and materials: - A 'where we are at' profile of older Australians was established using a recognized Australian data base. Contributing factors to physical and mental health from the data base were identified. This was enhanced by interviews with 7 outstanding, achieving older Australians. Results: - The final stages of life are likely to be more successful, in terms of both physical and mental health, if older people plan for their retirement and have a purpose for these later years. Conclusion: - Older people need to be made aware that if they wish to have a physically and mentally healthy, successful latter part of their lives, planning is needed. They need to have a purpose, or life plan. This can involve continuing with work, either full or part time, or taking up a new interest or expanding an existing one, either paid or unpaid, the equivalent to full or part time work. Healthy old age requires physical and mental well being. Exercising and sport can assist physical wellbeing but having a purpose, feeling wanted, useful and part of the community are prerequisites for good mental health. Being involved in either paid or unpaid work and having a sense of purpose satisfies this need.

**PD6 845 INTEGRATED NETWORKS IN FRANCE: THE NECESSITY OF INTEGRATING THE PUBLIC POLICY MAKING FRAMEWORK**

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Introduction: The implementation of a model of integrated services delivery for older people – called PRISMA-, is currently investigated in France. PRISMA is an evidence-based model developed in Quebec. The first step of the model is to build coordination boards at different level of decision-making power. These boards bring together institutional groups, organisations and professionals and are guided by whole system thinking. They work in a joined-up, co-ordinated manner to insure high-quality services delivery. Methods: We used a qualitative analysis based on a triple approach. 1) We made a comprehensive analysis of the French national context through administrative, legislative and regulatory documentation. 2) We analyzed semi structured interviews with actors from all level of decision-making (national, regional, local) participating to PRISMA France. 3) We made observations and transcription of speeches during meetings of the coordination boards joined. Quality was insured by triangulation of analyses of different data sources and saturation of new themes. Results: A main theme emerged: the absence of a real institutional governance of healthcare and social policy for older people. The sequential, structural and incomplete reforms from a bismarckian system to a beveridgean one result in the cohabitation of three concurrent policies: central (national), regional and local. In this context, no authority has the main accountability to define the policy for older people. From these statements, the literature surrounding healthcare and social policy and social welfare allows to explain that the implementation of an integrating model is particularly complex and time-consuming in France. Conclusion: As Compare to Quebec, the implantation of the PRISMA model in France requires an important approach of integrating the national authorities. The lessons learned from this project are important for the current national Alzheimer plan which proposes to implement "homes for integration and autonomy for Alzheimer patients" (MAIA).

**PD6 846 GENERAL PRACTICE IN RESIDENTIAL HOMES: SUBJECTIVE NEEDS OF RESIDENTS**

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Introduction: In the Netherlands national policy on quality of care indicates care should be demand-oriented care. However, little is known about the demands of elderly people in

residential homes and senior housing. Therefore in this qualitative study residents were asked about their subjective needs for care by general practitioners (GPs). The focus was on GP care because GPs play a key role in providing care for residents. Method: Semi-structured interviews were conducted with a representative sample of 40 residents in residential homes and senior housing in rural and urban areas. Questions focused around subjective evaluations and needs concerning care for physical and psychosocial problems. Results: The majority of respondents is satisfied with their GP and is very reluctant to admit imperfections. Satisfaction was higher in the rural area. Most residents consider the relationship with the GP as more important than the actual care given by the GP. They believe GPs are very competent, especially in case of somatic problems. But according to the doctor-patient relationship residents have clear needs. Almost all want their GP to visit them on his/her own initiative, at least after they have been ill. They want a GP who is understanding, friendly and interested, which can be shown by taking time to listen. Due to sensory impairment and memory problems most residents prefer to have a nurse present during consultations, because she is very well informed about the residents' functioning. Afterwards she is helpful in remembering the advice of the general practitioner. Conclusion: Regardless of patient satisfaction being high in this study, there are still unmet subjective needs, especially in the domains of GP-patient relationship and the supportive role of nurses. The results of this study will be used to improve demand-oriented GP care in residential homes and senior housing.

**PD6 847 CARE CREDITS IN THE BRITISH AND GERMAN PENSION SYSTEMS: HOW DO THEY WORK AND ARE THEY ENOUGH?**

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European pension systems have been under pressure to reform in the last two decades or so, as a result of population ageing, the rise in pension expenditures and the changing structure of labour markets. The provision of care credits are an essential aspect of modern pension reform and protection, as the demand for eldercare continues to rise, however our understanding of their policy significance within pension systems but also more broadly as part of welfare protection, remains limited. Care credits, regardless of whether they are provided for child care or for the care of adult dependants, operate in three ways; firstly, as a compensatory mechanism for those who devote significant amounts of time to caring for dependants; secondly, as a vehicle for promoting greater gender equality given that the majority of caring is still undertaken by women; and thirdly, as a policy instrument for maintaining a carer's link with the labour market. This paper presents the first stage of a larger research project studying the role and significance of care credits in the British and German pension systems, focusing on the first of the three functions of care credits outlined above. The paper reviews the current policy context in the two countries to assess the level and nature of compensation provided to carers in the form of credits to their pension contributions, and the differences in provision between different occupational sectors and modes of employment.

**PD6 848 AGE-FRIENDLY CITIES' EPISTEMOLOGICAL ITINERARY: A CONTENT ANALYSIS OF FIVE INTERNATIONAL POLICIES IN AGEING DEVELOPMENT.**

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Age-friendly Cities of the World Health Organization (WHO) is an international program aiming at a better integration of older adults in their own community. It proposes a vision that benefits every citizen: "Children, the young and the old". Increasingly governments from several countries build upon the Age-friendly Cities program in order to meet the specifics needs of seniors living in urban areas. This program integrates the Active Ageing framework from WHO. More precisely, it's based on three concepts: health, participation, and security. This presentation will focus on presenting a reflective and critical look on these three fundamental concepts by analyzing their theoretical or epistemological background. Our aim is to understand Age-friendly Cities by grasping its historical foundations. For more than two decades, many international organizations have produced frameworks for public and social policies of ageing all around the world. Our work is based on a structural and a thematic content analysis of five international policies in ageing: 1) In 1982, the first World Assembly on Ageing in Vienna; 2) In 1999, the United Nations Principles for Older Persons; 3) In 2002, the Second World Assembly on Ageing in Madrid; 4) In 2002, Active Ageing framework; and 5) In 2007, the Global Age-friendly Cities guidelines. The results of our content analysis are divided into three parts. First, we will highlight the ideologies, value systems and representations found in each policy of ageing. Then we will compare the similarities and conceptual differences between these frameworks by insisting on the evolution over the time. Finally, we will draw the conceptual and theoretical pathway that lead to Age-friendly Cities program by insisting on the background related to each of the main concepts: health, participation and security.

**PD6 849 ASSESSING THE REGULATIONS REGARDING THE ACCESSIBILITY OF THE INTERSTATE LAND PASSENGER TRANSPORTATION SYSTEM (STRIP) TO ELDERLY PEOPLE: THE BRAZILIAN CASE**

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The Brazilian Public Authorities have been concerned about the accessibility of the Interstate Land Passenger Transport System - STRIP to elderly people. As a result, they have established a regulatory framework of measures to relieve the problem. However, the enacted measures don't always contribute to solve the problems they were meant to. Some measures are unacceptable because they make passengers with special needs go through embarrassing situations; others can make the STRIP unaffordable to low-income disabled riders. This type of flaw happens, among other reasons, because policy makers are not fully aware of how the proposed measures affect the accessibility of the system. This gap, in turn, is caused by the lack of knowledge of the factors that determines the STRIP accessibility; of the causality relations between the accessibility factors and the enacted measures and of the potency of the effects. Consequently, these factors hinder a coherent assessment of the accessibility measures. In addition, they lead to enacting ineffective regulations. This paper makes it contribution by studying the concept of accessibility to define assessment criteria for the accessibility measures for elderly peoples to the Interstate Land Passenger Transportation System - STRIP. These criteria aims to help policy makers revise the existing regulations and make more informed decisions on measures that are to be enacted. We will present a case study in which we assess Brazilian regulations against the defined criteria and then propose adaptations to the existing legislation. To achieve our objectives, five main methodological stages were undertaken. We took the following steps: a) revisited the theoretical concept of accessibility and identified its determining factors; b) defined criteria to assess accessibility measures c) identified enacted measures in the legislation; d) evaluated the accessibility measures comprised in the Brazilian legislation; e) proposed adaptations to the Brazilian legislation regarding the accessibility of STRIP to disabled peoples and peoples with restricted locomotion.

**PD6 850 COPING PROFILES AND PATTERNS OF THE ELDERLY LIVING ALONE IN JAPAN**

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Introduction: According to the ecological perspective, which is the widely-accepted social work theory, social work needs are brought about through interaction of stressors against a person and his/her coping attitudes and behaviors toward them. Therefore, coping attitudes and behaviors are one of the most important aspects for social work assessment. The purpose of this study is to describe coping profiles of the elderly living alone and to break down them into several patterns. Methods: The subjects were 2,907 elderly who actually lived alone, randomly selected from residents' registration of Itabashi Ward of Tokyo. Home-visit structured interviews were completed for 1,391 elderly. The Brief Scale of Coping Profile which consisted of 18 items was utilized to asses their coping profile. Results: Six factors were elicited by factor analysis and named as follows: 1) changing mood, 2) changing a point of view, 3) avoidance and suppression, 4) active solution, 5) consulting with others, 6) emotional expression involving others. Cluster analysis was performed using the average of total raw score of each factor. The five clusters proved to be the best explanation for patterns of their coping. The characteristic of the first cluster is that the score of all factors were high. Those who belonged to the second cluster showed higher score regarding "active solution". The third cluster was characterized by higher score regarding "changing a point of view" and "avoidance and suppression". The score of "changing mood" is higher in the fourth cluster. As for the fifth cluster, the score of all factors were very low. Conclusion: These results suggest that social workers need to approach to the elderly living alone considering their own coping patterns. For instance, social workers should especially be supportive for those belonging to the fifth cluster because they rarely try to take any coping attitudes and behaviors.

**PD6 851 THE EARLY DIAGNOSIS OF ALZHEIMER DISEASE : HOW THE MEDICAL AND SOCIAL ORGANISATION GIVES A HELP TO THE GP ?**

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Introduction: The team of medical staff and social workers of the Conseil Général of the Hauts-de-Seine (CG92) visits each person applying for the Allocation Personnalisée Autonomie; they notice that many persons have cognitive troubles, with no diagnosis. The objectives of this work are to point out these patients to their General Practitioner (GP) and check out if they consult a specialist. Methods and materials: First, we organised sessions, under the authority of Pr Bruno Dubois, to inform the GP about psychometric tests and clinical characteristics of the Alzheimer disease and other dementia. Then, we informed the GP that we would use the IADLs test - besides AG-GIR - to point out the first signs of loss of the social link: the results of both IADLs and AG-GIR would be sent to them

afterwards. This work, named DPMA92, started in 2006 as decided by the Plan Gérontologique 2005-2010. Secondly, we gave the epidemiologic and statistic analysis of the whole population Pr JF Dartigues. Results: 4484 cases were registered during 2007: 20,0 % had a diagnosis of MA or other dementia, 38,3 % had signs of cognitive impairment. The first results of the inquiry to the GP showed that among the 38,3 %, 18 % attended a geriatric consultation: the diagnosis was confirmed in 10,8 % of cases, 2,1 % were not, and 5,1 % were still being assessed. 82 % of cases never contacted the specialist because mainly of the patient himself (19,4 %), or of his family (6,9 %) or of his GP (25,5 %). Conclusion: The aim of the Plan Gérontologique of CG92 was to increase the number of patients led to the specialized consultation. This study shows that the diagnosis is slowed down by the person itself or/and the family or/and the GP.

**PD6 852 WELFARE STATES AND QUALITY OF LATER LIFE - DISTRIBUTIONS AND PREDICTIONS OF QOL IN A COMPARATIVE PERSPECTIVE**

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Demographic transitions are a driver of social change and societal ageing influences the resources and chances in life of different age groups. As a contribution to the debate on (potential) results of the transformation of social security in ageing societies, the impact of social security systems on distributions of quality of life in later life is discussed. Three basic hypotheses are examined and thoroughly tested: the hypothesis of (relative) levels, the distribution hypothesis and the social structure hypothesis. The empirical investigation includes the following questions: How do levels of quality of life in later life depend on welfare state arrangements? Is the variability of objective and subjective quality of life related to welfare state arrangements? What is the relevance of social structure indicators for this variability and how is it related to old age security systems? What can be learned for the perspectives of current debates on equity and social security reforms? The analyses apply data from 12 countries. While most of them are included in the first wave of the international comparative research project SHARE, data for England come from the English Longitudinal Study of Ageing (ELSA). Descriptive analyses as well as multivariate models prove an interconnection between welfare state systems and quality of life indicators but not all three hypotheses can be fully confirmed. The analyses confirm the 'level hypothesis' for three out of four indicators applied. Analyses only partly back the 'distribution hypothesis' as well as the hypothesis of social structure effect can also only be partly confirmed. Finally, a basis for extended future analyses is outlined.

**PD6 853 RESOURCES, EVALUATIONS AND SOCIAL CONTEXTS - DIVERSITY AND INEQUALITY IN LATER LIFE IN A MULTI-LEVEL PERSPECTIVE**

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Socio-economic status and resources and evaluations are pre-conditions for quality of life, autonomy and life planning in later life. The changing balance between age groups in ageing societies lead to a re-allocation of status, goods and positions - and therefore to a shift in inequality patterns. It also may lead to changes in trajectories into later life and new dynamics in later life courses. This is true for objective resources as well as for subjective evaluations and expectations of future dynamics. Both shape older people's behaviour in consumption and social participation but e.g. also influence retirement decisions, saving behaviour and social relations. These evaluations are connected to standards of comparisons on different societal levels. Hence, analyses must take into account the multi-level context of national points of reference as well as municipalities, neighbourhoods, social networks, birth cohorts and life courses. This presentation will, firstly, review the discussion on diversity and inequality dynamics in later life, discuss concepts and measures, and will, secondly, assess to what extent such dynamics in later life are effected by the dynamics of contexts. Empirical findings from multi-level analyses in a cohort-sequential and longitudinal perspective will be presented. Empirical analyses from prove independent impact of different context levels and their development over time on objective and subjective measures of economic well-being (and others) and its future development. This presentation will apply cross-sectional and longitudinal data from the German Ageing Survey.

**PD6 854 FAMILY CARE IN SWEDEN: POLICY, RESEARCH AND PRACTICE**

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Introduction: In Sweden, care of the elderly is a public responsibility. Yet, family carers are the major providers of services and support for older people. Methods: The 1990s was the decade when the family was "re discovered" in elder care in Sweden. This promoted new policies and legislation to provide support for family caregivers. Research in family care has shifted direction from a pure descriptive to a more applied and interventionist approach. Further, service development has been stimulated through national grants to municipalities to develop and provide service support for family caregivers. Results: Family caregivers are now more visible and recognised. A growing 'carers' movement' is lobbying local and national governments to provide easily accessible, flexible and tailored support for carers. Problems with targeting, service coverage, and quality of supportive services prevails. Future challenging tasks are to reach working carers, diverse caregiver populations and to

integrate family carers into the health and social service system. Conclusions: The carers' issue continues to stay at the top of the social policy agenda. In general, lack of evidences regarding the effects of support to caregivers has hindered the development services so far. Then, to ensure that services for carers will be improved, additional state grants have been made available for service developments, research, developmental work and knowledge dissemination. However, the Swedish government is now in the process of instituting legal rights to support for carers, to be enacted in July 2009.

**PD6 855 LIVABLE COMMUNITIES FOR OLDER ADULTS: THE PERSPECTIVE OF OLDER ADULTS FROM PUERTO RICO**

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Introduction: The present study ascertains the perspective of older adults in Puerto Rico on their communities, and identifies the challenges and prospects of the livable communities' model. Livable communities is a model of urban planning that assures that communities have the infrastructure that provides older adults access to the activities and services for successful aging. Methods: Three communities were selected that were over 30 years old, of lower middle-class socio-economic status, and had at least 25% of the population over 65. Three data collection strategies were used: key informant interviews; structured observation of external environments; and focus groups. Data was collected on the domains of the concept of "livable communities"; transportation, social and health services, pedestrian infrastructure, security, recreation and shopping. Data was also gathered on older adult's views of their community, its history and development, and the characteristics of communities for older adults. All data was triangulated to insure validity and explain inconsistencies. Results: Older adults define community on the basis of social relationships. The infrastructure of communities and different development trajectories have an effect on older adult's perceptions of the quality of social relations in a community and their ability to meet their needs. Some community developments, such as the commercialization of residential areas have brought mixed results, increasing access but raising other concerns. Other factors identified that affect perception and development of livable communities are: immigrating populations, and community organization. Conclusion: Our results indicate that besides the need for infrastructure, older adults perceive the need for meaningful social relations for a community to be "livable". Moreover, the different challenges present in the three communities studied suggest that the development of the "livable community model" needs to be tailored to the particular needs of the community under consideration.

**PD6 856 HETEROGENEITY OF DISABILITY AND ITS CONSEQUENCES FOR PROJECTING FUTURE CARE NEEDS OF OLDER CANADIANS 2006-2031**

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Introduction: Our research examines multiple factors that contribute to projecting the numbers of the population who will have care needs and proposes different scenarios in recognition of the heterogeneity of disability. Method: Using the 2002 General Social Survey, logistic regressions estimated levels of disability and those with long term health problems. Seven activities (a)personal care; b)everyday housework; c)meal preparation; d)grocery shopping; e)household maintenance/outside work; f) transportation; and g) banking/bill paying were analyzed in 3 groups. Group 1 includes those receiving at least 1 of a-d; Group 2 received both 1 of a-d and 1 of e-g; and Group 3 received at least 1 of e-g. The parameters were applied at five-year intervals in Statistics Canada LifePaths microsimulation model to project future demand. Results: Results indicate that G2 is very different than the 2 other groups and likely the group on which subsidized home care programs will want to focus. For example, compared to G1 and G3, G2 has a higher proportion of females, less educated, older, more often widowed, with a higher degree of severity. In comparison, only 20% of persons in G2 have no disability (39 percent are severely disabled) compared to about half of people in G3 and 1/3 in G1. Hours of support is 10 times higher in G2 (10.3 hours/week) than either G1 or G3 (1 hour per week) reflecting the importance of including the heterogeneity of disability in projecting future needs of older persons. Conclusions: Findings suggest that in the short term the proportion of levels of disability may slow down but the absolute numbers of persons receiving assistance to remain in their home will rise. Understanding these projections of people needing assistance to 2031 by the type of assistance needed will facilitate the development of targeted chronic home care policies for the future.

**PD6 857 THE ARCHITECTURE OF THE GERIATRIC CLINIC OF HOSPITAL SÃO PAULO - UEGHSP.**

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Objective: to adapt the architectural project to the elderly user after a study of the premises of the Geriatric Clinic of Hospital São Paulo. Methodology: research study based on the qualitative method, whose subject was the relationship and meanings produced in the elderly individual's dynamics when interacting at UEGHSP. Personal data were collected through non-participatory and participatory observation. The researcher followed the routine of users, employees, multidisciplinary team and events that occurred at the clinic, observing behaviors and daily interactions. In the participatory observation, an open, semi-structured questionnaire was administered. Selection criteria: Users Inclusion - Being older than 60 years; Having well-preserved functional capacity; Having mobility, even if it is reduced; Being capable of answering the research. Exclusion - Being younger than 60 years; Having cognitive deficit; Being on a bed and/or without mobility in arms and legs; Having speech difficulties. Professionals Inclusion - Working directly with patients above 60 years who are hospitalized at the clinic. Exclusion - Not working directly with patients above 60 years who are hospitalized at the clinic. Results: The set of collected information showed the inadequacy of the space in meeting the elderly patients' needs. The inadequacies are: · Lack of space for circulation and health examination · Inadequate furniture · Lack of safety · Absence of cognitive and physical stimuli in the clinic Conclusions: The analysis of the collected data resulted in the design of an architectural project to adapt the premises. The need to adapt the current space of UEGHSP was confirmed, but the collected data showed that the perception of the spatial difficulties involves technical and safety issues, and the opportunity to socialize the user, independently of the physical premises' conditions. In the final proposal, the clinic's spatial limitation was considered determinant, and the resulting architectural project was adapted to this limitation.

**PD6 858 HOUSING ASSETS AND THE FUNDING OF LONG-TERM CARE IN ENGLAND**

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Introduction: In England debate continues about long-term care financing in the light of concerns about the sustainability and fairness of the current system. A controversial issue is how older people's housing assets should be treated in the means tests for public support with the costs of care. Currently, housing assets are considered with other savings and income when assessing an individual's means to pay for residential care. Many perceive this as unfair. Methods and materials: The study involved linkage between macro- and micro- simulation models of long-term care financing. The former comprises cell-based modules projecting the numbers of disabled older people, numbers of service recipients, and public and private expenditures. The latter simulates the incomes and assets of future cohorts of older people and their ability to contribute toward care costs, using data from the Family Resources Survey. Projections are made of future public expenditure on long-term care for older people in England under a range of potential reforms to treatment of housing assets for residential care. The impact of the changes on different sections of the income distributions is assessed. Gains and losses are measured as changes in users' disposable incomes after meeting care costs. Results: Projected public expenditure is higher under scenarios that disregard housing wealth. The level of increase in public expenditure depends on assumptions about the impact of the change on care home fees and how the policy is implemented. Immediate gains are above average for those in the middle income quintiles. Projecting into the future, gains would be greatest for those in the lowest 60% of the income distribution. Conclusion: The impact of options to disregard housing assets for residential care depends significantly on how the policy is implemented and the particular features of the older population.

**PD6 859 GENDER DIVERSITY IN MICROENTERPRISES OF ELDERLY WORKERS**

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Introduction This paper is based on a research work carried out on elderly workers (45 years and over according to IWO) who face difficulties to re integrate into the labour market when they were expelled from it due to specific questions linked to their age ("ageism"). The basic question was to find out the keys of the success in microenterprises established after the Argentina's crisis in 2001 and managed by elderly workers. We asked what type of activity are they carrying out, who are their owners, how they emerge and perform interacting with the social, political and economic system, and what is their analysis of the present business situation. Methods and materials A qualitative study was carried out on successful microenterprises managed by male and female elderly workers, using the "case study" with the interview in depth and participating observation techniques in order to describe their characteristics and development phases. Results The results have allowed us to prepare a description of the interviewed organizations divided into: a) those established by the elderly workers themselves, and b) those established with the support of social policies -enterprises incubator. The cases analysis describes the Enterprising Development System that consists of stages: a) Gestation, comprising motivation, the

abilities acquisition, and the opportunities identification; b) Launching, taking into account the project's preparation and evaluation, and the resources organization; and c) Initial Development involving the entry into the market and the initial steps. In order to know the sustainability of the studied enterprises a SWOT analysis has been conducted so completing their assessment. Conclusion From the results, a set of recommendations is established to draw up social policies designed to favour the success of these initiatives, and the assessment of specific social policies for elderly female entrepreneurs (Woman's Bank, etc.) is presented.

**PD6 860 OLDER PEOPLE'S PERSPECTIVES ON THE CAUSES OF SOCIAL EXCLUSION**

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**Introduction:** This paper presents data from a study examining how and to what extent older people are socially excluded, factors leading to social exclusion, and how social exclusion can be prevented/reduced. The data is drawn from the first qualitative phase of the study that explores the factors that older people report as causing social exclusion. **Methods and materials:** Older people were recruited within each of the five districts of Barnsley Metropolitan Borough, England, via networks established by Age Concern. All individuals recruited within a given district formed the membership of a focus group, with each of the five groups meeting on two separate occasions. A total of 40 older people participated. Discussions were guided by a topic schedule and analysed using the framework method. **Results:** Being active was seen as important for life satisfaction by all participants. However, not all participants were able to achieve a satisfactory level of activity and some reported being isolated and lonely. Contributing factors to low levels of activity were identified as depression, low self confidence and caring responsibilities. A minority of participants argued that lack of activity was the individual's own fault. Analysis identified factors linked to social exclusion in general: deterioration in community spirit; fear of crime; life changing events such as retirement and widowhood; frailty; poor finances; transport; and accessibility including the physical environment. **Conclusion:** There was a consensus among older people that being active is central to preventing social exclusion. The data suggest a model of social exclusion in which many of the factors identified as related to social exclusion may act on an individual's quality of life primarily through their effects on social activity levels. This model will be tested in the next stage of the study, a questionnaire survey of 1,200 older people in Barnsley.

**PD6 861 TESTING THE CAPACITY FOR CULTURAL CHANGE IN IRISH PRIMARY CARE**

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**Introduction** Recent Government policies have placed an increased emphasis on more social, person centred models of care within a community setting. This focus on care in the community is influenced by current demographic predictions which suggest an increasing demand on in-patient health services resulting from increasing longevity and instances of chronic illness within the population. The Irish Primary Care Strategy - A New Direction (2001) promotes the idea of a team-based approach to achieve better co-ordination and integration across the system based on the creation of multi-disciplinary primary care teams. This objective is still in its infancy, with entrenched cultural differences linked to professional boundaries continuing to present challenges. Given the dominance of the medical model in shaping approaches to care in Ireland, this ongoing doctoral study is concerned with the capacity for culture change in Irish primary care. It aims to examine the values, attitudes, beliefs and artefacts of a pilot multi-disciplinary home support team delivering care to community dwelling older people. In integrating theories of organisational culture, Schein's (1992) model of organisational culture is employed as a theoretical fulcrum. **Methodology** A phenomenological methodology is employed, involving in-depth interviews with team member and recipients of care, focus groups with home care workers and observations of team working. **Results** Preliminary analysis suggests that the intervention and control groups share understandings and values of person centred care but not empowerment. Care attitudes that are person centred and reflect empowerment of client and carer worker are more obvious in the intervention group data than the control group. **Discussion** Shared ideological cultures aspiring to person centred care and empowerment do not necessarily manifest as shared cultural attitudes. Positive person centred and empowered attitudes motivated by shared beliefs and values may be inhibited by traditional, inflexible, top down health care structures and funding pressures.

**PD6 862 SOCIAL AND SUPPORT NETWORKS OF RURAL SENIORS IN CANADA**

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**Introduction:** Most research examining the networks of older adults is conducted in urban areas or on the general populations of older adults, providing little insight into the

experiences of rural seniors. It is unclear whether rural places provide strong connections and essential support to older adults. We examined the social networks and the networks that that provide everyday support for older rural Canadians, focusing on the extent to which they meet social and support needs. **Methods:** Data from a national telephone survey of older adults living in rural communities in Canada, stratified by age group and sex, formed the basis of this analysis (n=1,312). K-means cluster analysis resulted in the development of a typology of support network types. **Results:** While social networks ranged from 1-29 (M=9.4) members, support networks ranged from 1-12 (M=3.3) members. Several social networks characteristics (i.e. size, age and proximity) were related to receiving support. Cluster analysis revealed that 9% had very small support networks, receiving support primarily from a spouse. Others received support from very specific groups of people, such as primarily female children (20%), or primarily male non-kin (19%), while the remainder received support from larger and more varied networks. However, 15% of the older adults did not have anyone in their support network, some of whom exhibited advanced age, poor health, and a lack of financial resources. **Conclusions:** The results indicate that great diversity exists in the social and support networks of rural Canadian seniors. While the vast majority of older rural adults have a social network that has support potential, they differ considerably in access to a network that provides support for everyday needs. As rural communities can range from being highly supportive and caring to socially isolating, this research helps to deconstruct the idea of the universal supportiveness of rural communities.

**PD6 863 DOUBLE JEOPARDY OF INCOME SUPPORT PROGRAMS FOR THE FEMALE SENIORS: A FEMINIST EVALUATION OF JOB PROVISION PROGRAM FOR THE AGED IN SOUTH KOREA**

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South Korea has since the late 1990s various kinds of income support programs for the seniors. Job Provision Program for the Aged is an income support program that is regarded as an affirmative tool to integrate the seniors into society in both terms of purchasing power and time/space-appropriating capacity. Considering the longer life expectancy and the higher poverty rate among the female seniors, income support programs for the seniors should be gender-sensitive. The purpose of this paper is to examine the extent to which the job provision program accommodates the needs of the female seniors for those ends. Based on observation and questionnaire and in-depth interview, this paper argues that the Job Provision Program contributes little to Korean female seniors, due to the lack of durability and the space-segregating nature of the jobs provided with women seniors, in addition to the lack of consideration of female seniors' health and life-time career. This paper also finds that women in rural regions are disproportionately excluded from the program, due to the lack of accessibility and affordability.

**PD6 864 EFFECT OF OPORTUNIDADES ON VACCINATION COVERAGE OF MEXICAN RURAL ELDERLY LIVING IN POVERTY**

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**Introduction:** Oportunidades is an incentive-based poverty alleviation program which eligibility was determined in 2 stages, first by identifying low-income communities and then by choosing low-income households within those communities. Recently a component, consisting in cash transfers for the elderly conditioned to preventive utilization, was added. To estimate the independent contribution of Oportunidades on the coverage of rural elderly living in poverty for three different vaccines, an analysis of the 2007-Oportunidades Evaluation Survey (ENCEL-2007) was conducted. **Methods and materials:** ENCEL-2007 is a faced-to-faced survey carried out in households from 741 rural communities (<2,500 inhabitants) of 13 Mexican states. For the first time the evaluation included data regarding people  $\geq 65$  to evaluate the Oportunidades effect on this specific group of age. Dependent variables were self-report of coverage for Tetanus, Pneumococcal and H.Influenzae vaccination. Through logistic regression analysis, propensity of being beneficiary of Oportunidades was estimated to control for potential selection bias. Participants were matched, using genetic matching, on different characteristics found associated. Using the matched data multivariate logistic regression analyses were estimated to evaluate the effect of the Program. **Results:** 12,146 elderly were surveyed. Vaccination coverage was 76%, 48% and 44% for Tetanus, Pneumococcal and H.Influenzae respectively. Indigenous population, non-insured and elderly living with functional dependence have lower coverage rates. Oportunidades increases the probability of been covered with the three vaccines, although only for Tetanus was statistically significant after matching. Having one or two of the other vaccines, substantially increases the probability of been vaccinated with the third one. This is the case for all three vaccines. This could be result of an adequate promotion work at the facilities although highlights potential access barriers to the first contact. **Conclusion:** Some social inequalities are evident since coverage tends to be lower in even more vulnerable groups. Although

Oportunidades seems to have positive effect on vaccination coverage, low coverage rates and inequalities evidenced are invaluable information for policy-makers.

**PD6 865 FACTORS INFLUENCING THE ACCEPTANCE OF SERVICES PLANNING BY CARE MANAGERS AMONG COMMUNITY DISABILITIES.**

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Care management has been introduced into the long term care system and care managers have performed practical tasks, such as assessment needs, care planning, implementation of services, monitoring and evaluation. Because client-oriented service is the basis of care management, it is not all service which care manager planned was accepted by the client. The purpose of this study was to identify which factors influencing the acceptance of services planning by care managers. Data pertaining to 985 disabled was collected in a baseline of case assessment and program evaluation of Chia-Yi City selected for the Pilot Program for Long Term Care Development. 48.4% of the community disabilities used one of these services planning by care managers. Results of logistic regression analyses indicated that eligible for government support program, living arrangement, severity of functional disability, awareness of services demand and whether the caregiver having any one IADL have shown significant influence the acceptance of services planning by care managers after controlling a gender, age, education, marriage status, number of chronic conditions, cognitive impairment, relationship with caregiver, care burden and ability of care manager. Our findings implied that policy should pay more attention to the acceptance of services planning by care managers among community disabilities with different sociodemographic status, and develop well-training program for care managers in response to the growing disabled population in Taiwan.

**PD6 866 MATERIAL SECURITY AND INTERACTING SOCIAL BEING: THE CASE OF 'HARD TO REACH' ELTERS IN HONG KONG**

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Introduction: During the aging process, it is believed that keep being interacting social beings would promote subjective well-being of the elders, and also help them cope with life stress. In 2008, the Hong Kong government initiated proactive outreach services targeting 'hard to reach' elders. This study aims to examine material security and interacting social being of 'hard to reach' elders in Hong Kong. Method: Qualitative method was adopted by using in-depth interview. Semi-structured interview guideline was developed that focused on whether s/he was depending on social security; objective and subjective indicators of social being (e.g. social network, living arrangement; social support and loneliness). Social service agencies that provide outreach services for the 'hard to reach' elders helped recruiting respondents. After obtaining informed consent, a total of ten elders were successfully interviewed by trained interviewers. The interview processes were recorded and transcribed for data analysis by using NVivo. Results: Concerning material security, it was found that all of the interviewees were depending on certain types of social security (e.g. Comprehensive Social Security Assistance or Old Age Allowance) at the time of the interview. However, they were either living alone or living with their spouse only; they reported having very limited social network including family, peers and neighbourhood network. Their subjective evaluations of life were also unsatisfactory – they felt lonely, being neglected by the society, and experienced low life satisfaction. Among the ten respondents, four of them reported that they experienced positive gain after receiving interventions from the social service agencies. Conclusion: While material security could help fulfill basic needs of those who depend on it, 'hard to reach' elders had difficulties to keep being interacting social beings. Proactive outreach services seemed helpful for some of the 'hard to reach' elders, which had policy implications.

**PD6 867 EDUCATION, WORK HISTORY, AND DYNAMICS OF POVERTY: A LONGITUDINAL ANALYSIS OF OLDER ADULTS IN JAPAN**

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Introduction: The risk of poverty among older Japanese and the effects of educational attainment, work history and life events on the experience of poverty was investigated over a 6-year period. Methods: Data were obtained from a national probability sample of 2,533 men and 1,440 women aged 55 to 64 that were conducted in 1999. Follow-up surveys of this sample were conducted in 2001, 2003, and in 2005. Multinomial logistic regression analyses were used to identify the correlates associated with the experience of poverty. A man and a woman living together was defined as poor if their annual income was less than 1.2 million yen (1 Japanese yen = approximately 0.01 U.S. dollar in 2005). Results: The poverty rate was 4.0% among men, 7.6% among women in 1999. Over the 6-year period, 13.6% of men and 26.4% of women experienced at least one spell of poverty.

Participants who had higher educational attainment were less likely to become poor, and the longest-held occupation had a significant effect on the probability of becoming poor. During the survey period, male participants who became unemployed and participants who became widowed were more likely to move into poverty. For women also, the spouse's longest-held occupation was associated with the probability of becoming poor. Conclusion: The longitudinal analysis indicates that a larger percentage of the elderly population is subject to the risk of poverty over the lifetime than has been suggested by cross-sectional data. Our results show that stratification established early in the life course, such as education and occupational status, affects the risk of becoming poor in old age.

**PD6 868 HEALTH AS A DETERMINANT OF PENSIONERS' WEALTH IN RUSSIA**

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After retirement Russian pensioners suffer from the declining of standard of living as Pension system cannot ensure a dignified old age. Pensioners themselves cannot solve this problem because of bad health: their health requires extra costs and constrains labor activity as a source of revenue. The empiric base includes: • Russian Longitudinal Monitoring Survey, panel research, 2005-2007 (more than 12000 respondents every year); • pan-Russian surveys "Social policy and social reforms", 2006 and "Needy people in Russia", 2008 hold by IS RAS (nearly 2000 respondents each). According to the results: - elderly population has worse health than the rest of Russians, for example, it has various chronic diseases much more often (heart disease - three times more often); - Russian pensioners' health is much worse than the health of their peers from the developed countries (widespread in the world method to assess the public health Euro-Quol (EQ-5D) was used along with other methods): in Great Britain 36.5% of people aged 61 are healthy, in Russia - 8.2%; - pensioners' social feeling is also bad and has a negative impact on health. - State Pension system is ineffective: • formal level of disability does not reflect reality: one third of bedfast has no status of disable; • state payments do not allow to pay for medical care in case of necessity. - pensioners cannot solve these problems themselves because: • poor health (especially heart disease) restricts their activity; • on the labor market older professionals face discrimination and unskilled workers – hard working conditions that worsen their health. So situation with health of retirees in Russia is much worse than in European countries and it has a great impact on economic situation of pensioners. Social policy for this social group must be based on not only Pension system, but also Health system.

**PD6 869 PHENOMENOLOGICAL STUDY ON THE EMPLOYMENT EXPERIENCE OF PRE-ELDERLY WOMEN IN KOREA**

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Introduction Elderly women takes important place in Korean welfare. Expressively women in 50's so called pre-elderly face the critical period demanding preparation for their older life through getting a job. This study purposes to understand their employment experiences which they have undergone in personal, family and social context with the emic perspective. Methods and materials To understand their complicate experiences, this study uses phenomenological research method by a snowball sampling. Eight women in 50's interviewees who have experienced newly employed status within a year regardless of their occupations and careers are selected. Data are collected through 2 or 3 times in-depth interviews with each individual of which takes one and half hours per session. Results Pre-elderly women's employment experience consists of a set of process and constituents, 1) the moment to decide to get a job – 'I, myself decided after careful consideration,' 2) job seeking and getting process- 'doubt and grave' in their abilities and careers. 'being barricaded' in the society, 3) workplace experience – overcoming hardship feelings and trying not to be told, "You don't act like it" from her young boss, 4) meanings of work and life - harmonious life, dignity of her life, appreciation her health enough to work, not to rely with her adult children. Employment experience of pre-elderly women seem to brighten women's dim future which will be outreached their long older life. Conclusions Policy implications are suggested. First, the importance of pre-elderly women's employment can be emphasized for the aged welfare with the women's life course perspective. Second, job agencies and education programs for the aged or for women should provide more gender-sensitive, integrated services in the communities. Third, labor market policy should support equal opportunities for pre-elderly women without discrimination by sex and age.

**PD6 870 FUNCTIONS OF THE INSTITUTIONS FOR ELDERLY PEOPLE IN POSTWAR JAPAN**

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Welfare systems in Japan have started as one of assistances for needy persons. They have acted as safety nets for them. It is said that the welfare institutes as safety nets have been

weakening gradually. In this study, functions of the present welfare institutions and policies for elderly persons are looked back and their challenges for the future are examined. Statistical materials concerning nursing homes, the long-term care system, and old care receivers, which are published from Ministry of Health, Labor and Welfare and Japanese Council of Senior Citizens Welfare Service, are used in this study. And I considered the transitions of the policy concerning elderly people and institutions for them. The elderly people institutions have been rapidly provided with progress in aging after the 1970s. After the 1980s, many varieties of the institutions have emerged and they could have responded to the every kind of needs of elderly people. The long-term care insurance system was installed in 2000, and cares for the older began to provide from not only the public facilities but also the private organizations. Welfare institutions have become more diverse through elimination of unnecessary regulations at the installation of the long-term care system. After that, by the reinforcement of benefit principle, the poor have been hardly able to receive welfare services. New kinds of welfare institutions have established by the needs for care, medical services and living. A lot of kinds of welfare institutions that have different ground have coexisted and so they have?had differences in management and equipments. Inclusive social work services are important to avoid a relocation effect. And special elderly nursing homes exist as retirement homes. But as the facilities that people stay in the end of life, the regulations that the nursing home can have cooperation with medical agencies are needed.

#### **PD6 871 METHOD OF EMPATHY BASED STORIES IN GERONTOLOGICAL NURSING RESEARCH**

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**Introduction:** In the future there is more people who are living into old age than at any time in past. Population ageing is seen as major force transforming at various level like in health and social care services and in society as a whole. **Method and materials:** Method of Empathy-based stories in this research produces stories about future and future aging. The respondents received orientation and a script to assist them in the writing essays or stories following instruction given by the researcher. Instructions have the temporal perspective of the stories focused on the future, in year 2030. The idea of this method based in variations. In other words, one or two central elements in the script are purposefully varied, but the main structure of the script is maintained the same. The stories were analyzed qualitatively by categorizing the responses by themes. In this research respondents are Finnish baby boomers who were born between 1945 and 1950. This generation was exceptionally large and that kind of phenomenon haven't been seen before or after in Finnish history. Respondents consisted of 5 Members of Parliament, 23 municipality or city persons who are elected to a position of trust and 12 ordinary baby boomers. **Results:** Respondents described what aging means for them and what brings happiness, healthiness and well-being to them when they will be old. They also have written about the future society, social and health services and other services, community, networks and technological developments. **Conclusion:** As a research method, method of empathy-based stories produced very rich material about possible futures and images of the future. It also produced signals about new aging culture and model. In this research method produced themes, which are used to planning to design more comprehensive study by a quantitative method.

#### **PD6 872 GERIATRIC AND PSYCHOGERIATRIC CARE PROGRAMME: SHARING EXPERIENCE**

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In the context of hospital reforms initiated since 2005 with a great number of laws and a high level of needs in the geriatric fields, the Geriatric Department of the University hospital of Poitiers has developed a geriatric care organisation to offer a more efficient access to the health care system for the general practitioners (GP) and the elderly. The project was to set up geriatrics structures correlated to the loco-regional needs. The plan care was built to consider patients inside the hospital, home care and focused on psychogeriatrics solutions. The first step inside the hospital was to improve the geriatric assessment in the emergency room, and to evaluate the appropriate number of acute care beds and rehabilitation care beds. The second step was to adapt the consultations to the main geriatric medical problems: dementia, falls, pressure sores. To improve the accessibility, a specific phone number was created to facilitate the contact with the GP. To ensure the continuity we formalized process with different stakeholders as psychiatric hospital, council of community and the regional agency for the hospitalisation. In conclusion we will share the necessary tools for the implementation, the limits and the point of development in the future.

#### **PD6 873 FEAR OF CRIME AMONG THE ELDERLY: THE INFLUENCE OF VULNERABILITY BEYOND PHYSICAL HEALTH**

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The concept of diversity within the older population has long been a popular idea in gerontology to counter ageist discourse. One of these systematic stereotypes is 'elderly being petrified by an irrational fear of crime' since early studies show that elderly display the highest levels of fear of crime and the lowest levels of victimization. The aim of this study was to question whether and how differences in the extent of fear of crime among older persons occur. The paper starts with extending current theoretical notions on vulnerability beyond the usual physical frailty and we suggest that feelings of vulnerability should not be seen in isolation from other daily insecurities. A sample of 46,989 Belgian elderly were interviewed on numerous indicators. In multivariate regression analyses the influence of vulnerability (financial resources, marital status, loneliness, housing problem and need for mobility assistance) on fear of crime was measured. In a first phase the analysis was employed on elderly in general, whereas subsequent analyses were performed on different age groups (60-69, 70-79, 80 and over). Analysis of the total sample yielded that loneliness and physical health produce the most significant effect on fear of crime. Furthermore, mobility problems and limited financial resources increase fear of crime significantly. Housing problems and marital status did not contribute to the global regression model. Analysis on the different age groups identifies that need for mobility assistance has only an impact on fear of crime for respondents between 60 and 69 years old. For those aged 80 and over, housing problem becomes an extra indicator of fear of crime. Findings revealed the importance of a broad definition of vulnerability in research on fear of crime. Different predictor sets, however, were noted for different age groups. Diversity among elderly is thereby related both with vulnerability as with age.

#### **PD6 874 DELAYED HOSPITAL DISCHARGE: POLICY SOLUTIONS, IMPLEMENTATION STRATEGIES AND PRACTICE; AND IMPACT ON OLDER PEOPLE'S TRAJECTORIES THROUGH ACUTE CARE.**

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**Introduction** The 'problem' of delayed hospital discharge in the UK is identified as a system level issue: leading to inefficiencies in acute bed usage; reflecting inter-organisational boundary disputes between health and social care and between acute and community services; and contributing to poor patient outcomes. It assumes current significance because of the re-shaping of acute care: the designation of hospitals as settings where specialist diagnosis and high technology treatment is provided to acutely ill patients. **Methods** The paper draws on a recently completed comparative, multi-method case study of the implementation and impact of two different approaches to tackling delayed hospital discharge in England and Scotland; the former borrowing from policy initiatives adopted in Scandinavian countries that applied financial sanctions directed at social care partners to reduce 'delays'. The aims were to examine policy implementation processes; assess their effect on inter-organisational relationships, service development and practice to reduce delays; and on the experiences and outcomes for older people, at risk of, or subject to delay. Data gathering methods included: the collection and analysis of documents; interviews with strategic and operational managers in health and social care (n=56), with patients (n=68), operational staff responsible for their care/discharge planning (n=132), informal caregivers (n=40); and observation of decision-making and practice. Patients and caregivers were followed up around six months after the first interview. **Results and Conclusions** The paper considers two linked sets of findings: first, the impact of 'carrots' and 'sticks' as policy drivers on the construction of 'delays' and on organisational and behavioural change to manage them; second, the impact of policy on older people who are 'delayed', the contexts in which 'delays' occur and the implications for acute care organisation of managing treatment and care of very old people with multiple health and co-morbid problems in the last years of life.

#### **PD6 875 GENERATIONAL HABITUS AND MEASURING THE MATERIAL DEPRIVATION OF OLDER PEOPLE**

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**Introduction** Poverty is a contested concept but there is wide consensus that it reflects those who lack the financial resources to participate in the norms and customs of everyday life. 'Material deprivation' measures come closest to operationalising the complexity of the experience of poverty, and are of increasing importance in Europe. These measure the extent to which people have or participate in a prescribed list of material items and social activities, and the reason for any non-participation. Contrary to expectation, over 65s tend to emerge from these measures as less deprived than other age groups. As material deprivation measures gain political currency across Europe as formal poverty measures for policy making purposes, it becomes important to assess the extent to which they are accurately capturing the deprivation of older people. **Methods and Materials** The Family Resources Survey is an annual household survey of approximately 24,000 UK households. This paper uses multivariate logistic regression analysis of the FRS 2005/6 to investigate three possible explanations for the finding that older people emerge from these measures as less deprived: (i) Older people are genuinely less deprived, (ii) age differences are caused by 'generational habitus' (Gilleard and Higgs, 2002), or (iii) caused by the internalisation of poverty (dissonance theory). **Results and Conclusions** The results suggest that older people's measured lower material deprivation is driven by generational differences in the

ways questions are being answered. Relying on material deprivation measures in policy making will lead to the needs of older people not being identified. Further, deprivation measures might show the older population getting poorer over time, reflecting the tendency of younger generations to view their circumstances as more deprived rather than any decline in objective standards of living. Gillear, C. and Higgs, P. (2002) The third age: class, cohort or generation, Ageing and Society, 22: 369

**PD6 876 MOTIVES TO REALLOCATE IN OLD AGE. FINDINGS FROM THE BELGIAN AGEING STUDY.**

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**Introduction** The widely used concept of 'ageing in place' has achieved great popularity among academics, social policy makers and health care providers. Several studies indicate that ageing at home, without changing residence, is the older peoples most preferred strategy, even when they are in need of care, have economic difficulties or live in inadequate houses or deprived areas. Different authors suggest that ageing in place is an ambiguous position, signifying rootedness as well as rigidity. In this paper, we examine the motives for reallocation among older people. Both push-factors or conditions that drive people to leave their homes as well as pull-factors of the new environment are addressed. **Methods and materials** For these analysis we used the data collected from the Belgian Ageing Study (N=46989) in over 100 municipalities in Flanders, Belgium. Results Overall, exactly 14.4% of the elderly stated they've reallocated during the past ten years. The main reason to reallocate is a pull-factor; the prospect of a better environment. Health (27.9%) and housing problems (24.5%) are the second and third most important motive. New facilities in the area (18.5%) and not willing to rely on their children (17.6%) complete this top five. Furthermore, our findings indicate that motivation changes with age. Elderly aged 70-79 are more motivated because of the new facilities (22.5%). Not willing to rely on their children varies from 19.0% for the elderly 70-79 to 21.0% for people aged 80 and over. The latter group also state that feelings of loneliness are important to reallocate (19.4 %) Conclusion As found in the literature, only a small percentage of elderly reallocates in later life. Most elderly prefer staying in their own house. The motivation to move varies for the different age groups, suggesting a differentiated policy is appropriate.

**PD6 877 50+ FOR 50+, EXCELLENT SENIOR CARE**

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**Introduction** Excellent Senior Care is the name of a Dutch experimental project special for 50+ people who are working or want to work in a nursing home for elderly care. Three main reasons: 1. it will upgrade the ambiance in the nursing home, 2. it offers jobs to women over 50, and 3. it contributes in the dealing with the shortage of personnel in the care homes. Through a Dutch Plus- Magazine we checked the availability of persons over 50 willing to work in care homes. We conducted also a pre study in the selected care home to see if and how a 50+ pilot for a special ward/division is realizable. We concluded that it is, under special conditions. These are: \* A special way of the designing the care-work, with special focus to the physical part of the work as well as the special senior qualities in this situation, \* A durable designed work setting, \* And the availability of an appropriate team of consultants in pilot process, \* giving sufficient room to the 50+ expertise which may give additional joy and internal satisfaction. **Methods and materials** 50+ Job Profile - For the sake of the project the AgeProof Agency has designed a special 50+ job profile and 50+ job description, where in we combined tasks of three care jobs and took all these aspects into account. The pilot study was funded in October 2008 by the Dutch government and the introductory period has started in December 2008 and the pilot period will run up to December 2010. During the pilot period our basic material will be outcomes of regular participant observations, diaries of the 50+ carers/nurses. In addition we will administer in the beginning, halfway and at the end the Work Ability Index. Also costs and revenues will be examined. Results In July we plan to report our first results about the implementation of the pilot study, the recruiting of the 50+ personnel and about the satisfaction of personnel and clients in the care home. Conclusion In July we hope to give some provisional conclusions

**PD6 878 ELDER ABUSE AND INDEPENDENT ADVOCACY - DEVELOPING RESEARCH, POLICY AND PRACTICE IN ENGLAND**

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**Introduction** There has been growing recognition of the need for independent advocacy to represent the rights, choices and interests of otherwise vulnerable older people in the UK. The author draws upon work undertaken as part of an exploratory research and development project initiated by the Older People's Advocacy Alliance UK. The broad aims of the project were:- 1. To obtain a better understanding of the impact of advocacy on elder abuse. 2. To explore the relationships between advocacy organisations and statutory safeguarding bodies. 3. To identify best practice in order to inform policy and practice. **Methods and Materials** A variety of methods and materials were employed, including:- 1. A review of academic research, official reports and "grey" literature. 2. Questionnaires

completed by advocacy workers in 13 advocacy organisations. 3. Group meetings and reflective practice sessions with advocacy workers. 4. Follow up telephone interviews with 6 advocacy organisations. **Results** 1. Most advocacy organisations are working closely with older people who have been subject to physical, psychological, financial and sexual abuse and neglect. 2. The goals identified by the older person and the advocate have been achieved in most cases. 3. Advocacy organisations may have an ambivalent relationship with statutory safeguarding bodies. 4. There can be significant ethical, political and practical dilemmas for advocates in this field, which calls for more guidance and support. **Conclusions** 1. There is a need for more research to explore the advocacy process as well as outcomes and the direct views of older people themselves. 2. There is a need for policy makers to make provision for advocacy for older people who fall outside the current statutory framework. 3. There is a need for advocacy practitioners to have greater opportunities for reflection, learning and support in working with elder abuse.

**PD6 879 THE EFFECTS OF HUMAN CAPITAL AND SOCIAL CAPITAL ON THE PERCEPTION OF THE IMAGE OF ELDERLY PEOPLE**

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**Introduction:** The purpose of this study was to examine the effects of human capital and social capital on the perception of the image of elderly people. The elderly need to perceive the positive image of elderly people in order to achieve the elderly development task successfully. **Methods and Materials:** Data of "the 2004 national elderly people conditions and welfare needs survey", which was executed by Korea Institute for Health and Social Affairs, were used. The number of the elderly respondent was 2,638. The human capital was measured by the status of education, health, income, employment. The social capital was measured by trust status(the number of neighbors and friends to give counselling) and network status(cohabitant spouse, number of emergence contacts, frequency of come-and-go with acquaintances). The image of elderly people as subordinate variable was measured by healthy, intellectual, emotional and economic images. The logistic regression was used to analyze the effects of human capital and social capital as independent variables on the perception of the image of elderly people. **Results:** Results of this study showed that health status (Exp(B)1.733), economic status (Exp(B)1.110), number of neighbors and friends to give counselling (Exp(B)1.024), cohabitant spouse status (Exp(B)1.225) and frequency of come-and-go with acquaintances (Exp(B)1.104) had statistically significant effects on healthy image. Health status (Exp(B)1.319) and frequency of come-and-go with acquaintances (Exp(B)1.136) had statistically significant effects on intellectual image. Health status (Exp(B)1.448), economic status (Exp(B)1.146), number of neighbors and friends to give counselling (Exp(B)1.041), cohabitant spouse status (Exp(B)1.255), number of emergence contacts (Exp(B)1.030) and frequency of come-and-go with acquaintances (Exp(B)1.083) had statistically significant effects on emotional image. Health status (Exp(B)1.413), economic status (Exp(B)1.196), employment status (Exp(B)2.184), number of neighbors and friends(Exp(B)1.068), cohabitant spouse status (Exp(B)1.574) and frequency of come-and-go with acquaintances (Exp(B)1.109) had statistically significant effects on economic image. **Conclusion:** This study revealed that as the status of human capital and social capital was increased, the perception probability of the positive image of elderly people was increased.

**PD6 880 AGEING AND POLICY RESPONSES : CHANGES AND CHALLENGES CREATING A GERO-INFORMATICS IN SOUTH KOREA**

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As an inevitable consequence of this demographic transition to increasing longevity and decreasing fertility, South Korea(hereafter Korea) is undergoing a rapid aging process. The impact of the growing number of elderly people has become a dominant social concern in Korea, particularly in relation to issues of security and well-being. In order to fulfill the needs and expectations of the growing numbers of elderly people in Korea and to overcome the problems associated with later life especially ill-health, considerable debates have emerged in terms of welfare services and health systems for elderly people. Korea indeed has been forced to develop new attitudes towards old age and new ways of providing welfare services for the elderly, due not only to the increasing numbers elderly people but also because of societal change such as changing family structures. Influenced by these aspects, Korea has concerned on the development of policy for elderly people and finally established 'Long-term Care Security System'. However, much of the interest related to establishing health policies and provisions for elderly people does not embed these concerns within the context of rapidly changing social environments. Korea is representative of a country that has experienced rapid development of information technology and using internet, and as a result, elderly people in Korea have shown on highly skilled using internet. It is furthermore acknowledged that the increased more educated and better-off elderly people expect to independent living even if they are ill. Here is this paper contention that Korea should focus on constructing appropriate policy and strategies for embodying gero-informatics considering the existing patterns of provision and social trends. This study will perform a critical review of literature and discuss the information and service based gero-informatics in Korea. The purpose of this study is to suggest a potential strategies for improving health of elderly people. Drawing on

a range of data, first, this study will examine the existing scope and nature of provision for elderly people. Then, this study will discuss how current public health policy and service efforts for elderly people are limited to meet the needs of the aged. Preliminary suggestions of this study may be helpful to improve the health care approach in order to better serve elderly people.

**PD6 881 A RESEARCH AGENDA TO SUPPORT POLICY DEVELOPMENT ON ICT-BASED ASSISTIVE TECHNOLOGY FOR OLDER ADULTS**

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**Introduction** In recent years a number of assistive technologies for older adults based on Information and Communication Technologies (ICTs) have been developed and tested, and some are being brought to market. However, there are many uncertainties as to their cost effectiveness and overall impact. There is also controversy over who will or should pay for such technologies, even when their use would enable older adults to remain in their homes and communities longer. **Methodology** This study reviews existing literature related to potential policy development in this arena, and then proposes a stakeholder-focused research agenda that would provide the range of information required for rational policy development. **Results** The proposed research agenda identifies the types of data required from the most important stakeholder groups on both the demand side (e.g., users and payers) and the supply side (i.e., providers) in the market for relevant ICT-based technologies. Topics include, among others: What are the needs of the potential users of such technologies? What is the ability and willingness of potential payers (families, government, and NGOs) to purchase these technologies, and what criteria would have to be met? What vendors are in the market, who are their competitors, and what will it take to keep them in the market to provide products that are determined to be cost-effective? **Conclusion** Rational policy development requires an adequate base of relevant up-to-date information. In the case of policy regarding potentially expensive ICT-based technologies to support older adults in the community, these data are not currently available. Implementation of the proposed research agenda would provide this much-needed data.

**PD6 882 ACHIEVEMENTS AND PROBLEMS OF AGEING POLICIES IN RUSSIA**

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**Introduction.** The policies towards aging people in Russia are officially guided by international declarations and domestic laws. However, implementation of most of them is still hindered because of the economy and ideology transition of the 90s. **Methods.** Analysis of legislation developments and its implementation reveals the tendency of improving attitudes towards seniors and positive changes in ageing policies in Russia in the 90s. From being "mercy" driven (1995, Law "About Social services for older persons and pensioners") it moved to acknowledging and promoting participation of older adults in social life (Federal Programme "Older Generation", 1997, revisited in 2002). However, the Programme "Older Generation" was closed in 2004 and has never resumed. **Conclusions.** Currently the Government does not follow any unified positive ageing policy. Moreover, there is no specific division in any legislative body responsible particularly for ageing policies. Despite the fact that lately the Government has intensified efforts on solving demographic issues and economic problems they entail, most of the efforts concentrate on birth rates increase, and little attention is paid to retaining and using the great potential of senior citizens. Even the guaranteed Governmental pensions for which persons become eligible at the so called "official age of retirement" (55 for women and 60 for men) instead of bringing some level of personal freedom, often serve as a basis for age discrimination at work place. However, the Government does play a profound role in service delivery for older people, which has a twofold effect. On the one hand most of social services, welfare, pension plans are guaranteed by the Government. On the other hand, variety of the services is quite limited and quality is sometimes not satisfactory. Unfortunately, the Governmental policies towards nongovernmental nonprofit organizations, which could help to compensate for such shortages, are not cooperative enough to allow for their significant contributions.

**PD6 883 VARIATION IN THE PREVALENCE OF PSYCHIATRIC DISORDER AND TREATMENT RATES AMONG OLDER PEOPLE LIVING IN ENGLAND**

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**Introduction** In England there remain significant gaps in treatment and services for older people with mental ill health. An integral part of improving and supporting the delivery of mental health services for older people is our ability to monitor the prevalence of mental health disorders and their association with treatment received. Good quality and nationally representative data covering both treated and untreated disorders are therefore vital for the effective planning of clinical services. **Methods and materials** Using data generated from a nationally representative random probability survey carried out in 2007 (the Adult Psychiatric Morbidity Survey, APMS) with 7,400 people, we will describe the prevalence

of mental health disorders in older people living in the community and compare rates with the rest of the adult population. We will provide a description and analysis of the level of psychotropic medication, counselling and talking therapies and health and community care service use, and also explore age-related inequality in access to treatment among older people with mental ill health. **Results** The prevalence of mental health disorder identified by the study declined with age. Preliminary analysis shows a decreased likelihood of older people receiving talking therapies and an increased likelihood of receiving psychotropic medication. The data are currently under embargo prior to publication. We will provide analyses focussing on levels of treatment and service use, their distribution by key demographic variables and associations with measures of mental ill health among older people. **Conclusion** APMS is a key data resource used in the planning of national mental health services and policy in England. This analysis focussing on older people will provide evidence that can be used to inform the development of service provision for older people.

**PD6 884 A STUDY OF THE INFLUENCING FACTORS ON WORK OF THE KOREAN ELDERLY**

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The rising life expectancy and the low birth rate causes aging society in Korea. Ascending dependency rate and descending fertility rate become a public concern. The purpose of this study is to identify the influencing factors on work of the Korean elderly with two research questions; 1) why is work important to elderly?; 2) what are factors influencing on work of the Korean elderly?; 3) how are these factors changed during 10 years? This study uses the dataset collected by KIHASH in 1994, 1998 and 2004 surveys titled "Living Profile and Welfare Service Needs of Older Persons in Korea". The total of respondents aged 65 years old and over was about 2,300 individuals in the dataset of each research. This study employs multiple linear regression by using a set of predictors which are sufficient to explain the reasons the elderly want to work. The result finds six variables which had significant effects on work of the elderly: gender, health, education, personal income, community activity, life satisfaction. The completed model had an adjusted  $R^2$  of 0.62,  $F=74.2$ , and  $P<0.001$ . Six variables has not been changed but the degree of effect of each variable has been changed. The variable of health has been stronger than others and the variable of gender has not been changed in the degree of effect. In conclusion, this study would suggest that 1) the elderly need to be encouraged to maintain their work as long as they are healthy regardless of gender; 2) it is necessary to increase life-course flexibility in order to allocate their time to work and others; 3) work of the elderly provides society with productivity; 4) on individual level, they can enjoy golden years by themselves.

**PD6 885 POVERTY AND WELL-BEING OF OLDER PEOPLE IN TAJIKISTAN**

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**Introduction** The break-up of the Soviet Union and the subsequent transition to market-led economies has been accompanied by a decade of economic and social upheaval on an unprecedented scale. There is now a substantial body of literature detailing the impact on the population of the decline in economic and social well-being in the new Republics of the Commonwealth of Independent States (CIS) during the 1990s. However, older people are largely invisible in this literature, despite facing particular challenges. This paper presents the first results from an ESRC-DFID funded project examining the living conditions and sources of finance and social support (both state and family) amongst older people living in one of poorest countries of the former Soviet Union - Tajikistan. **Methods** The project combines quantitative analysis of the living standards of older people of recently available household survey data, with qualitative research providing deep insight into the reality of life for older people today. **Results** Poverty rates amongst older people in Tajikistan are highly sensitive to household composition and to the assumptions made concerning economies of scale within the household. Using medium economies of scale, around 40 percent of older people live below \$2.15 a day. Both public and private transfers play an important role in alleviating poverty. Transfers from the family via remittances play a more significant role than old age pensions from the state. **Conclusion** The public pension system continues to play a major role in alleviating poverty. However its effectiveness is diminished by the low level of benefits and reform is urgently required.

**PD6 886 NON-INSTITUTIONAL SERVICES OF THE CIVIL SECTOR TO THE OLDER PEOPLE IN SERBIA AND PARTNERSHIP WITH THE PUBLIC SECTOR**

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**Introduction** This paper demonstrates the rise in importance and outreach of the non-institutional services provided by the civil sector to the older people, complementing the institutional solutions by the public sector in Serbia. It describes the difference in approach and capacity and the rising influence of the civil sector in strategic planning. **Materials and Methodology** Materials for this paper were collected through interviews with the representatives of civil sector and surveys (The Elderly Non-residential Care in Serbia,

Amity 2007; First and Second reports on the implementation of the Poverty Reduction Strategy, Government of Serbia 2007 & 2008; Civil Sector Services to the Older people Red Cross of Serbia 2006, Survey of older people poverty, Amity 2009). Results The results of the survey demonstrate that starting from 2000 the number of beneficiaries covered by the civil sector has been on the constant increase. The civil sector has served approx. 17,000 older beneficiaries per month in 2007 with Red Cross alone having approximately 11,000 beneficiaries per month (in comparison with approx. 4,000 in 2001 when the programme started). The authorities in Serbia increasingly recognise civil sector as an important resource in providing services to older people. This has lead to participation of civil sector in some of strategic public documents and reform laws (Poverty Reduction Strategy, 2002; National Strategy of Ageing, 2006; Strategy for the Development of Social Welfare, 2006; The Law on Social Protection, 2006). Conclusion The synergy between the grassroots approach and search for systematic, strategic solutions is what marks the ongoing cooperation between the two sectors. It is expected that the civil sector role will be formally defined through the process of outsourcing part of the service delivery package to non governmental actors in the next two years.

**PD6 887 ASSISTED LIVING RESIDENCE AND SOCIAL POLICIES: SOME OVERVIEW OF THE EUROPEAN AND USA FRAMEWORK**  
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Assisting living is a vital component of long-term care in the United States as it is in Europe. In Spain the significance of getting older is linked to the need of setting new policies connecting housing research, health care and seniors citizens policies. Thus, the Dependency act which came into force a pair of years ago show that the coordination between public bodies and policies can make the difference. The aging in place process which is also emphasized in both set of laws has a different effect if we consider the choices that public authorities set to reach the goal of a healthy and well cared seniors population. This paper emphasize in both aspects to propose an alternative in the assisted living area.

**PD6 888 EXPLORING DETERMINANTS OF CULTURAL PARTICIPATION: FINDINGS FROM THE BELGIAN AGING STUDY**  
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Introduction: This study examines cultural participation of the elderly. After a period of undifferentiated observation of the population, there is now a tendency to further divide the various classes of age and sex. The influence of aspects of vulnerability and environmental factors or thresholds, however, remains under researched and poorly understood. This study explores the extent and nature of older people's participation in cultural life. The main purpose is to investigate what key factors determine cultural participation among the elderly. In particular, the research looks at the relative impact of socio-demographic variables, income, physical health, transport modes and the degree of urbanization on cultural participation. Method and materials: This study uses data from the Belgian Aging Study ( $N = 46,989$ ) with respondents aged sixty and over living in 100 municipalities in Flanders, Belgium. To analyse the key factors that determine cultural participation we applied a binary logistic regression. Results: The regression analysis indicates that physical health is the most important predictor of participation in cultural life, followed by the extent of mobility. Furthermore, the results highlight the importance of financial resources and gender. Contrary to our expectations urbanization appears to be unimportant. Conclusion: Findings indicate that cultural participation of elderly is rather low. However, placing an exclusive emphasis on age appears to be too simplistic. We conclude that vulnerability (financial, physical ...) plays an important role in the domain of older people's cultural participation. Finally, study limitations and strengths, potential paths for future research and implications for social policy are formulated.

**PD6 889 AN EXPLORATORY STUDY ON THE DETERMINANTS OF LIFE SATISFACTION AMONG THE ELDERLY IN KOREA**  
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The aim of this study was to explore the determinants of life satisfaction for the elderly in Korea. Especially, this study attempted to find out how social capital of the elderly and their general characteristics — socio-demographic, economic, and health traits — influenced on their life satisfaction. The data was collected through face-to-face interviews of 300 elderly. Data on social capital, general attributes and the discrepancies in the level of life satisfaction was analyzed by using univariate and bivariate analysis, while the effects of social capital and their general characteristics on their life satisfaction were analyzed by multiple regression analysis. Results of this study showed us that social capital, level of education, participation in religious activity, income level and subjectively perceived health condition were the predictors to the level of life satisfaction for the elderly. Among them, the social capital was one of the key predictors. In other words, social capital can make the aged better off and give them a sense of security and satisfaction for the elderly. Finally, these findings may be used for realizing us the importance of social capital of the elderly and developing and designing new promising

approaches of social policies and programs, which meet social needs of the elderly as well as their psychological needs.

**PD6 890 QUALITY OF LIFE IN AGED PEOPLE THAT PARTICIPATES ON THE LONGEVITY PROGRAM OF THE CITY HALL OF RIO DE JANEIRO – BRAZIL**  
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The world population is getting older, basically due to better conditions of sanitation, medicine evolutions against diseases and small birth rates. According to the Instituto Brasileiro de Geografia e Estatística (IBGE, 2005), in 2025, elderly people will represent 15% of brasiliian population and in the city of Rio de Janeiro that population can achieve 14%. Therefore, it's important to discover solutions to make their elderly healthier. The aim of this study was to evaluate quality of life in aged people that participates on the Longevity program. The methodology used was the application of the WHOQOL-OLD questionnaire to 196 voluntaries. The questionary was separated in five parts to analyze the results: physical, psychological, independence level, social relations and ambient. In what refers to the physical part, 70,92% of the participants related to be extremely important to be free from any kind of pain. The psychological part shows that according to 65,31% it's very important to don't have negative feelings about life. In relation to the level of independence the most answered questions were about the capacity of realize home task's by their own and don't have any dependence of medicines, with 61,73% and 59,18% respectively. In the social relations part, 55,10% of the participants answered that it's very important to have a social support of the government. About the ambient, 57,14% of the interviewed pointed out that it's extremely important the disponibility and quality of social and healthy care programs. The results founded on the study corroborates with the objectives of the Longevity program, that claims to promote greater levels of functional autonomy, by doing exercise's with professional orientation and to achieve better levels of personal relations, trying to stimulate not only the physical conditioning, but also the social questions in aged people, helping them to achieve a healthier elderly.

**PD6 891 HEALTH INEQUALITIES AMONG VERY-OLD BRAZILIANS WHO UTILIZES THE PUBLIC AND PRIVATE HEALTH SYSTEMS**  
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Introduction Health inequalities occupy a central place in thinking about international health policies and Public Health Systems (PubHS), especially in the developing world. Brazil is one of the countries where the very-old population group is growing fastest in the world. We evaluated similarities and differences in health among very-old Brazilians who utilizes the Public and Private Health Systems (PriHS). Methods and materials The probabilistic sample was composed by 273 south and southeast urban very-old Brazilians ( $\geq 80$  years) living in the community. The cross-sectional, population assessment was performed at home. Evaluation included socioeconomic and lifestyle characteristics, comorbidities, Mini-Mental State Examination (MMSE), Instrumental Activities of Daily Living (IADL) and the 15-item Geriatric Depression Scale (GDS). P-values  $>0.05$  were considered Non-statistically significant (NS). Results PubHS users comprised 41%, and females were 67% of the sample. Mean age was 84.3 ( $\pm 4.3$ ) among PubHS users and 84.9 ( $\pm 4.0$ ) in the PriHS group (NS). Mean schooling-years was 2.8 ( $\pm 2.9$ ) for the former and 4.3 ( $\pm 4.3$ ) for the latter group ( $P=0.001$ ). Among PubHS users, 17% consumes alcohol regularly and 33% are smokers or ex-smokers, whereas among PriHS users these values were 26.0% and 24.5%, respectively. PriHS user's income (International Dollars [ $\$=1,047$ ] was almost twice higher than that of PubHS ( $\$=549$ ) users ( $P < 0.001$ ). MMSE score and number of chronic diseases were not significantly different between the groups. Among PubHS users, 26% presented depressive symptoms and 73% were dependent for IADL, as compared with 21% and 76%, respectively, among PriHS users (NS). Conclusion Although very-old PubHS users presented worse socioeconomic conditions, they did not present significant differences in terms of functionality, number of comorbidities, cognition, or depressive symptoms. These findings are not readily explainable, but survival effect, improved quality of the Brazilian PubHS, or even inefficiency of both systems in preventing age-associated worse outcomes among the very-old are possible explanations.

**PD6 892 FEATURES OF AN AGE-FRIENDLY COMMUNITY: INSIGHTS FROM A PHOTOVOICE STRATEGY WITH OLDER ADULTS**  
S. NOVEK\* (University of Manitoba, Winnipeg, Canada)  
T. MORRIS-OSWALD(1), V. MENEC(1) - (1) University of Manitoba (Canada)

It is widely recognized that cities and communities throughout the globe will need to adapt and improve public policy in response to an aging population. Furthermore, it is recognized that quality of life for many older individuals is highly dependent upon the ability of their local communities to meet their needs by providing a range of supports and opportunities.

This paper presents the findings from a participatory research project conducted in three communities in Manitoba, Canada. The goal of the study was to explore the concept of an 'age-friendly' community from the perspective of older adults. Method: The study employed photovoice technique with high-functioning community based seniors. Through the photovoice process, older adults were provided with cameras and took photographs to illustrate community features that they believe either enhance or diminish quality of life for older persons. The photographs then became references around which both individual interviews and focus groups were conducted. Results: Participants identified a number of priorities for improving their local communities, explored barriers to be overcome, and identified key action items. Some of the major findings from the study will be presented, and illustrated through the photographs and commentary provided by participants. Conclusions: The Age-Friendly Photovoice study enabled community based seniors to give voice to a variety of concerns and needed improvements at a community level. The research also has potential to engage decision-makers in a critical discussion of public policy impacts on older citizens.

**PD6 893 PROJECT DANCE AND LIFE: HELPING AGED PEOPLE TO HAVE MORE AUTONOMY AND QUALITY OF LIFE IN THE CITY OF RIO DE JANEIRO, BRAZIL**  
 H. FURTADO\* (Department of Healthy Aging and Life Quality of Rio de Janeiro City, Rio de Janeiro, Brazil)  
 C. LOZANA, E. SANTOS, R. FARJALA

Introduction: The dance is part of the history of the humanity and can represent beliefs, cultures and the participation of the nation in different situations in the entire world. Dancing is a physical activity well accepted by aged people, because it can remember old memories, is rich in different movements and contributes for self expression and creativity. Methods and materials: The program Dance and Life occurs in public places in different neighborhoods of the city with a total of 20 teams. Each team is composed by a teacher and a monitor that develops different kinds of classes, based on specific methodologies in different dance styles, like: forró, valsa, bolero e samba. There is also a nurse to help in the first aids in a possible situation with aged people and a support to help the control of the periodicity of the participants and organize all the material to the classes. The classes occur three times a week in the night period and have the aim to develop important aspects for a better quality of life, as physical aspects (strength, resistance and balance), social aspects, recreation and hobby. The evaluations realized in each nucleus analyze quality of life (WHOQOL-OLD), functional activity (RIKLI and JONES, 1999) and balance (TINETTI, 1995). Results: The results evidences that the number of participants that joined the program was bigger compared to the first expectations, with an amount of 2.317 aged people. Conclusions: Dance demonstrated to be an activity with enormous success in elderly people because besides having an socialization idea, can promote a better functional activity by raising strength, resistance and reducing risks of falling, showing that is possible to reduce investments on public health by doing preventing actions.

**PD6 894 GERONTOLOGY AS A MORAL SCIENCE? THE CASE OF THE BELGIAN AGING STUDY**  
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Introduction: In this article we discuss some theoretical and methodological perspectives for studying the needs of older people. The main purpose is to examine how these various approaches can be fitted into the 'theoretical discussion' on the 'public role' of social science. Starting from the debate on professional versus public sociology, the paper reflects upon issues concerning the extra-academic purpose or engagement of gerontology. Using the case of the Belgian Aging Study (BAS), we discuss the implications of gerontology as a moral science. Method: First, we elaborate on the specificity of the BAS-method to reveal the needs of older people. A survey was developed to collect information about a variety of topics, including demographic characteristics, health, well-being, participation, etc. A sample of 46.989 residents aged sixty and over was interviewed. The research project was carried out in cooperation with provincial governments, local authorities and members of local senior organizations. Older people are involved in this research, not only as sources of information, but also as experts and actors by playing a role as voluntary poll-takers (peer-research). Every sample is representative for a specific municipality, offering local governments tools for evidenced-based policy. Secondly, various aspects of the BAS-method are situated in the broader theoretical framework about the project of public sociology. Results: The process of this research in which older people actively engage as partakers and develop a sense of co-ownership shows how gerontology can play a role in the public sphere. In particular, it is argued that certain aspects of the BAS-method increase older people's political participation. Conclusion: Recognizing gerontology as a moral science suggests the need of revitalizing the discipline by leveraging its insights and

methods to engage in debates not just about what is or what has been in society, but about what society might yet be.

**PD6 895 FACTORS ASSOCIATED WITH VOLUNTEERISM AMONG COMMUNITY DWELLING OLDER ADULTS IN URBAN CHINA**  
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Introduction: The benefit of volunteerism to the society and older adults is clearly documented. However, volunteerism is still a relatively new concept in the developing countries. Very few studies have focused on older adults' volunteering activities in China. This study documented the prevalence of and identified factors related to volunteering activities performed by urban community living older adults in China. Methods: The data used in this study were extracted from a national representative Sample Survey on Aged Population in Urban/Rural China (SSAPUR) that was conducted by the China Research Center on Aging in 2000. This study included 10,139 urban community living older adults aged 60 years or older. The participation of volunteering activities was assessed by whether older adults participated in public security, voluntary labor, volunteer groups, mutual aid groups, and educating youth in the past 12 months. A logistic regression analysis was used to identify the factors related to older adults' volunteering activities. Results: In this sample, over one third (35.8%) of older adults participated in at least one of the volunteering activities. Logistic regression analysis showed that males ( $OR=.77$ ,  $p<.000$ ), college education ( $OR=.61$ ,  $p<.000$ ), no party affiliation ( $OR=.69$ ,  $p<.000$ ), had a paid job ( $OR=1.51$ ,  $p<.000$ ), self-rated health ( $OR=1.19$ ,  $p<.000$ ), ADL limitations ( $OR=.92$ ,  $p<.05$ ), IADL limitations ( $OR=0.95$ ,  $p<.000$ ), and life satisfaction ( $OR=1.06$ ,  $p<.05$ ) were statistically significant factors in relation to the participation of volunteering activities. Conclusion: A surprising high percentage of urban, community dwelling older adults in China participated in volunteering activities. The significant predictors of volunteerism identified may help organizations locate the potential volunteers more effectively. Given the benefits of volunteerism, this result highlights the importance that policy makers at different levels need to develop strategies that facilitate and promote older adults' participation in volunteering activities.

**PD6 896 A CROSS-NATIONAL COMPARISON OF FRONT-LINE CARE WORKERS IN CARE HOMES IN CANADA, SCOTLAND AND THE US**  
 R. JOHNSON\* (University of Stirling, Scotland, Stirling, United Kingdom)

As the world population and the prevalence of dementia increases it becomes more imminent to prepare front-line care workers to provide appropriate care for the residents with dementia that they will be providing care for living in long-term care centers. This qualitative research employed multi-ethnographic methods to interview and observe front-line care workers in these three countries. The basic research questions for front-line care workers were: do you feel as if you were adequately trained to do your job; if so, where did you get that knowledge; and an observation tool was developed to measure if they used that knowledge. The preliminary results found that these three countries recruit and employ different socio-economic status levels of front-line care workers based on each country's training requirements and health care policy. In addition this research looked at how the elderly are valued in each country. In conclusion, significant differences were found among the countries compared in terms of several variables, some including: pay and benefits; career ladders; training requirements; and front-line care worker turnover. These variables should be investigated further for quality care for people with dementia living in long-term care.

**PD6 897 THE RISE OF HIV/AIDS AMONG THE ELDERLY: EVALUATING RISKS AND INTERNATIONAL POLICY RESPONSES**  
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 V. PHUA (1) - (1) Gettysburg College (Gettysburg, United States of America)

Current research in HIV/AIDS has focused on two core issues of concern related to this disease process and its impacts on older populations. The first concern is that of the social and economic costs of aged parents caring for children and younger relatives suffering from this disease. The elderly who engage in this type of family support not only face the increased burden of care giving for these sick and dying family members but they also face the loss of the very family members they would often depend upon for care in their later years. Work by Knodel et al (2001) and others have clearly laid out the issues relevant to this topic and they have established a research framework that is increasingly employed by other researchers in this area. The research presented here addresses the second core issue, increasing our understanding of growing prevalence of late life exposure and contraction of HIV/AIDS among people aged 50 and older. Studies by numerous researchers have shown that the incidence of HIV/AIDS among the mid-life and aging populations has long represented 10 percent or more of the identified HIV positive population and is now increasing at an alarming rate. As of 2001, the decade long cumulative number of AIDS cases reported to the Centers for Disease Control and Prevention in adults aged 50 years or older quintupled, from 16,288 in 1990 to 90,513 by the end of 2001 (Mack and Ory, 2003). Recent work by Henderson et al (2004) has found that the knowledge and understanding of

risks associated with contracting HIV/AIDS among older women (50 plus) was surprisingly limited and this lack of knowledge contributes to the increased risk of contracting HIV. We will present the evolution of HIV among the aged and evaluate policy responses to this new concern.

**PD6 898** BRIDGING THE DIVIDE: A NEW ROLE FOR SENIOR CENTERS TO ADDRESS NEIGHBORHOOD HEALTH AND LONGEVITY DISPARITIES  
M. FAHS\* (Hunter College, City University of New York, New York, New York, United States of America)

Introduction. Innovative models for targeting effective prevention services among urban community-based older adults are urgently needed. Yet a paucity of studies differentiates health status and use of evidence-based preventive services by race/ethnicity and neighborhood. This study compares utilization predictors by race/ethnicity and neighborhood among NYC seniors attending senior centers, a potentially vital structural component of urban aging policy. Methods. The research design is cross-sectional. In-person interviews were conducted in six languages using standardized health status instruments (e.g. EQ-5D; PHQ-9). A representative sample of seniors attending senior centers was randomly selected to represent racially/ethnically diverse neighborhoods in NYC. The sample (n=1,861) is composed of White non-Hispanics (n=724), Latino/Hispanics (n=424), African Americans (n=347), Asian/Pacific Islanders (n=226), and Others (n=138). Logistic regression models were used to estimate the effects of neighborhood and race/ethnicity on preventive service use, controlling for socioeconomic and health characteristics. Results. Strikingly, senior center participants are representative of the US population of community-based older adults, based on nonsignificant differences in physical and mental health scores. Yet important differences by race/ethnicity were identified. For instance, 24.2% of Latinos were depressed, compared with 15.1%, 13.3%, and 9.0% ( $p < .001$ ) among Blacks, Asians, and Whites, respectively. However, after controlling for health status, place of birth, age, education, access, and insurance status, logistic results reveal neighborhoods to be highly significant predictors of health care access and specific preventive service use, e.g. colonoscopy and mammograms, mediating the effects of race/ethnicity. Conclusion. Neighborhood-based senior centers have the potential to contribute to age-friendly cities and healthy urban aging. However, difficult challenges remain to integrate or "modernize" senior centers with evidence-based disease prevention and health promotion. New policy initiatives to address the complex interactions of race/ethnicity with neighborhood-based determinants of healthy urban aging are discussed.

**PD6 899** ALZHEIMER'S DISEASE ON THE FRENCH POLITICAL AGENDA  
L. NGATCHA-RIBERT\* (Fondation Médéric Alzheimer, Paris, France)

INTRODUCTION The aim of this presentation is to analyze the processes implemented by the emergence, development and institutionalization of public actions and programs dealing with Alzheimer's disease and related disorders. Since "senile dementia" was regarded as almost "normal" aging until now, dementing illnesses among elderly people have only recently received a peculiar attention from researchers and policy makers. METHODS We have examined the different reports and amendments published since the 1960s, and illustrated them by different media supports and interviews (with policy makers, physicians such as geriatricians, neurologists and psychiatrists, and family associations), which are considered as precious indicators about the evolution of conceptions and policies about Alzheimer's disease. RESULTS Official and political recognition of Alzheimer's disease is a slow process, as well as the evolution of norms and conceptions going from "disabilities" to "Alzheimer's Disease" via the very French notion of "dependency". We have identified different actors efforts building this issue as a "public problem" and guiding public decisions. CONCLUSION It shows that Alzheimer's disease has been redefined many times according to beliefs, institutions and actors at each period of time.

**Tuesday July 7th**

**Track A – Biological Sciences**

**PA7 001** THE VARIABILITY OF THE UCP1 GENE AFFECTS SURVIVAL IN OLD FEMALES  
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Uncoupling proteins (UCPs) belong to a family of anion transporters located in the inner membrane of mitochondria, that uncouple substrate oxidation from ATP synthesis. The brown fat specific uncoupling protein 1 (UCP1) is involved in thermogenesis, a process by which energy is dissipated as heat in response to cold stress and excess caloric intake. Several studies in model organisms indicate that thermogenesis has potential implications for body mass control and cellular fat metabolism. In humans, the A-3826G polymorphism

in the 5' region of the UCP1 gene is associated with obesity, fat gain and metabolism. The A-3826G polymorphism is in strong linkage disequilibrium with the C-3740A variation, that disrupts a site for the binding of ATF/CREB factor. Since fat metabolism is one of the key-pathways in lifespan extension, we tested the possible effects of this polymorphism on survival. A Genetic Demographic (GD) approach was applied on a sample of 844 subjects from southern Italy (371 men and 473 women; age range 18-109) screened for A-3826G variability. To test for the functional role of the A-3826G polymorphism we cloned in pGL3 promoter vector upstream of the Luc-transcriptional unit the sequences containing the A-3826G and C-3740A variations. The reporter constructs were transfected in MCF-7 cells. By analysing allele specific survival functions we found out that in females the G allele modulates survival in the elderly. Consistently, transfection experiments showed that the luciferase activity of the construct containing the A-C haplotype was significantly higher than to that containing G-A haplotype. Interestingly the construct containing the G-C haplotype was totally lacking of luciferase activity. These results suggest a functional effect of the A-3826G and C-3740A polymorphisms on UCP gene expression which affects survival in old females.

**PA7 002** APOE GENOTYPE IN NONAGENARIAN FROM THE BASQUE COUNTRY

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OBJETIVE/INTRODUCTION To analyze APOE genotypes in a nonagenarian group from the Basque Country (northern Spain) in relation to their cognitive state. METHODS This study includes 48 nonagenarian individuals, 32 of them suffering from cognitive impairment disorders. Additionally, a sample of 265 controls without cognitive impairment disorders was analyzed. All the individuals were tested with MMSE. Values below 20 points within the nonagenarian group were considered cognitive impairment disorders, while a value of 28 points was set to controls. Genetic analyses were carried out in the DNA Bank facilities at the University of the Basque Country UPV-EHU (Spain). Two techniques, polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLPs) with HaeII and AflII enzymes, were used to determine the APOE genotype. RESULTS 1.57 years. The group± The average age of nonagenarian was 96.50 consisted of 85.4% of women. We compared the frequency of APOE genotypes between nonagenarians and controls by chi-Pearson and significant differences were found ( $p = 0.03$ ). There was a higher frequency of genotype 3.3 in nonagenarians than in the control group. On the other hand, the presence of 3.4 genotype was lower. Nonagenarians were divided by cognitive state. Taking this classification into account, we observed the absence of the APOE 4 allele in subjects without cognitive impairment. CONCLUSIONS The APOE 4 allele, a key factor in the onset of neurodegenerative processes and the development of cognitive impairment, was absent in nonagenarians without cognitive impairment.

**PA7 003** ANALYSIS OF FV-LEIDEN AND FACTOR II G20210A SNP FREQUENCIES IN A GROUP OF SICILIAN NONAGENARIANS

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S. LA PIANA(1), M. PIPITONE(2), S. GRIMAUDO(2), C. CARUSO(1) - (1) Dept. Pathobiology and Biomedical methodology, University of Palermo (Palermo, Italy);  
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Introduction: The analysis of the genetic profile of centenarians aims to identify the genes and allelic variants which may be involved in life expectancy and which can be considered as predisposing factors for ageing associated diseases. The process of aging is characterized by signs of increased activity of coagulation enzymes, indirectly expressed by high levels of factor VII, fibrinogen and fibrin degradation products that well correlate to the pro-inflammatory state associated to the aging. These increases are counterbalanced by regulatory proteins, as TFPI (tissue factor inhibitor), that increases in the elderly in parallel to the factor VII. In this work we assessed allelic frequencies of the G1691A mutation (FV Leiden) and G20210A polymorphism of factor V and II in ultranonagenarians Sicilian subjects and young controls to assess whether genotypes predicting increased functionality and levels of these haemostatic proteins might affect the achievement of an advanced age. Methods and Materials: The identification of the alleles in the two polymorphic sites of factor V and Factor II were obtained by Real Time PCR allelic discrimination assays on a 7300 Real Time PCR System - Applied Biosystems in 106 nonagenarians and 120 controls. For both polymorphisms were used probes specific for the wild-type alleles marked at the 5' end with the fluorochrome Fam, and probes specific for the mutated alleles marked with the fluorochrome Vic. Results and conclusions: Analysis of the distribution of genotypic and allelic frequency of the mutation G1691A (FV Leiden) of FV and the prothrombin G20210A polymorphism allows to find no significant differences between the two groups studied. The data presented here, in good agreement to those obtained by other studies, confirm that the presence of gene variants

associated with a higher production or increased functionality of the clotting factors is not detrimental to the achievement of longevity.

**PA7 004 CALORIE RESTRICTION MODIFIES THE EXPRESSION OF COENZYME Q BIOSYNTHESIS GENES IN MICE**

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J. VILLALBA(1) - (1) (Cordoba, Spain); (2) (Seville, Spain); (3) (Baltimore, MD, United States of America)

Introduction Knowledge of molecular mechanisms controlling longevity provides a means for establishing the rules to maintain cells and tissue efficiency with aging. Caloric restriction is the only non genetic manipulation that increases mammal longevity. Coenzyme Q and related enzymes regulate aging processes through the maintenance of cellular redox homeostasis. Materials and methods We studied by QPCR-RT the effect of calorie restriction (40%) diet on liver, brain, muscle and kidney mRNA levels of mSPS1, mDLP1, mCOQ2 and mCOQ7 in thirty six mice during one month of treatment. These genes encode enzymes catalyzing the final steps of coenzyme Q biosynthesis. Amounts of CoQ<sub>9</sub> and CoQ<sub>10</sub> were quantified by reversed-phase HPLC. Data were analysed by the Student t-test in SPSS 11.0 statistical software. Results Results showed an increase ( $p<0.05$ ) in mCOQ2 and mCOQ7 mRNA levels of liver and kidney in calorie restriction conditions. mSPS1/mDLP1 ratio increased ( $p<0.01$ ) in liver and kidney, and Q<sub>9</sub>/Q<sub>10</sub> ratio in liver was also increased ( $p<0.05$ ). We also observed significant changes ( $p<0.01$ ) in redox ratio of CoQ. Conclusion Our data indicate that short-term calorie restriction diet involves a series of changes in cellular coenzyme Q and genes encoding enzymes of the final stage of coenzyme Q biosynthesis. Given the well established effect of calorie restriction extending life span and enhancing stress responsiveness, our results supports a role for coenzyme Q as a target of calorie restriction in longevity promotion.

**PA7 005 EFFECT OF ORAL CARE TO PREVENTION OF PNEUMONIA TO THE PATIENTS IN SANATORIUM - IS THERE RELATIVITY OF ORAL CARE TO THE CAUSE OF DEATH?**

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Purpose It is clear that oral care is effective in prevention of pneumoniathe to the patients in sanatorium . We executed a statistical examination whether the oral care is effective or not, to the patients in sanatorium. We investigated the cause of death as our first report, and we prospectively evaluated the usefulness of the oral care. Method We retrospectively investigated the death certificates for the long-term treating patients in sanatorium until March 31, 2008 to October, 1996. The study consisted of the oral care group, (30 patients), and non-oral care group(50 patients) . And , randomized intervention design was used. We investigated the comparative study of the age, sex, the average hospitalization period, the cause of death, the presence of the oral ingestion, and the usage condition of the antimicrobial. Result The Average hospitalization days results : OC group was high for 1285.26 days in non-OC group 591.946-day ( $P<0.001$ ) and some thought. The sex ratio were : OC group female (62%), OC group man(38% ) , non- OC group the female (66%) non-OC group man (34%). The great difference is recognized by neither of the groups. The ratio of the oral ingestion was almost equal to OC group 36.7% Non-OC group 34%, and non-OC groups obtained a high result in the cause of their death the ratio of pneumonia : OC group 16%Non-OC group 38% . That is, in the OC group the feature with a lot of deaths by geromarasmus was seen. And in the non-OC group, it turned out that there were a lot of death cases due to pneumonia. Consideration OC group of the average hospitalization days were significant long, the ratio of the oral ingestion was almost equal to each groups. In the OC group it turned out that there were less cases due to pneumonia. So, we consider that there is close relationship between the oral care and life prolongment.

**PA7 006 FUNCTIONAL STATUS OF THE SEMI-SUPERCENTENARIANS**

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N. HIROSE(1) - (1) Keio medical school (Japan)

healthy aging and longevity phenotype is a persistent problem. Centenarians have been used as a case merely due to their remarkable age. However, the recent expansion of the centenarian population and the increasing number of frail centenarians raise question regarding the appropriateness of centenarians in general as a case phenotype. We focused on semi-supercentenarians(SSC) who have survived beyond 105 years birthday as a representative of healthy aging and longevity phenotype, because mortality leveling off was observed people over 105 years old in Japan. However, we are not sure whether SSC are healthy aging and longevity phenotype, who maintained functional status through the life span or frail survivors who spend most of the time in bed in final stage of life. To confirm the validity of adopt mortality level off as a criterion age, we compared the functional level of both surveyed age (over 105) and age at 100 years old between SSC and centenarians who had dead before 105 years old. Results showed that the functional level

of SSC at the surveyed age were lower in comparison with centenarians. Functional level at 100 years, however were higher in SSC. In addition, cumulative frequency of bed-bound individuals by age in SSC glows slower. Well maintained functional level at the age of 100 and beyond in the SSC indicates that they have special characteristics to live healthier and longer. Also indicates that SSC are good target to tap longevity genes. This framework might be beneficial for discriminating case individuals harboring genes that are likely to confer extreme longevity in any population, regardless of average life expectancy

**PA7 007 MITOCHONDRIAL DNA CONTROL REGION: BASE COMPOSITION AND CORRELATION WITH MAXIMUM LIFE SPAN IN MAMMALS**

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Introduction: Mitochondrial DNA (mtDNA) consists of two functionally and topologically different parts: coding sequences and non-coding control region (CR). The CR covers a relatively small part of mtDNA (on average, less than 8%), yet it plays a leading role in regulation of mtDNA replication and transcription. Given a strong association between mtDNA and maximum life span (MLS), the CR could be of particular interest. Here we focus on CR compositional features and their correlation with MLS in mammals. Methods and materials: Data on 159 mammalian species with completely sequenced mtDNA and reported MLS was analyzed. CR was divided into 10 equal segments (decimals). Base composition, strand asymmetry, and their correlation with MLS were estimated for each decimal. Results: Base composition of the entire CR does not differ significantly from that of the coding mtDNA. However, in contrast to coding sequences, CR displays a clear pattern of gradual compositional alterations along its length. For example, thymine/cytosine ratio declines gradually from 3.2-4.2 in the peripheral decimals to 1.3-1.5 in the central decimals. Accordingly, strand asymmetry is minimal in the central part of CR, where the content of all four nucleotides is almost equal, as could be expected from a random distribution. This pattern could presumably be attributed to regional differences in the rate of spontaneous or transcription-associated DNA unwinding. For each of the bases, correlation with MLS is significant in the peripheral decimals and decreases gradually to lower or even to insignificant values in the central decimals. Conclusions: In mammals, correlation of MLS with mtDNA base composition and strand asymmetry declines gradually along CR, from the periphery towards the center. The results obtained show for the first time an association between longevity and CR. In a broad sense, the results highlight a possible role of non-coding mtDNA in determination of mammalian longevity.

**PA7 008 ENDING AGING - SHOULD WE AIM FOR IT?**

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In 2007 Aubrey de Grey (with Michael Rae) published the book "Ending Aging: The Rejuvenation Breakthroughs That Could Reverse Human Aging in Our Lifetime". De Grey represents a growing group of people who expect substantial life-extension to be possible within this century based on stem cell technology, genomics engineering, caloric restriction mimetics, etc. Based on the study of recent papers by prominent biogerontologists such as Richard Miller, Judith Campisi, Jan Vijg and Rudi Westendorp this presentation will start with the issue of whether this is a realistic possibility. The main topic of this presentation, however, is the fundamental socio-ethical question whether substantial life-extension should be a goal of public policy. Should governments install a Marshall plan against aging to reap the benefits of a longevity dividend? Based on the most important relevant literature it will be argued that there are hardly any decisive ethical arguments in principle against substantially prolonged human lives (arguments of freedom, well-being and meanings of life). The most important principled argument against might be the one related to population growth and the fundamental choice between either a world of many very old people with hardly any children or a continuing cycle of new generations. The arguments from justice and efficiency do not constitute an absolute objection against substantial life-extension. They do make clear, however, that (a) biogerontological research will be very important in the coming decades but (b) social and governmental priorities should be different from engineering substantially prolonged human lives. For the time being aging well is as important as ending aging.

**PA7 009 THYROID HYPOFUNCTION AS A LONGEVITY ASSURANCE MECHANISM IN OLD AGE**

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Introduction: An accumulating body of evidence suggests the involvement of thyroid hormone metabolism in the regulation of the life and health span in rodents. Several age-related changes in the hypothalamic-pituitary-thyroid axis have been observed during the human aging process as well. However, it remains unknown whether this altered thyroid function in human old age represents a dysfunction contributing to the aging process or an adaptive mechanism in response to damage, aimed to enhance longevity. The purpose of this study was to explore the role of thyroid hormones in the processes of human aging and

longevity. Methods and materials: To this end we investigated the relation between thyroid hormones and metabolic parameters as well as inflammatory markers among 555 subjects, age 85, and 606 middle-aged subjects. Results: In agreement with previous studies we observed a decline in thyroid function with age. In addition we found that low thyroid hormone was associated with a more beneficial glucose and lipid metabolism in both middle-aged and old-aged subjects. In contrast to middle-aged subjects, in old-aged subjects low thyroid hormone was related with higher inflammatory markers. Moreover, lower thyroid hormone levels were associated with a higher mortality risk. Conclusion: our findings are indicative of suppression of the thyrotroph axis in elderly individuals as part of an adaptive response to delay age-related pathology.

#### **PA7 010 EFFECTS OF ELASTIN PEPTIDES ON CERAMIDE-INDUCED APOPTOSIS**

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Elastin is an essential component of the extracellular matrix. Mechanical fatigue or enzymatic degradation of this molecule produce oligopeptides called elastin peptides (EP) which can exhibit several biological activities. When human skin fibroblasts (HSF) are stimulated with EP, a high activation of the PI3K/p110 $\gamma$  is observed. As this kinase plays an important role in cell survival, we hypothesized that EP could disturb cell apoptosis which is required to dispose of damaged cells. When HSF are treated with ceramide they rapidly enter apoptosis. But when EP are present this phenomenon is reduced. Signalling pathways analysis demonstrated the involvement of the PI3K/110&gamma;. Following EP treatment, the anti-apoptotic protein Akt is phosphorylated resulting in its full activation. This in turn leads to the phosphorylation and subsequent inhibition of several pro-apoptotic proteins: the Bad protein which is involved in the mitochondrial apoptotic pathway, the forkhead family transcription factor Foxo3a which promotes pro-apoptotic protein production and caspase-9 which is part of a structure found in the mitochondrial apoptotic pathway. As EP accumulate with ageing, our results indicate that EP could somehow prevent cellular apoptosis, and promote cellular senescence thereby contributing to tissue ageing. EP are less efficient when cells are aged. This unexplained phenomenon is termed "receptor uncoupling" because it seems that the receptor is literally disconnected from its signalling pathways. As the simplest explanation is that the receptor is less expressed with age, we analysed its expression in 4 strains of young HSF (<25y), 5 strains of old HSF (>60y) and 1 strain of senescent HSF. Surprisingly, we did not observe any variation. This finding strongly suggests that the uncoupling of the receptor cannot be explained by a modification of its expression level. The receptor is still present but for reasons that deserve further investigations it is no more efficient.

#### **PA7 011 THE INDUCTION OF AGE-RELATED CHANGES IN YOUNG IMMUNE SYSTEM: STUDY ON THE HETEROCHRONIC PARABIOSIS**

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Introduction. The decrease of the immune parameters with age is a well established fact. It can be assumed that these effects are mediated either by changes in the cells, lymphoid organ's niches, or by humoral factors, or by some unknown regulatory influences at the cell population level. In order to analyze the trigger mechanism of age-related changes in the immune system we made the heterochronic pairs with different terms of coexisting. The aim of this investigation: to ascertain the initial changes, and determine the sequence of age-related alterations in the young immune system. Materials and methods. Young and old male CBA/Ca mice were joined by parabiosis for immunological tests. There were made 6 groups: young and old single controls, young and old isochronic pairs, and heterochronic pairs with 3, 6 and 12 weeks of coexisting. Young and old male FVB.Cg and FVB.Cg-Tg(GFP)5Nagy/J mice were joined by parabiosis for cell migration analysis. For investigations routine immunological methods, FACS-analysis, ELISA and Western Blotting were used. Results. It was observed the age-related changes of the immune parameters in young heterochronic partners, which progressed with term of coexisting. Old heterochronic partners have some rejuvenation effect only at early term of coexisting (3 weeks). Initial changes in immune parameters concern to the T-cell subpopulation in the peripheral lymphoid organs. The first of them - the increase of high proliferate CD8+CD44+ cell number in the spleen, which have young origin. The changes in lymphoid cell population which led to final dysfunction of the immune system were analyzed. Conclusions. The immune system aging is inducible process. Understanding of its mechanism can lead to the knowledge of aging process. The study was supported by Institute of Biology of Aging (Moscow, Russia).

#### **PA7 012 IMPAIRED AGE-RELATED RESPONSE TO HYPERTERMIA IN A NON-HUMAN PRIMATE**

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The heat wave of 2003 increased death prevalence from hyperthermia in the elderly. To test how aging affects evacuation of excedentary body heat, thermoregulatory experiments were conducted in a non-human primate, *Microcebus murinus*. First, to test the response to

exposure to a warm environment adult and aged mouse lemurs were exposed during 10 days to an ambient temperature of 25°C and then at 34°C. Core temperature was continuously recorded by a telemetric device. Then, fever was pharmacologically induced in adult and aged mouse lemurs at the reference ambient temperature of 25°C by the injection of isoproterenol, a enhancer of body heat production via activation of non shivering thermogenesis. Respiratory metabolism and skin temperature were recorded as representative parameters of body heat production and evacuation in this protocole. Exposure to 34°C induced higher effects in aged than in adult animals. Indeed, the minimal level of Tc raised by 2°C between 25 and 34°C in aged mouse lemurs and only by 1°C in adults. More, the temporal organization of the daily rhythm in Tc was strongly disturbed in aged animals while no such effects were observed in adults. After the induction of fever, both adult and aged mouse lemurs exhibited an increase in respiratory metabolism, revealing the enhancement of body heat production. However, skin temperature only increased in adult animals, whereas it did not vary in aged ones. More, respiratory metabolism was maintained higher than the control level during a long time in aged mouse lemurs, whereas it rapidly decreased to reference values in adult ones. Thus, difficulties in evacuating the excedentary body heat in both experimented hyperthermia conditions were revealed during aging. An impaired age-related response in the vasodilatation/vasoconstriction balance might be the origin of this trouble and should be further investigated.

#### **PA7 013 AGE-RELATED DIFFERENCES AND SIMILARITIES IN BRAIN ACTIVATION DURING INHIBITION AND SWITCHING**

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Younger (M = 24.38 years) and older (M = 63.80 years) adults performed a computer version of the Modified Stroop Test, including an Inhibition condition (IC; naming the color of a color-word) and a Switching condition (SC; alternating on cue between naming the color and reading the color-word). As expected, younger and older adults were faster in the IC than in the SC, and older adults were slower than younger adults across all conditions and less accurate in the IC and SC. Near Infra-Red Spectroscopy (NIRS) allowed an assessment of oxyhemoglobin and deoxyhemoglobin concentrations in four regions of interest (ROI), i.e., anterior and posterior dorsolateral (DLPFC) and ventrolateral (VLPFC) prefrontal cortex. Results for younger adults showed an increased oxyhemoglobin concentration in the anterior DLPFC during the IC and an increased oxyhemoglobin concentration in both anterior regions during the SC when compared to other ROIs. Concerning deoxyhemoglobin concentration, younger adults showed a greater concentration in the right than the left hemisphere in all conditions. Older adults also showed an increased oxyhemoglobin concentration in both anterior regions during SC compared to other ROIs. A greater deoxyhemoglobin concentration was observed in the SC compared to the IC in older adults. When comparing better performing and poorer performing older adults (based on reaction times and accuracy measures) to younger adults, NIRS results revealed that poorer performing older adults had a greater oxyhemoglobin concentration in the right than in the left hemisphere during the IC, while better performing older adults and younger adults showed no hemispheric difference in oxyhemoglobin concentration. No significant differences were found among the three groups for deoxyhemoglobin. Consequently, NIRS results suggest a hemispheric differential involvement for younger and older adults in deoxyhemoglobin concentrations during the Stroop Test and between better and poorer performing adults in oxyhemoglobin concentrations in the Inhibition condition.

#### **PA7 014 CHARACTERIZING A MOUSE MODEL OF IGF-1 IN AGING**

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Introduction: 'Midi' mice have chronically low levels of IGF-1 and exhibit extended longevity in comparison with control mice. These mice have a null insertion in the Igf-1 gene and have approximately half the circulating IGF-1 concentration as controls, similar to levels of IGF-1 in calorically-restricted (CR) mice. Our aim was to measure metabolic properties known to change with CR so as to assess the potential role of IGF-1 in CR. Methods: Male and female mice were measured at 7-11 months for body composition (DEXA) and 24-hour values for body temperature (Minimitter implants), physical activity (beam breaks), and metabolic rate (indirect calorimetry). Plasma values of insulin and other metabolites were also measured at six-hour intervals over 24-hours. Results: No significant differences between control and experimental mice were found for body temperature, physical activity, metabolic rate, respiratory quotient, bone density, and percent fat mass. Insulin levels of midi mice were significantly higher than control mice, whereas body weight and IGF-1 levels were significantly reduced. Conclusion: Decreased plasma IGF-1 may be a sufficient stimulus to slow the aging processes in these mice

despite the presence of elevated insulin levels. Similarly, midi mice display a caloric restriction phenotype only in their longevity but not in other parameters of metabolism. The results suggest that, at least in the C57BL/6 background, plasma IGF-1 levels may play a major role in slowing aging processes. Supported by: NIA #AG022443.

**PA7 015 MICRORNA EXPRESSION PROFILE IN CELLULAR SENESCENCE**

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Cellular senescence is a form of permanent growth arrest that is considered a possible contributor to tissue aging. Various stimuli, including dysfunctional telomeres, mild oxidative stress, DNA damage and activation of certain oncogenes, trigger cellular senescence that is controlled by p53 and p16-Rb tumor suppressor pathways. Recent evidences support the hypothesis that cellular senescence contributes to aging not only by accumulation *in vivo* of senescent cells in different tissues, but also by reducing the regenerative potential of the tissues, as a consequence of the stem cell senescence. Cellular senescence is characterized not only by the appearance of some biochemical markers, but also by modification of gene expression pattern. We previously reported that young human embryo fibroblasts (IMR90) exposed for only few days to low doses of the GSH-depleting agent diethylnmaleate (DEM), acquire the senescent phenotype. MicroRNAs (miRNAs) are a class of small non-coding RNAs, that act as post-transcriptional regulators of gene expression. miRNAs suppress gene expression by binding to complementary sites in target mRNAs causing translational repression or transcript degradation. In order to investigate whether miRNAs play a role in the induction of cellular senescence (either induced by repeated *in vitro* cell culture passages or provoked by a mild oxidative stress), we analyzed the expression profiles of 365 known human miRNAs by quantitative RT-PCR, using TaqMan Array Human miRNA Panel, in young and senescent fibroblasts as well as in DEM-treated young IMR90. 200 miRNAs out of the 365 tested resulted expressed in IMR90 cells. The miRNA expression profile was altered in senescent cells, with 8% of them being up-regulated, and 25% being down-regulated. This suggests that specific miRNAs are involved in the senescence program induced by mild oxidative stress and by repeated cell passages and demands functional experiments to prove their involvement in such processes.

**PA7 016 NONEQUIVALENT CHANGES IN THE IMMUNE SYSTEM AND SERUM HORMONE LEVELS IN YOUNG HETEROCHRONIC PARTNERS**

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Introduction. The functional capacity of different systems decreases during aging. The attempts to prevent the age-related changes by heterochronic parabiosis led to the controversial results – age-related changes in the immune system of young heterochronic partners. The aim of this investigation: to study the homeostatic mechanism of these changes. Materials and methods. Surgery for the formation of the parabiotic pairs was performed with CBA/Ca male mice. There were made 6 experimental groups: young and old single controls, young and old isochronic pairs and heterochronic pairs with 3, 6 and 12 weeks of coexisting. There were studied some immunological, biochemical and endocrinology parameters, the aim of which were to get information about homeostasis. For investigations routine immunological and biochemical methods, ELISA and FACS-analysis were used. Results. It was observed rapid and dramatic age-related changes of the immune system of young parabionts in heterochronic pairs, while old partners seemed to have no signs of rejuvenation in the late period of coexisting. It was established that old and young heterochronic parabionts had equal serum thyroxin level with young isochronic pairs. The level of corticosterone was increased in all groups of parabionts, what gives evidence of the chronic stress. Simultaneously such factors as insulin and glucose levels had no serious changes in heterochronic pairs and for the most of this parameters young and old organism behaved as separated organisms with its own regulatory mechanisms, even on the late periods of parabiosis. Conclusions. The immune parameters and some hormone levels changed independently in heterochronic partners. It seems that age-related changes may be regulated by various mechanisms which are controlled with different plasticity. The study was supported by Institute of Biology of Aging (Moscow, Russia).

**PA7 017 GHRELIN AS THE METABOLIC SIGNAL OF CALORIC RESTRICTION IN AGING**

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Introduction: Caloric Restriction (CR) is a well-known strategy to extend lifespan in diverse animal species. The numerous physiological benefits which arise during CR animals are retained long after their body weights and metabolic rates have adjusted to the reduced caloric level. We propose ghrelin as the metabolic signal which maintains not only the sense of hunger in these animals but also the CR phenotype, perhaps in part because of ghrelin's stimulatory effect on the growth hormone-IGF-1 axis. Prior work by Yang et al. (2007) has indeed demonstrated ghrelin is up-regulated in CR. Methods: We have compared two mouse models of CR or its mimetics. The first was a 10-day restriction at the 40% and 60% of ad libitum-fed in heterogeneous stock (HS) male and female mice. In the second, HS male and female mice fed a low-methionine diet were compared with a group receiving 40% less food than controls. In these models, measurements were made of plasma ghrelin, insulin, IGF-1, and glucose as well as body composition (DEXA), 24-hour physical activity (beam breaks), 24-hour metabolic rate, body weight and food consumption. Results: Preliminary results from animals on the low-methionine diet show an up-regulation in total plasma ghrelin in addition to an increase in food consumption compared to ad libitum controls. Animals on short term, severe calorie deficits displayed a sex difference in total plasma ghrelin and an up-regulation in stomach tissue ghrelin mRNA expression. Within these models, there were mixed effects on plasma insulin, glucose and other variables, and no significant changes in 24-hour metabolic rate or physical activity. Conclusions: There is suggestive evidence from these studies supporting the role of ghrelin as an agent in the orexigenic and anti-aging effects of CR. References: Yang, H., Youm, Y-H., Nakata, C., and Dixit, V.D. Peptides, 28 (10), 1931-66 (2007).

**PA7 018 ABSENCE OF MUTATIONS IN LAMIN A/C GENE IN FOUR WIEDEMANN-RAUTENSTRAUCH SYNDROME PATIENTS**

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Introduction: The Wiedemann-Rautenstrauch syndrome (OMIM 264090) characterises a premature aging syndrome in which several features of aging are apparent at birth. Other progeroid syndromes have been already mapped, but WRS's causing gene is still unknown. Hutchinson-Gilford progeria syndrome and some cases of Atypical progerias show alterations in the coding sequence of the Lamin A/C gene, a nuclear structural protein related to the nuclear membrane stability, structural regulation of chromatin and genetic transcription, among others. Materials and Methods. Peripheral blood was obtained under parents written informed consent. Genomic DNA was isolated using modified salting-out procedure. The entire Lamin A/C coding regions were amplified using Polymerase Chain Reaction, and the fragments were purified and sequenced using BigDye Terminator kit in an ABI Prism 3130 capillary sequence machine (Macrogen Inc. Soeul, South Korea). Results. We did not find mutations in the twelve exons and UTR's of the Lamin A/C gen in four WRS patients, and in particular, we did not find the G608G mutation (GGC>GGT transition) which is associated with most cases with Hutchinson-Gilford progeria (OMIM 176670). Discussion. The premature aging syndromes are excellent models for the study of normal aging. The present report is based on the analysis of four well clinically characterized WRS patients: one previously described, and three unreported cases who present the typical phenotypical WRS characteristics. This is the first report analyzing LMNA gene in this number of probands. Clinically, WRS has been clearly defined to represent a progeroid entity different from HGPS. Based on this study, WRS may also be considered to be genetically different from HGPS. The next step is to analyze genes involved in the metabolism of Lamin A/C, other nuclear structural proteins and metabolic pathways such as Protein kinase B/AKT signaling. This work was supported by DIB-Universidad Nacional de Colombia (Grant # 7707) and COLCIENCIAS (Grant # 1101-405-20117).

**PA7 019 WHOLE BODY PROTEIN AND GLUCOSE KINETIC RESPONSES TO THE FED-STATE CLAMP IN OLDER ADULTS**

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INTRODUCTION: This study was aimed at determining how the aging process influences protein turnover in women during fed conditions. Because anabolism occurs in the postprandial state, and that aging is associated with loss of muscle mass, we hypothesized that aging would be associated with reduced net muscle protein synthesis and whole-body net protein balance in response to feeding. METHODS AND MATERIALS: Eight young (24 +/- 3 yrs, BMI: 21 +/- 2 kg/m<sup>2</sup>) and five elderly (74 +/- 8 yrs, BMI: 24 +/- 3 kg/m<sup>2</sup>) women were studied after 6 days of controlled diet and activity. Whole body [<sup>13</sup>C]leucine and [<sup>3</sup>H]glucose kinetics were compared in the postabsorptive state and during a simulated fed steady-state clamp that maintained insulin (~350 pmol/L), glucose (~8 mmol/L) and

branched-chain amino acids (BCAA, ~700 µmol/L) at physiological postprandial levels. RESULTS: In response to the clamp, there were no differences in glucose utilization and infusion rates, leucine flux, oxidation, synthesis or net balance between groups. However, in elderly women, the rates of amino acid infusion to maintain BCAs were lower (0.8 +/- 0.2 ml/min vs. 1.2 +/- 0.2 ml/min, p = 0.02, adjusted for FFM) and leucine breakdown was less suppressed (-21 +/- 7 µmol/min vs. -32 +/- 5 µmol/min, p = 0.01, adjusted for FFM) compared to young. Suppression of protein breakdown and amino acid infusion rates were indeed correlated ( $r = 0.75$ ,  $p < 0.01$ ). CONCLUSION: These preliminary results indicate that despite a net protein balance and insulin sensitivity of glucose metabolism that are comparable to those of young, protein breakdown is less inhibited by insulin, glucose and amino acids in elderly women. Muscle protein synthesis and expression of key components of the Akt/mTOR signaling pathway and of ubiquitin-proteasome will be determined in quadriceps needle biopsies.

**PA7 020 MODELLING INSULIN AND INSULIN-LIKE SIGNALLING (IIS) AND ITS TRANSCRIPTIONAL RESPONSE**  
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Introduction Nutrient sensing, particularly the insulin and insulin-like signalling (IIS) pathway, is a primary regulator of ageing and lifespan. Mutations of many proteins in the pathway have been found to modulate lifespan and it is important in the lifespan-extending effect of caloric restriction: this occurs in large part through the FOXO transcription factors which initiate a programme of stress response. We are developing computational models of IIS in order to gain insight into its responses, interactions and regulation. Methods Models are represented as stochastic differential equations, and are implemented in Systems Biology Markup Language (SBML) which allows the models to be developed in a modular and extensible fashion and to be shared. Simulations are carried out with the locally-developed Biology of Ageing e-Science Integration and Simulation (BASIS) system. Results We have modelled the IIS pathway from receptor binding of Insulin/IGF-1 to the activation of downstream kinases and their targets. We have extended a published model to put it into the stochastic framework and introduced additional positive and negative feedbacks and interaction with the TOR pathway. We show how these can lead to alterations in the sensitivity of IIS, and moreover how this can occur in a tissue-specific manner. The subcellular localization, transcriptional activity and stability of FOXO is controlled by a complex system of post-translational modifications in response to IIS and other signalling pathways. We have unified these into a single computational model, and we show the effects on FOXO of the interplay between multiple input signals acting with a variety of temporal patterns. Conclusion We have shown how an integrated model of the nutrient sensing system can be used to gain insight into the regulation of key molecular mechanisms of the maintenance, repair and resource allocation systems.

**PA7 021 VASCULAR OXIDATIVE STRESS AND INFLAMMATION ARE INCREASED WITH AGE AND AMELIORATED BY LIPOIC ACID SUPPLEMENTATION**

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Introduction: Increased oxidative stress and inflammation appear to be contributing factors to age-related atherosclerosis and cardiovascular diseases. Our previous work has shown that alpha-lipoic acid (LA) has anti-inflammatory and antioxidant properties. Methods and materials: We investigated biomarkers of systemic and vascular oxidative stress and inflammation in old (22-24 months) and young (3-4 months) male F344 rats and the ameliorating effects of dietary supplementation for 2 weeks with 0.2% (wt/wt) LA. Results: Markers of oxidative stress, viz., NADPH oxidase activity and levels of superoxide radicals, were increased in aorta of old vs. young rats, whereas superoxide dismutase (SOD) activity was decreased. Aortic mRNA and protein levels of the NADPH oxidase subunit, NOX4 (found in vascular cells), but not phagocytic NOX2 or p22phox, also were markedly increased with age, in agreement with the increased NADPH oxidase activity. The activities of xanthine oxidase and catalase were unchanged. Markers of inflammation, viz., NFkB DNA binding activity and mRNA and protein levels of vascular cell adhesion molecule-1 (VCAM-1) in aorta, and the concentration of monocyte chemoattractant protein-1 (MCP-1) in plasma, were significantly increased with age. Dietary supplementation with LA resulted in a non-significant decrease in NADPH oxidase activity in aged aorta, accompanied by a significant decrease in mRNA but not protein levels of NOX4 and VCAM-1. Furthermore, LA reversed the age-dependent decrease in aortic SOD activity, while decreasing plasma MCP-1 levels. Conclusion: These data suggest that vascular oxidative stress and inflammation increase with age, and LA ameliorates some of these age-dependent changes, thereby potentially lowering risk for cardiovascular diseases. This work was supported by grant 0760018Z from the American Heart Association, a grant from the Center for Healthy Aging Research at Oregon State

University, and NIH grant AT002034. Key Words: aging • aorta • lipoic acid • inflammation • oxidative stress

**PA7 022 THE RHYTHM OF AGING: WHY OUR IMMUNE SYSTEMS DO NOT AGE AT THE SAME RATE (AND US WITH THEM)?**

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Introduction. Experience teaches us, that organisms do not age at the same rate. We hypothesize this must be true also for the aging of immune system, considered one of the most important factors in the organismal aging process. The latter is reflected inter alia by greatly varying ages at which people succumb e.g. to the autoimmune diseases, usually associated with middle or older age, like rheumatoid arthritis (RA), systemic lupus erythematosus, Alzheimer's disease, or certain forms of chronic renal insufficiency. All of these diseases shorten life expectancy, so they can be considered accelerators of aging. There is a plethora of published observations of age-associated and/or age-dependent changes in the qualitative and quantitative changes of the immune system cells' phenotypes and functions. However, so far at least neither of them can be pinpointed as a singular cause of the immune system aging. Methods. Using flow cytometry, we have compared changing phenotypes (especially aging- or activation-related and T-regulatory cell markers) and proliferative functions (using our modification of the dividing cell tracking technique) of the CD4+ lymphocytes in the patients suffering from one of the aforementioned diseases and age-matched controls. Results. While certain phenotype changes observed in the patients are similar to those observed in healthy aging (e.g. increased proportion of the memory cells), other (especially the proportion of Tregs) are variably changing for different diseases. Also, the dynamic parameters G1 time) of CD4+ proliferation in vitro (especially cycle length and G0 vary between the diseases and only in the RA are similar to those seen in healthy aging. Conclusion. Aging- or aging-like (disease-) related immune cells' dysfunction may exhibit various forms, yet lead to the same general consequence: age- and/or disease-related immunodeficiency. Causes of the deterioration are greatly individualized and probably depend on the antigen-exposure history and genetic makeup of any single individual.

**PA7 023 CARDIAC CONTRACTION DETERIORATES WITH AGE IN VENTRICULAR MYOCYTES FROM MALE BUT NOT FEMALE RATS**  
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Introduction. Cardiac contraction is initiated by membrane depolarization, which triggers release of sarcoplasmic reticulum (SR) calcium (Ca), a process known as excitation-contraction (EC)-coupling. This study investigated whether age-related changes in cardiac EC-coupling differed in ventricular myocytes from male and female Fischer 344 rats. Methods. Ca concentrations (fura-2) and cell shortening (edge-detector) were measured simultaneously in cells from young adult (~3 months) and aged (~24 months) rats. Cells were voltage clamped and paced with conditioning pulses at 2 Hz. Results. The amplitudes of contractions and Ca transients were smaller in myocytes from aged males than in younger cells. Ca current density also declined with age in males. SR Ca content, assessed by caffeine, was similar in males regardless of age. However, Ca released per unit Ca current, an estimate of EC-coupling gain, declined dramatically with age in male cells. Fractional release of SR Ca also declined with age in males. In contrast to the results in males, contraction and Ca transient amplitudes were unaffected by age in female myocytes. Ca current density and fractional SR Ca release did decline with age in females, but EC-coupling gain was not affected by age in female myocytes. Interestingly, SR Ca content increased dramatically in aged female myocytes compared to younger cells. These age and sex differences in cardiac EC-coupling were maintained when conditioning pulse frequency was increased to 4 Hz. Conclusion. In short, age-associated changes in cardiac EC-coupling are more prominent in myocytes from males than in females. The increased SR Ca content in aged female cells may compensate for reduced Ca current, so as to maintain contraction. This increased SR Ca may be a female advantage that limits detrimental effects of age on cardiac EC-coupling.

**PA7 024 ACTIVATION OF AMP-ACTIVATED PROTEIN KINASE STIMULATES NUCLEAR TRANSLOCATION OF GAPDH IN HUMAN DIPLOID FIBROBLASTS**  
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• Introduction: Beside the metabolic function of glyceraldehyde 3-phosphate dehydrogenase (GAPDH) in the cytoplasm, it is involved in organization of the cytoskeleton and endocytosis, modulation and transport of nucleic acids, translation and transcription, replication control, DNA repair, cell proliferation and apoptosis. Its diverse activities appear to be regulated according to its subcellular localization and oligomeric structure. We here investigated the intracellular distribution of GAPDH after serum depletion and re-addition of serum, platelet-derived growth factor (PDGF), and lysophosphatidic acid (LPA). Since phosphoinositide-3 kinase (PI3K) has been reported to

be involved in other nuclear import signals and AMP-activated protein kinase (AMPK) inversely interacts with PI3K, their involvement in the serum- and growth factor-induced nuclear translocation of GAPDH was examined in the present study. • Methods and materials: The intracellular distribution of GAPDH was investigated by confocal laser scanning microscopy of immuno-stained young human diploid fibroblasts (HDFs). We addressed our study in the signal transduction pathways using their inhibitors, activators and siRNAs. • Results: Serum withdrawal from young HDFs led to a gradual accumulation of GAPDH in the nucleus and its nuclear accumulation was reversed by re-addition of serum and growth factors PDGF and LPA. The nuclear export induced by re-addition of serum and treatment with PDGF and LPA was prevented by LY 294002 and SH-5, inhibitors of PI3K and protein kinase B (Akt), respectively, suggesting an involvement of the PI3K signaling pathway in the nuclear export of GAPDH. AICAR (5-Aminoimidazole-4-Carboxamide-1-beta-D-Ribofuranoside), an activator of AMPK, stimulated nuclear translocation of GAPDH and prevented its nuclear export by serum and growth factors. AMPK inhibition by compound C and its depletion by siRNA partially prevented the serum withdrawal- and AICAR-induced nuclear translocation of GAPDH. • Conclusion: AMPK activates nuclear import signal of GAPDH, whereas PI3K signaling pathway acts mainly as its nuclear export signal.

**PA7 025 THE NITRIC OXIDE-PRODUCING ACTIVITY OF MACROPHAGES FROM SENESCENCE ACCELERATED MOUSE (SAM)**

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Introduction • SAMP1 is one of the inbred strains of senescence accelerated mouse (SAM). Mice of the strain show an age-associated early decline in immune activities, such as antibody production and natural killer activity. However, macrophage functions of the mice have been investigated only partly. In this series of research, we studied age-associated changes in macrophage functions of the mice, in order to discuss causal relations between macrophage functions and accelerated aging of the mice. Here, we investigated the nitric oxide (NO)-producing activity of peritoneal macrophages from various ages of SAMP1 mice. Methods and Materials • Three- to 12-month-old SAMP1/Kue and 3- to 24-month-old C3H/HeS1c mice were used. Peritoneal adherent cells from each mouse were used as macrophages and were cultivated in the complete RPMI1640 medium with lipopolysaccharide (LPS) or IFN- $\gamma$  for 2 days at 37 degree, 5% CO<sub>2</sub> in a CO<sub>2</sub> incubator. Supernatants of each culture were assayed for NO<sub>2</sub><sup>-</sup> by the Griess method. Results • The magnitude of LPS-stimulated NO-producing response of the C3H/He macrophages did not change significantly with aging, whereas that of IFN- $\gamma$  stimulated response showed an increase with aging to a peak at age 6 month and a decline with age from 6 to 24 month. In contrast, the magnitude of LPS-stimulated NO-producing response of SAMP1 macrophages increased significantly with age from 3 to 12 month. The magnitude of IFN- $\gamma$ -stimulated response of SAMP1 macrophages also showed similar age-associated increase. Conclusion • The NO-producing activity of macrophages from SAMP1 mouse increases with aging in spite of age-associated early decline of other immune activities. These results suggest that activated macrophage may increases in number in aging SAMP1 mouse with being involved in the accelerated aging.

**PA7 026 THE PHAGOCYTIC ACTIVITY OF MACROPHAGES FROM SENESCENCE ACCELERATED MOUSE (SAM)**

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Introduction • SAMP1 is one of the inbred strains of senescence accelerated mouse (SAM). Mice of the strain show an age-associated early decline in immune activities, such as antibody production and natural killer activity. However, macrophage functions of the mice have been investigated only partly. In this series of research, we studied age-associated changes in macrophage functions of the mice, in order to discuss causal relations between macrophage functions and accelerated aging of the mice. Here, we investigated age-associated changes in the phagocytic activity of peritoneal macrophages from SAMP1 mice. • Methods and Materials • Three- to 20-month-old C3H/HeS1c mice and 3- to 14-month-old SAMP1/Kue mice were used. Peritoneal adherent cells from each mouse were used as macrophages. In a CO<sub>2</sub> incubator, macrophages were incubated for 2 hours at 37 degree with sheep red blood cells (SRBC) or SRBC treated with mouse anti-SRBC IgG antibody. Engulfed SRBC by macrophages were hemolyzed with dimethylsulfoxide. Concentration of hemoglobin in the resultant solutions was measured at 415 nm with a microplate reader. • Results • Phagocytic activity of macrophages tended to increase in 12-month-old and older C3H/He mice. In SAMP1 mice phagocytic activity of macrophages appeared to increase at earlier age as compared with C3H/He mice. Antibody-treated SRBC were engulfed by C3H/He macrophages more vigorously than untreated SRBC. By contrast, untreated SRBC engulfed by SAMP1 macrophages as vigorously as antibody-treated SRBC. • Conclusion • SAMP1 macrophages appear to increase the phagocytic activity at earlier age than C3H/He mice. SAMP1 mice show an age-associated early decline in antibody production and natural killer activity. Therefore,

we suggest that macrophage functions in SAMP1 mice may be enhanced to compensate the early decline in the lymphocyte functions.

**PA7 027 STUDIES ON THE ROLE OF NQO1 IN REPLICATIVE SENESCENCE OF MOUSE EMBRYONIC FIBROBLASTS**

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Introduction. Senescence is generally defined as an irreversible state of G0/1 cell cycle arrest in which cells are refractory to growth factor stimulation. This state is characterized by oxidative stress and the expression of a number of senescence-associated markers. In most rodent cells, induction of the tumor suppressor p53 is critical to the induction of senescence, as its mutation allows escape from replicative senescence and causes immortalization. NAD(P)H-quinone oxidoreductase 1 (NQO1) is an ubiquitous cytosolic flavoenzyme that is involved in the protection against oxidative stress and carcinogenesis and in the stabilization of p53, particularly under oxidative stress conditions. This work was aimed at the study of the putative role of NQO1 in cellular senescence. Methods and materials. Mouse embryonic fibroblasts (MEFs) were derived from E12.5-E14.5 embryos and cultured in Dulbecco's Modified Eagle's Medium with 10% fetal bovine serum. Growth curves, NQO1 activity, p53-galactosidase were studied and p21 levels, and senescence-associated during cell passages using a 3T3 protocol. Results. Cessation of MEFs growth was observed at passages 5-9. As expected, cellular senescence was associated with a significant increase of p53 and p21 levels. Interestingly, NQO1 activity increased to reach a maximum from passage 5 to 10 and then, a decline took place after passage 15. At passage 20, very low NQO1 activity and p53 levels were observed. Conclusion. We have demonstrated changes of NQO1 activity associated with p53 stabilization and replicative senescence in MEFs. NQO1 could play an important role in the regulation of cellular lifespan by controlling p53 levels.

**PA7 028 EFFECT OF MITOCHONDRIA TARGETED ANTIOXIDANTS ON AGEING OF PODOSPORA ANSERINA: ULTRASTRUCTURAL STUDY.**

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Since many years ageing processes have been extensively studied in various model organisms and systems with an aim to find a base for the development of effective interventions to counteract several age-related diseases in humans. The bases of several theories of ageing include the hypothesis that ageing is basically caused by oxidative damage mediated by reactive oxygen species (ROS) leading to an accumulation of molecular defects which result eventually in organism death. Malfunctioning of mitochondria caused by oxidative damage was claimed as a process leading to ROS overproduction. During many years Podospora anserina has been extensively studied as an ageing model. Works of more than fifty years of research have demonstrated a clear mitochondrial etiology of ageing which subsequently has been repeatedly verified. Mitochondria targeted antioxidants (MAT) were previously shown to be effective in living systems to protect cells and subcellular structures under oxidative stress conditions and ageing [1]. In our work comparative analysis of MAT effect on ageing of Podospora anserina was performed in relation to mitochondrial structure. Podospora anserina tissue pieces were prefixed with paraformaldehyde-glutaraldehyde fixator in phosphate buffer at pH=7.4 for 2.5 h. Then the material was post-fixed with 2% OsO<sub>4</sub> water solution for 2 h. Dehydration with ethanol was done by increasing the ethanol concentration (70% ethanol was saturated with 1% uranyl acetate). Samples were embedded in an epoxy resin and then sectioned by ultramicrotome (75nm). Staining was performed by Reynolds' method. Samples were analyzed using the HU-11B electron microscope "Hitachi". Treated mycelium has significantly prolonged life spans. The electron microscopy analyses evidenced that treatment of wild type Podospora anserina cultivated on M2 medium with lypophilic plastoquinone derivates protects mitochondrial structure under oxidative stress conditions induced by superoxide donor paraquat and ageing. [1] Anisimov A.N. et al. Biochemistry (Mosc). (2008); 73(12): 1329-42.

**PA7 029 EFFECTS OF METABOLISM ON LIFESPAN IN LABORATORY MICE**

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Introduction The link between energy expenditure and longevity has raised strong debate over the past few years. The intuitively attractive "rate of living – free radical damage" theory, which states that increase in energy expenditure decreases lifespan, has been recently contested. This theory is mainly based on the presumption that ageing and death are consequences of toxic by-products of metabolism. There are two commonly used measurements of metabolism: by estimating total energy expenditure, known as daily energy expenditure (DEE), and by measuring resting metabolic rate (RMR). Here we measured DEE and RMR on mice and evaluate how it affects ageing and death by comparing mice lifespan. Methods and materials DEE and RMR were measured in 55

mice. DEE was measured directly by double labelled water method (DLW) using elimination rates of stable isotopes. RMR was assessed from the rate of oxygen consumption at 30°C. After the procedures, mice were kept in groups of four until natural death. Results Both RMR and DEE was highly correlated with Body Mass ( $F=10.0$ ,  $P=0.003$ ,  $R^2 = 0.16$  and  $F=51.87$ ,  $P<0.001$ ,  $R^2 = 0.5$ ). Lifespan was not significantly correlated with RMR ( $F=0.05$ ,  $P=0.09$ ), but was negatively significantly correlated with residual RMR ( $R^2=-0.09$ ,  $F=5.51$ ;  $P=0.023$ ). There was no significant correlation between lifespan and DEE or with residual DEE. Conclusions Although, the negative association between lifespan and RMR points to the direction of the rate of living theory, our DLW data do not corroborate it, suggesting that differences in the levels of locomotor activity may also play a role and contribute differently to the process of ageing. This result highlights the importance of separating the effects of different components of total energy expenditure e.g. resting and activity metabolic rate, to understand how they separately contribute to the ageing process.

#### **PA7 030 EXPRESSION OF mTOR IN SENESENCE MESANGIAL CELLS AND AGING KIDNEYS IN RATS**

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**Introduction:** Most genes that affect longevity encode components targeted by the rapamycin (mTOR) pathway. However, the links between the mammalian targets of rapamycin (mTOR) signaling and mammalian longevity have not yet been reported. **Methods and materials:** Rat mesangial cells were obtained from male Wistar rats at the ages of 3, 12 and 24 months, respectively. The senescence-like phenotypes included enlarged and flattened morphology, increased granularity and expression of senescence-associated beta-galactosidase (SA- $\beta$ -gal). The renal tissues were processed for morphometric and senescence analysis. The expression and location of mTOR and P21 WAF1/CIP1/SDI1 in kidneys or in mesangial cells were studied by immunohistochemistry or immunofluorescence. The mRNA and protein levels of the mTOR, p-mTOR, P21 WAF1/CIP1/SDI1, P27 KIP1 and P53 were detected by Western blot and/or RT-PCR, respectively. **Results:** Substantial tubulointerstitial injury occurred at the age of 12 months, but significant glomerular structure alterations were observed at the age of 24 months. An increase of SA- $\beta$ -gal staining was seen in tubules that varied in frequency and intensity with aging. The mTOR staining appeared in the mesangial matrix and interstitium. The protein of P21WAF1/CIP1/SDI1 was localized in the tubulointerstitial cells. The staining intensity of mTOR and P21WAF1/CIP1/SDI1 in kidneys of old animals were markedly increased compared to that of young and middle-age rats. The mRNA levels of mTOR and P21 WAF1/CIP1/SDI1 were significantly increased in aging kidneys, compared to that in kidneys at the ages of 3 and 12 months. The protein expressions of mTOR, p-mTOR, P21 WAF1/CIP1/SDI1, P27 KIP1 and P53 were dramatically increased with advancing age. The mTOR protein was localized in the cytoplasm and nucleus of rat mesangial cells, and the fluorescence intensity showed markedly increased in senescent cells. The transcription levels of mTOR, P21 WAF1/CIP1/SDI1 and CyclinD1 were increased in senescent mesangial cells. The protein expression of mTOR, p-mTOR, P21 WAF1/CIP1/SDI1, P27 KIP1, P53 and CyclinD1 were significantly increased with age. **Conclusion:** mTOR may play an important role in the initiation and/or progression of rat mesangial cellular senescence and renal lesions in aging.

#### **PA7 031 REPLICATIVE SENESENCE IN NQO1-NUL MOUSE EMBRYONIC FIBROBLASTS**

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**Introduction.** NAD(P)H-quinone oxidoreductase 1 (NQO1) plays well established roles in bioactivation, chemoprevention, and in antioxidant defense. Recently, it has been shown that NQO1 also participates in the stabilization of p53, which relies in the direct interaction between NQO1 and p53, which avoids p53 degradation by 20S proteasomes. Since replicative senescence of mouse embryonic fibroblasts (MEFs) is associated with oxidative stress, and relies mainly on p53 function, the aim of this work was to study the role played by NQO1 expression in replicative senescence by using a NQO1 knockout model. **Methods and materials:** Wild-type and NQO1 $^{-/-}$  mouse embryonic fibroblasts (MEFs) were derived from E12.5-E14.5 embryos and cultured in Dulbecco's Modified Eagle's Medium with 10% fetal bovine serum. Growth curves, NQO1 activity, p53 and p21 levels were studied during cell passages using a 3T3 protocol. Results. The lack of NQO1 gene expression in NQO1 $^{-/-}$  MEFs did not inhibited p53 stimulation at the initial passages of MEFs subcultures. On the contrary, p53 and p21 levels were found elevated between passages 4 and 9, which correlated with lower rates of cell growth of NQO1 $^{-/-}$  MEFs. However, at passage 16, the NQO1 status had a strong influence on both p53 and p21 levels, which were significantly reduced in NQO1 $^{-/-}$  compared with wild-type MEFs. **Conclusion.** NQO1 does not appear to play a major role in p53 stabilization during the first passages of MEFs subculturing. At later passages however, the lack of NQO1 has a great impact on p53 levels, which is in accordance with its demonstrated role on p53 stabilization. This, the

impact of NQO1 status on p53 and p53-dependent gene expression varies according to cell passage in senescent MEFs.

#### **PA7 032 AGE RELATED CHANGES OF SOLUBLE ENDOGLIN**

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**Introduction:** The role of endoglin in the development of oncologic diseases has been described by many authors, however only few studies focused on its possible role in normal ageing and in the process of neurodegeneration. In 2008 we have started an investigation of possible role of endoglin in neurodegeneration and ageing. Here we present our preliminary results of changes of endoglin levels in the course of ageing. **Materials and methods:** In this study we examined 63 healthy young volunteers (32 women, 31 men, average age 34.7 years), 58 healthy younger seniors (44 women, 14 men, average age 83.5 years) and 33 healthy older seniors (20 women, 13 men, average age 93.0 years). Soluble form of endoglin (sCD 105) in serum was assessed by ELISA using diagnostic kits manufactured by R&D Systems, USA. Statistical analysis of data was performed using MedCalc (Belgium) statistical software. Normal distribution of data was assessed. Student's t-test for independent groups was used. Probability level less than 0.05 was considered as significant. **Results:** Soluble endoglin levels were  $4.88 \pm 0.95$  ng/ml in the group of healthy young volunteers,  $6.11 \pm 1.38$  ng/ml in the group of younger seniors and  $6.25 \pm 2.17$  ng/ml in the group of older seniors. We have found significant difference between young volunteers and younger seniors ( $p < 0.001$ ) and a positive trend in group of older seniors compared to younger seniors which was not significant. Serum levels of endoglin were significantly correlated to age. The value of the correlation coefficient was 0.4796 ( $p < 0.001$ ). **Conclusion:** The level of soluble endoglin increases with age according to our findings. The increase of endoglin level is probably decelerating in very old age (over 90). Further investigations are necessary to show its dynamic in healthy old and very old adults and in old individuals with different conditions including neurodegeneration. This research project was supported the institutional research plan MSM 0021620843 FHS UK and Research Project MZO 00179906.

#### **PA7 033 IRON METABOLISM IN THE RETINA : ROLE IN NORMAL AGING AND IN AGE MACULAR DEGENERATION (AMD)**

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**Introduction:** Altered iron homeostasis is associated with AMD. To determine the role of iron homeostasis proteins under oxidative stress conditions and as a function of age, we compared the expression of the main iron proteins in mice(I)heterozygous for the H Ferritin chain (HFT $^{+/-}$ ); in mice(II)overexpressing human Transferrin (hTf) gene and in rd10 mice(III) expressing a gene defect inducing photoreceptors death and the hTf gene. In (I), we compared their susceptibility to light induced damage; in (II) we compared *in vitro* susceptibility of Müller cells to iron induced toxicity; in (III), we analysed the potential *in vivo* effect of an excess of Tf on the rate of retinal degeneration. **Methods:** We used the retina from (I)HFT $^{+/-}$  mice at 3-4 and 16-18 months old. They were exposed to white light (13000 lux) for 24 hours and analysed 24 hours later for iron regulation proteins expression (H and L Ferritin, hephaestin, ceruloplasmin, ferroportin, Tf, Tf receptor, hepcidin, IRP1 and IRP2) by RT-qPCR. In (II), we treated Müller cells with different amounts of iron and analysed their viability. In (III), we analysed retinal degeneration by determining nuclear layer thickness at different time. **Results:** I) We observed decreased HFT in young mice retina. With light, Tf and Tf receptor expression varied in opposite direction but HFT decreased. II) Müller cells from hTf transgenic mice were less sensitive to iron stress than control cells. III) Hybrid mice carrying rd10 genotype and hTf genes displayed overtime a strong delay in degeneration. **Conclusion:** These results demonstrate an adaptation of the iron metabolism proteins in the retina related to age or stress conditions. An excess of iron has been observed in normal aging correlated with a decrease in the number of photoreceptors and also in AMD. Thus the control of iron homeostasis could be an important target to protect the retina in AMD.

#### **PA7 034 A TRADE-OFF BETWEEN THE RATES OF AGING AND INITIAL MORTALITY: WHAT ROLES DO CONTROL SYSTEMS AND THE ENVIRONMENT PLAY?**

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The important role of homeostatic and control systems as well as reparative and restorative ones in the maintenance and survival of individuals is well recognized. Perhaps a possible programmed and/or stochastic impairment of these systems also plays an important role in the emergence and development of senescence. However, new findings paradoxically

highlight the capability of old mitochondria, precursor cells, tissues, and organs to rejuvenate during the vital activity at appropriate conditions (Isobe et al., 1998; Conboy et al., 2005; Adler et al., 2008; Zhang, Cuervo, 2008; etc.). We suggest it is so because an optimal or inadequate regulation and control of the maintenance function is associated with various regimens of the vital activity, which in turn are responses to different external influences. Biological considerations allow us to conclude that a reasonable amount of the environmental pressure plays a stimulating role for functioning, and within this range the organism can completely renew itself. However, such range of the environmental pressure forces a heavy extrinsic mortality. To reduce this mortality, the organism will have to try to take advantage of a less aggressive environment. It thus compromises by sacrificing the optimal functioning (complete renewal) to the benefit from a less aggressive environment. As a result, renewal becomes incomplete, and senescence generates an age-related increase in the mortality rate. This age-related mortality augmentation is compensated for by a more significant decline in the mortality due to external causes. So we suggest that senescence may be caused by an inadequate interaction of an organism with its environment. Recognition of a previously underestimated direct role of the environmental influences in emergence of the nonpathological senescence will provide a better insight into the primary cause of aging and its basic mechanisms, and pave the way for developing better strategies aimed at deceleration of aging.

**PA7 035 TELOMERE SHORTENING IS ASSOCIATED WITH ENVIRONMENTAL INSULTS AMONG COMMUNITY-DWELLING ELDERS**  
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Introduction: Shorter telomere length has been associated with mood disorders and dementia in some studies. However, the influence of living environment on inhabitants' telomere length remains unclear. The aim of this study was to explore the role of environmental insults in shortening of telomere length, taking depression and cognitive impairment into account. Methods and Materials: A random household sample of older adults aged 65 to 74 was selected from a community in southern Taiwan. Of 500 subjects attending our study, 301 agreed to have venous blood withdrawn for telomere length measurement. Exactly 227 subjects completed the questionnaires (the Taiwanese Depression Questionnaire for depressive symptoms; the Short Portable Mental Status Questionnaire for cognitive ability; the Neighborhood Quality Index for perceived neighborhood quality of living) and genetic analysis. Results: Most of them were male (58.4%), married (75.9%), and received education for 6 years or less (93.3%). Their telomere lengths ranged from 0.41 to 4.29 kb with a mean of 1.93 (SD 0.95) kb. In the model of linear regression including gender, age, education, marital status, income, depressive state, cognitive function, and three neighborhood quality indicators (social support, environmental safety, and facilities), telomere was significantly associated with the environmental safety. A one-unit increase in environmental safety score was associated with a decrease of 0.082 (95% CI 0.009–0.154,  $p=0.027$ ) kb, adjusting for gender, age, education, marital status, income, depressive state, cognitive function, and two other neighborhood quality indicators. On the other hand, the presence of depressive state or cognitive impairment was not significantly associated with telomere length. Conclusion: Those results of this cross-sectional study support for the chronic stress model of accelerated cellular aging. Stress from unsafe neighborhood may predict shorter telomere length. Further longitudinal study is needed to confirm the causal relationship.

**PA7 036 GLOBAL DNA METHYLATION ALTERATIONS IN THE AGING NERVOUS SYSTEM**  
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Epigenetics influence gene function without affecting the DNA nucleotide sequence. DNA methylation, together with histone modifications, is the best characterized epigenetic modifications. DNA methylation is a heritable modification of DNA; crucial for development, transcriptional regulation and genomic stability. Abnormal DNA methylation of individual genes is a characteristic of cancer progression and important in neurological disorders such as Rett syndrome. It has also been shown to play a significant role in Werner syndrome. Importantly available evidence suggests that changes in DNA methylation accumulate during aging. Early studies identified global hypomethylation in a number of different tissues with advancing age. Later studies have shown also region-specific hypermethylation during aging. Global hypomethylation may cause genome instability and increase transcriptional "noise". Genome instability and hypomethylation have been linked not only to tumorigenesis but also to replicative senescence. Little is known about changes in global methylation in postmitotic cells such as neurons. Our hypothesis is that hypomethylation may be one mechanism undermining the normal neuronal phenotype in aging. We have analyzed global methylation in discrete regions of the central nervous system from rats of different age and sex, up to the median expected survival age using the LUMinometric Methylation Assay (LUMA). LUMA is based on combined DNA cleavage by methylation-sensitive restriction enzymes and polymerase extension assay by pyrosequencing. The results indicate increasing hypomethylation with advancing age. A process, which may have started as early as in the middle-ages. Preliminary data suggests that global alteration in DNA-methylation during aging, at least in part, has a gender specific pattern. Finally, the data indicate that these changes are

region-specific, consistent with the notion of a select vulnerability to the aging process among subsets of neurons. In conclusion, our data support the notion that changes in the epigenetic organization of DNA may be an important mechanism in cellular aging.

**PA7 037 THE NETWORK ROBUSTNESS-FRAGILITY HYPOTHESIS OF AGING, LONGEVITY, AND AGE-RELATED DISEASES**

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Hundreds of genes have been identified as being associated with longevity of model organisms and with human age-related diseases (ARDs). These studies highlight that aging, longevity, and ARDs are influenced by multiple genetic factors. Yet, the trend to focus on individual genes and/or their products continues to dominate, reflecting in part a current paradigm in biomedical research — searching for the specific targets that offer the potential for the development of highly specific drugs. In spite of enormous efforts and accumulated knowledge, our capabilities for tackling aging and ARDs, and ultimately to promote longevity are still very modest. What is lacking — essential knowledge of key players or efficient analytic tools, or both? Here we discuss how the existing data may be integrated and analyzed using a network-based approach and the tools developed in our lab, focusing particularly on the role of microRNA-regulated protein-protein interaction networks in linking the human aging, longevity, and ARDs. Simulations of node attacks revealed groups of proteins that might be of crucial importance for normal functionality and integrity of the system. The predictive power of the model has recently received an experimental validation. A gradual decrease in the network robustness along with an increased fragility of individual nodes are proposed as being the common mechanisms of both aging and ARDs. This work was supported by the European Union FP7 Health Research Grant number HEALTH-F4-2008-202047

**PA7 038 BENEFITS OF GLUTAMINE SUPPLEMENTATION IN MUSCLE GLUTAMINE SYNTHESIS IN VERY OLD FEMALE RATS ARE NOT MAINTAINED POST-TREATMENT**

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Glutamine synthetase (GS) a key enzyme in the production of glutamine is preserved in skeletal muscle during early aging (<24 mo). GS activity is enhanced in very old female and male rats. Hence, glutamine has a specific role in very old rats (up to 25 months of age). In addition, the up-regulated GS muscle activity observed in very old rats decreased when rats were Gln supplemented, with no change in plasma and muscle Gln concentrations. This was probably related to the increased Gln requirement with very advanced age. In contrast, nothing is known about the duration of this effect after discontinuation of Gln supplementation. We decided therefore to study muscle GS response 15 days after the end of treatment. Changes in GS activity were examined in the tibialis anterior (TA) muscle in 8 mo and 27 mo-old Wistar rats. As described elsewhere, adult and very old animals were exposed to Gln supplementation by the addition of Gln to drinking water for 7 consecutive days a month (20% of dietary protein) but during 50 % of their age and not during 5 months of their life. The treatment was discontinued 15 days before the rats were sacrificed and not just before. As expected, Gln supplementation had positive effects in very old rats: 1) it prevented the loss of body weight caused by very advanced aging; 2) it did not prevent sarcopenia (no improvement in decreased muscle mass). In contrast, interrupting treatment did not maintain the decrease in up-regulated GS activity observed in Gln-supplemented very old rats, as previously demonstrated. Neither muscle Gln concentration nor plasma level was modified by the preservation of increased muscle Gln synthesis. Because there was no accumulation of Gln in both muscle and plasma, this is additional evidence suggesting that Gln requirements increase with advanced age.

**PA7 039 THE PREPONDERANCE OF NEGATIVE SIGNALING EXPLAINS THE ALTERED CLONAL EXPANSION OF T CELLS WITH AGING**

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Introduction: Aging is accompanied by a decrease in immune functions, called immunosenescence. The exact cause is still not known. Changes in T cell sub-populations, thymic involution were invoked. We have demonstrated that the signal transduction is altered with aging. In the present work we studied the negative regulatory molecules in the T cell signaling to explain the altered activation of T cells with aging leading to decreased clonal expansion. Methods: 25 healthy young and elderly subjects were studied. Lymphocytes were separated by Fycoll-Hypaque. The molecules participating in the negative control loop of Lck were studied by Western blot. The surface expression of CTLA-4 has been studied by FACScan and confocal microscopy. The translocation of the molecules in the membrane lipid rafts (MLR) was also studied by Western blot. The activity of phosphatases was also determined. Results: We found that the phosphorylation of PAG was altered with aging explaining the decreased release of Csk from MLR and the

decreased Lck activation. The activation of FynT was also altered. The phosphatase activity studies showed an increase in their activities with aging. The CTLA-4 expression was higher after stimulation in T cells of elderly. Conclusion: These results suggest that the negative regulation is preponderant in T cells with aging on the positive activation and as such explaining the defect in T cell functions with aging. This opens new therapeutic avenues in the future.

**PA7 040 THE LEVEL OF PCP4, THE NEUROPROTECTOR CAMSTATIN, IS SENSITIVE TO AGING AND REVERSED BY CALORIE RESTRICTION IN BRAIN**  
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Pcp4 (Pep19) is expressed only in neurons of adult brain. It has been observed to protect against apoptosis and its level is frequently observed decreased in several brain pathologies. Pcp4 is a modulator of Ca++-CaM activation (camstatin) and therefore interfere in calcium signaling. This neuroprotector has been studied in C57Bl/6 mice during normal aging (from 2 to 24 months). Evaluation of the level of brain expression by *in situ* hybridization and QRT-PCR showed an important global decrease at 24 months of age, while until 12 months, no significant change in expression was observed. This decrease was observed in all regions where neurons expressed the gene. In calorie restriction (CR) diet treated mice of 24 months of age, this decrease was no more observed after either 4-months or 12-months CR duration. In mice 6 months of age and submitted to the same treatment, no effect on pcp4 expression was observed. This suggests that the mechanism responsible for the decrease of pcp4 expression at 24 months is sensitive to SIRT1-related calorie restriction. Pcp4 is located on human chromosome 21 and on mouse chromosome 16. Thus three copies of the gene are present in Down syndrome. To evaluate the consequences of the three copies of the Pcp4 gene in aging phenotypes, current investigation of its level in mouse models of Down syndrome (trisomic and transgenic) during aging are performed. It will confirm if the level of pcp4 may be altered during aging in this situation and therefore may contribute to variability in aging phenotypes in Down syndrome.

**PA7 041 EFFECTS OF A PROLONGED LEUCINE SUPPLEMENTATION ON ADIPOSE TISSUE IN ELDERLY RATS**  
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Introduction: Age-related sarcopenia is characterized by a reduced muscle mass and increased fat mass. Leucine supplementation is a promising therapeutic approach, due to its direct effect on muscle protein synthesis through a stimulation of the mTOR pathway, synergistic with insulin. Leucine also exerts effects of adipogenesis and fat morphogenesis, but its long-term effects are poorly known. This study aimed at determining the effects of a prolonged oral leucine supplementation on the adipose tissue of elderly rats. Methods: 71 male Wistar rats, aged 18 months, were fed ad libitum for 5 months a diet with 15% protein, supplemented in glycine (Gly, 35 rats) or leucine (Leu, 36 rats), with a follow-up of food intake and weight. On sacrifice, tissues were harvested, including the peri-renal adipose tissue that was used to measure proteins and/or mRNAs involved the insulin and mTOR pathways, adipokines and PPAR&gamma. Results: On sacrifice day, when compared with Gly rats, body weight was higher in Leu rats ( $718 \pm 17$  g vs  $618 \pm 14$  g,  $P < 0.05$ ), due to a 40% gain in adipose tissue ( $P < 0.001$ ) with no difference in other tissue weights including skeletal muscles. This weight gain was obtained during the first two weeks of the experiment and was concomitant to a higher food intake. The only difference in proteins between groups for the insulin and mTOR pathways was an increase in PKB&beta; and phosphorylated mTOR in the Leu rats ( $P < 0.0003$ ). PKB&beta; and Rictor mRNAs were lower in Leu rats and PPARY mRNAs higher in Leu rats, with no differences in adipokine levels. Conclusions: A prolonged oral leucine supplementation in elderly rats induces a significant adipose tissue gain along with an increased adipose differentiation, with no effects on muscle mass. This data needs to be confirmed, but may question the interest of leucine supplementation in sarcopenia.

**PA7 042 MOLECULAR ANALYSIS OF ABETA AMYLOID AGGREGATION IN THE MODEL ORGANISM PODOSPORA ANSERINA**  
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Introduction Abeta amyloid peptides represent the core component of amyloid plaques found in Alzheimer disease brain patients. From genetic to molecular studies, Abeta peptides aggregation is clearly involved in the disease. Therapies have aim at inhibiting aggregation of Abeta peptide. Nevertheless, neither the molecular mechanism of amyloid aggregation nor the amyloid structure acquired *in vivo*, have been established. Several structural models of Abeta amyloid fibers have been proposed. However, until now, all molecular analyses of Abeta peptides aggregation have been conducted *in vitro*. Recently, it has been pointed out that initial conditions of aggregation strongly define the structure

adopted and propagated by Abeta peptides. This structural flexibility in amyloid structure well explains the existence of prion strains. Consequently, structural models deduced from *in vitro* conditions might not represent exactly Abeta aggregates formed *in vivo*. Methods and materials In order to characterize *in vivo* aggregation of Abeta amyloid peptides, we expressed them in the model organism *Podospora anserina*, already used for studies of infectious amyloids. We realized site direct mutagenesis on Abeta peptides fused to Green Fluorescent Protein and analyzed the solubility of the fusion by fluorescence microscopy and western-blot. This molecular screening was also carried out on Abeta synthetic peptides for biochemical and structural analysis. Results & Conclusions We found that Abeta peptides expressed in *Podospora* formed aggregates spontaneously, even when attached to a globular domain. *In vivo* Abeta aggregation can be suppressed by replacement of some key amino-acids. As we did for the HET-s amyloid protein of *Podospora*, systematic mutagenesis of Abeta amino-acids will permit to correlate *in vivo* aggregation with *in vitro* structural elements. Our molecular studies should bring significant advance in the understanding of *in vivo* Abeta amyloid aggregation. Overall the fundamental knowledge, these *in vivo* data are crucial to design therapeutic agents targeting amyloid structure recognition.

**PA7 043 DYNAMICS OF MITOCHONDRIAL PROTEINS IN YOUNG AND SENESCENT CELLS**  
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Introduction: Mitochondria and their membranes are highly complex structures but also very dynamic. While in young cells mitochondrial fission and fusion events are a frequent process, in senescent cells mitochondrial dynamics are significantly reduced. Furthermore, also extensive intramitochondrial dynamics of the mitochondrial outer and inner membrane as well as of mitochondrial proteins and DNA take place. Inter- and intramitochondrial distribution of damaged mitochondrial components is hypothesized to act as rescue mechanism of impaired organelles by replacing damaged proteins with functional ones and therefore to contribute to mitochondrial functionality and maintenance. During ageing the mitochondrial inner and outer membrane change their morphology, composition and therefore fluidity as well. The aim of this work was to analyse putative age-induced changes in dynamics of mitochondrial proteins. Methods and Material: As cell model, young chicken embryo fibroblasts (CEF) were used, which were compared to CEF that had been aged *in vitro*. To analyse the dynamics of the mitochondrial matrix-, inner and outer membrane proteins, fluorescence-labelled proteins were analysed by FRAP (fluorescence recovery after photobleaching) in young and senescent cells. The fission factor Fis-1 was used as a model protein for the outer mitochondrial membrane, subunits of respiratory complexes were used to analyse dynamics of the inner mitochondrial membrane and furthermore a GFP-tagged protein was inserted into the matrix. Results: By using a sophisticated mathematical approach, we were able to determine the diffusion properties of these proteins, which are mainly influenced by their location and less by ageing, indicating that the differential dynamics of the mitochondrial proteins are reflecting the complexity of the mitochondrial membrane architecture. Conclusion: By using FRAP, we can show for the first time the comparison in the dynamics of mitochondrial proteins in young and senescent cells, indicating that short term diffusion does not constrain the mitochondrial fusion and fission in age.

**PA7 044 MRI TO CHARACTERIZE ALZHEIMER DISEASE PROGRESSION OVER SEVERAL YEARS: COMBINING RESEARCH AND CLINICAL SCANS**  
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Introduction: The rate of cerebral ventricular enlargement measured from  $T_1$ -weighted 1.5 Tesla magnetic resonance images (MRI) is an indirect measure of Alzheimer disease (AD) progression. This is a highly reproducible technique. Clinical MR scans are often acquired in subjects who also participate in clinical/observational research studies. Consolidating clinical and research MR scans and deriving ventricular volumes may allow characterization of biological AD progression over long periods. Objectives: (1) To assess the association between ventricular volume changes in AD over several years in comparison to measures of cognitive decline in three persons with probable AD (2) to examine the viability of combining multiple research and clinical MR scans. Methods: MRI, clinical, and neuropsychological data were collected for three persons with probable AD. All patients consented to release of their information. Patient 1, male, age=77, 2 clinical trials, total 7 scans, average scan interval=4/-+3 (months); patient 2, female, age=71, 1 clinical trial and 1 observational study, 5 scans, average scan interval=5/-+6; patient 3, female, age=62, 1 clinical scan and 1 clinical trial, 7 scans, average scan interval=12/-+12. Ventricular volume was computed using Brain Ventricle Quantification (Cedara). All analyses were completed blind to subject group, and time of scan. Pearson correlations tested associations between ventricle and cognitive measures. Results: Subject 3 demonstrated a strong association between ventricular change (average change  $+/-SD=2.5/-+2.9\text{cm}^3$ ) and change on the Mini Mental State Exam (MMSE) (average change  $+/-SD=-1.5/-+4$  points) ( $r=-0.9, p=0.037$ ). Patient 1 demonstrated a trend for an association

between cognitive decline measured on the MMSE (average decline  $-+SD=-1/-2$  points) in relation to ventricular enlargement (average enlargement  $-+SD=6.4/-15\text{cm}^3$ ). Conclusion: In this small sample, ventricular change is associated with MMSE measured cognitive decline in certain subjects. Ventricular volumes derived from different studies may be combined to characterize an individual's biological AD progression over long intervals and may complement cognitive tests.

**PA7 045 DIFFERENCE IN FMRI ACTIVATION LEVELS IN ELDERLY SUBJECTS WITH HIGHER AND LOWER OLFACTORY PERFORMANCE**  
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Introduction: Olfactory function is impaired in older adults. The underlying cortical substrate for age-related differences in performance in an odor paradigm was investigated in the present study employing fMRI. Methods and Materials: Nineteen healthy elderly subjects ( $68.4 \pm 3.2$  y.o.) participated in the study. Odors were presented in a continuous flow of air in synchronization with the subject's inspiration and were followed by a 10 s rest. Fifty odors were presented during a first run during which subjects performed a detection task, and 100 odors, i.e. 50 old and new odors were presented during a second run, during which subjects performed a recognition task. Performance was coded with hits, misses, correct rejections (CR), false alarms (FA) and discriminability index  $d'$ . fMRI images were preprocessed with Statistical Parametrical Mapping (SPM2, Friston et al., 1995) and processed with AFNI deconvolution algorithm (Cox 1996). Results: Subjects were separated into two groups according to their performance on  $d'$ : one group was composed of 13 subjects with  $d'>0.1$  (higher-performers), and the other group was composed of 6 subjects with  $d'<0.1$  (lower-performers). A region of interest (ROI) analysis was conducted on 15 regions including frontal areas, mesio temporal areas, pifiform cortex, cingulate gyrus, caudate nucleus, insula, lingual gyrus. An ANOVA showed an interaction between ROI, hemisphere, type of response (hits, misses, FA, CR) and performance (higher, lower). Conclusion: This study suggests that levels of activation in different cortical areas are associated with differences in performance in the odor paradigm. Supported by Programme de Recherche en Alimentation (PRA) and the Programme National de recherche en Alimentation et Nutrition Humaine (PNRA) to J.P. Royet and NIH Grant R01AG04085 to C. Murphy.

**PA7 046 ASSOCIATION BETWEEN ADIPONECTIN GENE VARIANTS IN SUBJECTS OF METABOLIC SYNDROME IN ELDERLY TAIWANESE —A HOSPITAL-BASED STUDY**  
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Introduction: People with metabolic syndrome (MS) are at greater risk for atherosclerotic cardiovascular disease. Most are also insulin resistant. Serum adiponectin levels and its several single nucleotide polymorphisms (SNPs) in the adiponectin gene have been reported associated with the metabolic syndrome. This study investigates the relationship between adiponectin gene variants in elderly subjects of metabolic syndrome in Taiwan. Methods: This was a cross-sectional hospital-based study. We analyzed the health status of elderly who voluntarily visited the China Medical College Hospital in Taichung for preventive services from January to December 2006. The preventive services included history taking, physical examination, and measurement of fasting blood biochemistry and adiponectin SNP 45 and SNP -11426 were measured in this study. The MS criteria were modified from the Third Report of the National Cholesterol Education Program's Adult Treatment Panel (ATP III, 2001). Results: Of the 215 persons, 42% were men and 58% were women (mean age,  $63.6 \pm 7.2$  years). The MS prevalence rate was 40% (86/215). After adjusted for appropriate covariates, individuals with adiponectin SNP45TT and SNP-11426 AA had a 1.62-fold risk (95% CI, 0.53-4.94) and 1.49-fold risk (95% CI, 0.37-6.02) to develop metabolic syndrome than those with SNP45GG and SNP-11426 GG. Conclusion: Our study showed the high prevalence of metabolic syndrome in elderly in Taiwan. However the polymorphisms of adiponectin SNP45 and SNP-11426 can't modify the influence on metabolic syndrome risk in elderly Taiwanese.

**PA7 047 VITAMIN C DEPLETION INCREASES SUPEROXIDE GENERATION IN BRAINS OF SMP30/GNL KNOCKOUT MICE**  
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Vitamin C (VC) has a strong antioxidant function evident as its ability to scavenge superoxide radicals in vitro. We verified that this property actually exists in vivo by using a real-time imaging system in which Lucigenin is the chemiluminescent probe for detecting superoxide in senescence marker protein-30 (SMP30)/gluconolactonase (GNL) knockout (KO) mice, which cannot synthesize VC in vivo. SMP30/GNL KO mice were given 1.5g/L VC [VC(+)] for 2, 4, or 8 weeks or denied VC [VC(-)]. Coronal slices of brain from both groups were rapidly prepared and incubated in a chamber filled with oxygenated Krebs-

Ringer solution with Lucigenin for 120 min. Next, the conditions were made hypoxic for 15 min before a return to the oxygenated environment, and incubation continued for up to 120 min. Images of brain slices were acquired every 15 min during each conditions. Total VC was measured by using a high-performance liquid chromatography-electrochemical detection method. Total superoxide dismutase (SOD) activity was measured by using the SOD Assay Kit-WST. Protein levels of Mn-SOD, Cu,Zn-SOD and catalase were determined by western blot analysis. At 4 and 8 weeks, VC levels in brains from VC(-) KO mice were  $<6\%$  of that in VC(+) KO mice. Accordingly, superoxide-dependent chemiluminescence levels determined by ischemia-reperfusion at the 4- and 8 weeks test intervals were 3.0-fold and 2.1-fold higher, respectively, in VC(-) KO mice than in VC(+) KO mice. However, total superoxide dismutase activity and protein levels were not altered. VC depletion specifically increased superoxide generation in a model of the living brain.

**PA7 048 COMPLEXITY ANALYSIS OF HUMAN POSTURAL SWAY IN ELDERLY**  
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INTRODUCTION Stability corresponds to the faculty of the body to maintain a position of balance. The latter depends on the mechanisms of postural regulations which mobilize the sensitivo-sensory, visuo-vestibular and kinesthetic systems. Recently, many studies (Sabatini, 2000; Roerdink et al., 2006; Duarte et al., 2008) aimed to describe and explain the dynamical properties of the center of pressure (CoP) fluctuations during quiet standing. In this paper, we propose to use the sample entropy (SampEn) algorithm to investigate the effect of vision on the complexity of CoP time series in a group of elderly subjects. METHODS AND MATERIALS 100 elderly participated to the stabilometric tests. They had to maintain stance quiet with eyes open and eyes closed on a force platform. The SampEn index (Richman and Moorman, 2002) was calculated for each time series in both directions (anterior-posterior, AP and mediolateral, ML). The SampEn is basically a quantification of the regularity of a signal. This statistic increases with the complexity (irregularity) of the dynamics. RESULTS Our main result was that the SampEn significantly decreased with absence of vision in AP direction ( $p=0.02$ ). This result is consistent with the loss of complexity theory for physiological and behavioral systems with aging, disease and constraint (Vaillancourt and Newell 2002; Goldberger et al., 2002). Generally, this loss of complexity is explained by a reduction of the number of structural components involved in the dynamics of the system and/or an alteration of the coupling existing between these components. CONCLUSION Based on a robust complexity quantification algorithm, the present study demonstrated the ability of the SampEn index to detect modifications in CoP dynamics induced by the absence of vision in elderly people.

**PA7 049 NEUROFUNCTIONAL CHARACTERIZATION OF VERBAL FLUENCY AS A FUNCTION OF AGING AND PRODUCTION TIME**  
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Introduction: Optimal cognitive functioning in older adults has been associated with various changes in patterns of brain activations. Yet, few studies have investigated the neurofunctional changes underlying expressive language abilities such as verbal fluency, which tends to get harder over time within a criteria. Moreover, most studies have relied on the sole identification of isolated activated brain regions, which may not be integrated in a neurofunctional network. The goal of this study was to use functional Magnetic Resonance Imaging (fMRI) and a functional connectivity approach called NEDICA (Network Detection Using Independent Component Analysis) in order to assess age and time-related changes in fMRI activations and functional networks associated with a verbal fluency task. Methods and materials: 12 younger (aged 20 to 31) and 12 older (aged 60 to 73) healthy, highly-educated, right-handed French speaking adults performed a verbal fluency task in a 3T fMRI scanner. They were asked to say as many words as possible given 4 orthographic and 4 semantic criteria, within a limited amount of time (90 s/criteria). The reference task consisted of repeating the months of the years. The fMRI acquisitions were made within a mixed design consisting of a single functional run (1600 s, TR = 2) and were blocked a posteriori according to production time and criteria. Results: At the behavioural level, only the main effect of time was significant; both groups showed fewer productions over time. At the neurofunctional level, age-related differences were found for both activation maps and functional networks. For instance, fewer functional networks were identified in older adults, who also showed less significant activations than younger adults. Conclusion: Although both age groups performed similarly at the behavioural level, considerable differences were found at the neurofunctional level. Such results are discussed in light of current age-related neurofunctional reorganization literature.

**PA7 050 AGE-RELATED INCREASE OF SUPEROXIDE GENERATION IN THE BRAINS OF MAMMALS AND BIRDS**  
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Oxidative stress, an imbalance between endogenous levels of oxygen radicals and anti-oxidative defense, increases with aging. However, it is not necessarily clear which factor is more critical to the age-related increase of oxidative damage, increase in oxygen radical or decrease in anti-oxidative defense. To clarify the production of oxygen radicals increases with age, we examined oxygen radical-dependent chemiluminescent signals in ex-vivo brain slices using a novel photonic imaging method "real-time bioradiography" (Sasaki et al, Brain Res 2006, Aging Cell 2008). Age-related changes of superoxide levels in brain, superoxide-dependent chemiluminescence was measured in living brain slices prepared from different aged animal brain during hypoxia-reoxygenation treatment as follows. Coronal brain slices were prepared from male senescence accelerated mouse (SAM) P10-TaSl and SAMR1/TaSlc mice, C57/BL6 mice, Wistar rats, and pigeons brains. Slices were pre-incubated in the imaging chamber filled with 50 mL of Krebs-Ringer solution containing 2 mM of Lucigenin under a continuous flow of oxygen gas. After a preincubation, chemiluminescent images of brain slices were acquired during hypoxia (nitrogen gas) and reoxygenation(oxygen gas) in the temperature-controlled imaging box. Lucigenin-derived chemiluminescence intensified during reoxygenation. Chemiluminescence intensity in SAMP10 (short life strain) and SAMR1 (control) brain slices under oxygenation (basal) and reoxygenation was increased with aging. The slope of increase of intensity with age in P10 was steeper than those in R1. Age-dependent increase of chemiluminescence intensity was also observed in C57BL/6 mouse, Wistar rat and pigeon. However, superoxide dismutase activity in brain tissue of these animals was not changed significantly with age. These results suggest that superoxide production itself is increased with aging. We speculate that reactive oxygen may be a kind of signal for aging and its levels in tissue may determine the aging process and life span.

**PA7 051** CONTROL OF VANCOMYCIN-RESISTANT ENTEROCOCCI OUTBREAKS IN A 900-BED GERIATRIC HOSPITAL IN PARIS AREA: A FIVE YEAR EXPERIENCE.

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Between 2004 and 2007, our hospital experienced several outbreaks of vancomycin-resistant Enterococcus faecium (VRE). We describe here the measures implemented to control these outbreaks. Materials and Methods. Case was defined as patient with (a) VRE isolated from clinical specimen and (b) from rectal swab from contact patients. Rectal swabs were plated on Bile-Esclaine-Azide agar containing vancomycin (10mg/L) and resistance genes were identified by Genotype Enterococcus assay. The clonality of VRE strains was studied by pulsed-field gel electrophoresis (PFGE). Measures aimed at controlling cross transmission: identification of carriers using a specific self-stick label, barrier precautions, promotion of hand hygiene, cohorting of cases and contact patients with dedicated staff, weekly screening of contact patients by rectal swab. Results. The 1st VRE outbreak started in December 2004, generating 9 cases in single ward (attack rate 30%). No new case was detected after April 2005. Between September 2005 and April 2007, a hospital-wide outbreak involved 70 patients in seven wards (incidence densities of 0.08, 0.25 and 0.05 per 1,000 days of hospitalization in 2005, 2006 and 2007, respectively). This outbreak was controlled after cohorting (a) all the VRE patients from the seven wards in a single unit with dedicated staff, and (b) all the contact patients in another unit. The outbreak began to decline in June 2006 and the last case was identified in April 2007. No new case occurred till December 2008 although 9 VRE patients and 15 contact patients were still in the Hospital. The strains involved in both outbreaks were E. faecium carrying vanA gene but, based on the susceptibility and PFGE patterns, the strain of the 1st and the 2nd outbreak differed. Conclusion. Successful control of VRE outbreaks is possible in geriatric hospital if a strict policy of active surveillance, cohorting and reinforcement of barrier precaution is implemented.

**PA7 052** IMPACT OF AN EDUCATIONAL PROGRAMMME ON FLUOROQUINOLONES (FQs) CONSUMPTION AND RESISTANCE TO FQs IN A 900-BED GERIATRIC HOSPITAL.

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Fluoroquinolones (FQs) are easy-to-use antibiotics in geriatrics. The rate of resistance to ciprofloxacin in Escherichia coli increased from 8 to 31% between 1998 and 2005. We implemented an educational programme on antibiotic prescription in 2006. We describe here the impact of this programme on FQs prescription and susceptibility to FQs in E. coli. Methods. The educational programme included (a) guidelines on antimicrobial therapy providing clinical indications for each class of antibiotics, (b) systematic review of every FQs prescription based on patient clinical and microbiological data and (c) recommendation for switching for antibiotics other than FQs (e.g. nitrofurantoin for lower

UTIs, coamoxiclav or macrolides for LRTIs...) or stopping antibiotic administration when FQ prescription appeared inadequate. Results. Seventy percent of FQs prescriptions (mean 15 per month) were in agreement with guidelines. Switch for antibiotics other than FQs or stopping antibiotic administration was obtained in most (89%) of the cases of non-agreement. A decrease in overall consumption of antibiotics from 272 to 216 defined daily doses (DDD) per 1,000 patient-days (PD) (-20%) was observed between 2005 and 2007. This decrease was stable in 2008 (210 DDD/1,000 PD) and was entirely the consequence the decrease of FQs consumption from 32 to 12 DDD/1,000 PD, -62%) during the same period of time. Simultaneously, the resistance to ciprofloxacin in E. coli decreased significantly. Conclusion Controlling FQs prescriptions by interactive and educational programme can lead to decrease FQs prescriptions and curb trend to resistance in major bacterial species.

**PA7 053** TELMISARTAN, AN ANGIOTENSIN II TYPE 1 RECEPTOR BLOCKER, PROTECTS FROM RENAL INJURY PARTIALLY THROUGH INHIBITION OF NOTCH PATHWAY IN AKITA (INS2(AKITA)) DIABETIC MOUSE  
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Introduction: Chronic kidney disease (CKD) is one of the risks for cardiovascular disease in elderly patients, and diabetic nephropathy (DN) is a leading cause of CKD. It has been recently reported that the Notch pathway is involved in the pathogenesis of DN. In this study, we investigated the activation of the Notch pathway in Ins2 Akita (Akita mouse), a murine model of DN, and the effects of telmisartan on the Notch pathway. Materials and Methods: Akita mice and control mice received telmisartan (5 mg/kg/day) or no treatment, respectively, for 15 weeks (n = 8 in each group). Body weight, blood pressure, and urinary albumin excretion were measured every 2 weeks. The effects of telmisartan on the Notch signaling pathway were studied by RT-PCR and immunohistochemistry both in vivo and in vitro using cultured murine podocytes. Results: Compared to the control mice, the levels of urinary albumin excretion, serum BUN, and creatinine were higher in the Akita mice (10.9 mg/day,  $22.2 \pm 3.8$  mg/dl, and  $0.07 \pm 0.01$  mg/dl vs. 50 mg/day,  $64.7 \pm 12.3$  mg/dl, and 0.19 mg/dl, respectively;  $P < 0.05$ ). Telmisartan treatment significantly decreased the levels of urinary albumin excretion, serum BUN, and serum creatinine in Akita mice (33 mg/day,  $30.2 \pm 6.7$  mg/dl,  $0.09 \pm 0.01$  mg/dl, respectively;  $P < 0.05$ ). The expression of the intracellular domain of Notch1 and its ligand, Jagged1, were increased in podocytes in Akita mice. However, telmisartan treatment significantly ameliorated those expressions. TGF- $\beta$  increased the expression of the Notch target gene, Hairy/Enhancer of split-related (Hey1), in cultured podocytes, and telmisartan suppressed this expression. Conclusion: The Notch signaling pathway was activated in podocytes in Akita mice. Telmisartan suppressed the Notch pathway both in vivo and in vitro. Our results indicate that telmisartan protects from DN, possibly through inhibition of the Notch pathway.

**PA7 054** VITAMIN D SUPPLEMENTATION WITH CALCIFEDIOL IN POSTMENOPAUSAL OSTEOPENIC WOMEN  
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Introduction: The purpose of this study was to evaluate the effects of vitamin D (calcifediol) supplementation on bone metabolism in postmenopausal osteopenic women. Methods: The phase IV clinical trial of randomized double blind placebo-controlled study of either calcifediol (Caldiool®, Medica Korea Co., Korea) 20ug daily or placebo were conducted for 8 weeks. Serum 25(OH)D3 and parathyroid hormone(PTH) were measured at 0, 4, and 8 weeks. Bone mineral density of lumbar spine, total hip and femoral neck were measured at baseline. Results: Of 30 patients, 16 were calcifediol group and 14 were placebo group. In calcifediol group, serum 25(OH)D3 level significantly increased from  $12.4 \pm 0.68$  (baseline) to  $31.8 \pm 2.57$  (4 weeks) and  $42.24 \pm 3.32$  (8 weeks) ng/mL. Serum PTH slightly decreased from  $25.3 \pm 2.5$  (baseline) to  $20.3 \pm 1.1$  (4 weeks) and  $21.4 \pm 2.0$  (8 weeks) pg/mL. In placebo group, there were no difference of serum 25(OH)D3 and PTH from baseline to follow-up. Conclusion: Calcifediol improved vitamin D status in terms of serum 25(OH)D3 levels in postmenopausal osteopenic women.

**PA7 055** TELOMERASE ACTIVATORS AS POTENTIAL ANTI-SENESCENCE AGENTS  
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Introduction: Proliferation of telomerase negative cells results in progressive telomere shortening. When telomeres reach a critical length, proliferation will be irreversibly arrested. Although telomere shortening and onset of senescence termed to be the traditional faith of primary proliferating cells, it seems that deficiencies in telomere maintenance mechanisms will install an early senescent phenotype with the loss of function at cellular

and systemic level. Manifestation of chronic diseases, independent from etiology, has been associated with shorter telomeres and "telomerized" tissues were proposed as solution. Methods: Application of molecules that activate already present telomerase enzyme could be the clinically safest method to activate telomerase. We discovered previously, that an oligonucleotide (termed C16AS), composed of a 13-mer antisense moiety against the template site of the telomerase RNA component and a 5' attached 16-mer oligocitidate, is able to activate the telomerase enzyme. We tested activation properties of C16AS in cell free *in vitro* systems using a modified version of the Telomere Repeat Amplification Protocol. We designed derivates of C16AS with modified primary sequences thus altered three dimensional structures in order to identify sequence motifs affecting activation efficacy. Results: We observed that derivates with 14 or 18-mer citidate moieties preserve activating properties, with a slight increase in activation potency in case of the 18-mer. Using derivates where oligocitidate was fully or partially replaced resulted in diminution or complete loss of activation. Conclusion: Therapies targeting chronic diseases and regeneration, as well as methods aiming rejuvenation, like application of telomerase activating agents, might have an increased importance in the future. According the results, it seems that C16AS acquires a specific three dimensional structure and activates telomerase with an aptamer-like effect. Derivates of the original compound have enhanced activation properties, thus further development into an *in vivo* telomerase activator seems to be reasonable.

**PA7 056 TELMISARTAN, A SELECTIVE PPAR&GAMMA; MODULATOR, SHOWS ANTI-AGING EFFECT THROUGH THE REGULATION OF MITOCHONDRIAL FUNCTION IN SKELETAL MUSCLE**

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Introduction: Recently, the relationship of mitochondrial dysfunction or mitochondrial DNA (mtDNA) variants to metabolic disorders as typified by diabetes has begun to attract increasing attention. Mitochondrial dysfunction in skeletal muscle has been implicated in a wide variety of pathological processes including insulin resistance or senescence. Telmisartan is an angiotensin II receptor blocker and a selective PPAR $\gamma$  modulator reported to increase energy expenditure and improve glucose and lipid metabolism compared with other angiotensin II receptor blockers. To clarify the detailed mechanism of these effects of telmisartan, we focused on regulation of mitochondria function in skeletal muscle and performed several comparative experiments using other compounds activating PPAR pathways. Methods: In the current study, measurement of ATP and reactive oxygen species (ROS) production, and real-time PCR to measure expression of mitochondria-related genes and mtDNA copy number were performed using C2C12 cell line. Results: C2C12 myotubules exposed to telmisartan increased ATP production as much as those exposed to a PPAR $\delta$  agonist, GW501516, however, those exposed to a PPAR $\gamma$  agonist, troglitazone did not. C2C12 myotubules treated with telmisartan reduced ROS production as much as those treated with troglitazone. Mitochondria cytochrome c oxidase I (MTCO1) expression was increased in C2C12 myotubules exposed to telmisartan ( $p<0.05$  compared with control), and MnSOD expression was increased in C2C12 myotubules exposed to telmisartan ( $p<0.05$  compared with control). MtDNA copy number in C2C12 myotubules treated with telmisartan was not significantly increased in comparison with control. Conclusion: The current results are consistent with the possibility that telmisartan may regulate mitochondrial function through activation of PPAR pathway at least in part. Telmisartan might be recognized not as just an antihypertensive drug but as a drug having anti-aging effect via increasing energy production and decreasing oxidative stress.

**PA7 057 DEVELOPMENTAL THEORY OF REJUVENATION**

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Introduction. The available means of life extension are based on the treatment of the diseases that are caused by ageing but not on the intervention in the process of ageing itself. Because of the limited maximum human lifespan and significant prolongation of the average human lifespan that has already been achieved further perspectives are bleak if the means of extending life beyond its species-specific upper border will not be found. The practical value of the elaboration of new biotechnologies (including stem cell transplantation) aimed at the treatment of various diseases will progressively decrease and even can soon become negligible. Without a theoretical understanding of biological ageing and finding the means of extending maximum human longevity the whole complex of medical-biological disciplines in the not too far distant future may simply run to a deadlock. Methods and materials. Theoretical analysis of articles on aging, development and neuroendocrine regulation. Results. According to the developmental theory of rejuvenation during aging epigenetic changes accumulate that distort the gene expression. In embryogenesis and postnatal growth the special mechanism reverses epigenetic mistakes and rejuvenates the cells. This salutary process is driven by extracellular fluctuations of morphogenetic molecules that regulate embryogenesis. For a permanent rejuvenation and extending life of the organism intensive (embryo-like) morphogenetic oscillations should be produced in tissues. Morphogenetic fluctuations may be stimulated with the aid of specific brain-induced sequences of electrical impulses that can be named

rejuvenating brain waves. Antiaging waves are generated effectively by the brain due to a new kind of mental practice that trains the ability "to think of everything simultaneously" and, thereby, greatly enhance the neural information processing. Conclusions. The developmental theory of rejuvenation offers a special mental practice that may enhance the brain information processing and produce special electrical impulses (rejuvenating waves) that can extend the maximum human lifespan.

**PA7 058 A POTENTIAL ROLE FOR FOXO1 IN THE EFFECT OF CALORIE RESTRICTION**

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Reduction of IGF-1 signaling is reported to extend lifespan in animals. Calorie restriction (CR), a well-known experimental intervention that retards the aging and extends lifespan, also reduces plasma GH and IGF-1 concentrations in rodents. Rats whose GH-IGF-1 axis was modestly suppressed shared phenotypes with CR rats. These findings suggest a role for the GH-IGF-1 axis in the effect of CR. Extension of lifespan by reduced insulin-like signaling in nematodes requires a transcription factor named Daf-16 (mammalian FoxO1, 3a, and 4). We investigated a potential role for FoxO1 in the effect of CR using FoxO1 knockout (+/-) mice. In the liver, FoxO1-mRNA levels were significantly increased by CR, while not for FoxO3a or 4. We evaluated resistance to oxidative stress, gene expression levels, glucose-insulin homeostasis, and lifespan in KO and wild type mice subjected to CR. CR enhanced resistance to the oxidative stress induced by 3-nitropropionic acid both in wild type and KO mice. CR similarly affected glucose-insulin profiles in KO and wild type mice. CR also increased lifespan in KO mice to the same extent of that in wild-type mice. Although FoxO1 is known to affect gene expression of metabolic and stress response genes, the present results suggest that the effect of CR is induced by factors other than FoxO1.

**PA7 059 INFLUENCE OF ENVIRONMENTAL ENRICHMENT AND NICOTINE ADMINISTRATION ON EXPLORATORY BEHAVIOR IN MICE**

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INTRODUCTION: Recent evidence indicates that a complex environment may prevent some of the age-related cognitive deficits observed in elderly people. In rodents, environmental enrichment induces neurochemical and behavioral effects. However, few studies have evaluated emotional reactivity in mice reared in enriched environments. Our main aim was to evaluate combined effects of enriched environment and chronic nicotine administration on exploratory behavior. Nicotine may have neuroprotective effects, and different nicotinic agonists are being tested as treatments for neurodegenerative disorders. METHODS AND MATERIALS: Half of the male NMRI mice (n=64) were exposed to an enriched environment (EE) and the other half remained in standard cages (SC) with or without oral nicotine (100  $\mu$ g/L). After 3 weeks, mice were tested in the actimeter and in the hole-board (a test which reflects exploratory activity and novelty seeking). RESULTS: ANOVA was performed taking into account the factors "Housing" and "Nicotine". There were significant differences in exploratory behavior between EE and SC mice both in the total number of head-dips ( $p<0.05$ ) and in the number of activity counts in the actimeter ( $p<0.001$ ): EE mice displayed lower number of head dips and reduced locomotor activity than SC mice. No significant effects of nicotine administration were obtained in any of the two tests. CONCLUSION: Exposure to an enriched environment, but not chronic oral nicotine, modifies locomotion and emotional reactivity. These results agree with previous data both in young and aged mice, and suggests that decreased motor and exploratory behavior may influence cognitive abilities displayed by animals reared in enriched environments. Environmental enrichment has been considered a useful paradigm exploring new treatments against neurodegenerative disorders such as Alzheimer's disease. Our results suggest that changes in exploratory behavior induced by an enriched environment may be taken into account when interpreting results obtained in learning/memory tasks using this experimental paradigm.

**PA7 060 NEW STRATEGIES TO TREAT CELL AGING CONSEQUENCES BY ANTI-INFLAMMATORY MOLECULE AISA 5203-L**

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Introduction : Stress-induced premature aging is detrimental for cells, stem-cells niches and organ function. It is associated to a high concentration of pro-inflammatory cytokines, thus accelerating cells and stem cell senescence. Methods and Results : 1/ We have characterized the mechanism of action of a monoterpene AISA 5203-L and its major metabolite POH in *in vitro* and *in vivo* studies documenting their anti-inflammatory and anti-stress activity. 2/ By a FOB (Functional Observation Battery) we have attested analgesic effects and observed enhanced motility. We have found an exceptional capacity

to restore epithelia both in colon and skin toward pro-inflammatory agonists and toxic substances, sustained by the inhibition of circulating TNF-alpha, as well as Interlukin-6 and Interlukin-1 and locally expressed vascular endothelial adhesive molecule inhibition (P-selectin). 3/ Here we show data attesting the anti-angiogenic capacity of AISA 5203-L and POH at non toxic doses in a HUVEC model. These results confirm previous ex vivo results attesting an important NO (Nitric Oxide) dependent vasodilation. Conclusions: We propose that the supplementation of the diet of an elderly person characterized by frailty syndrome, with AISA Therapeutics anti-inflammatory molecules could successfully treat its chronic mood alterations, consequently limiting immobilization. Also ulcerous skin and gut alterations characteristic of the elderly, would be treated concomitantly, enhancing the comfort of the patient. Finally, the mentioned treatment could anticipate the failure of stem cell niche compliance, and thus cancer development.

#### **PB7 061 EFFECTS OF EXERCISE ON THE NUMBER AND SIZES OF CARDIAC NEURONS IN WISTAR RATS DURING THE AGEING PROCESS.**

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It is well known that aerobic training is accompanied by changes within the cardiovascular system. However, the effects of exercise on the cardiac neurons, a group of neurons located on the surface of the atria, that control the cardiac activity at rest and during exercise were not studied. The present investigation sought to evaluate cardiac neurons adaptations, such as cell number and sizes to chronic exercise training in a rat model. Methods and materials. Twenty 3-month old male Wistar rats (*Rattus norvegicus*) were divided at random in two groups: Group 1 (G1) – Sedentary control group, comprising ten 3-month old animals that were sacrificed at the age of 13 months; Group 2 (G2) - Exercised rats, comprising ten 3-month old animals that were submitted to running on a treadmill for 10 months, sacrificed at the age of 13 months and an additional group of 10 animals (young control group, G3), that was killed at 3 months of age. Results. The number of cardiac neurons was decreased in the sedentary group (30%) when compared to the trained rats (10 months of running on a treadmill 3 times a week, 0.9 Km/h) ( $P < 0.05$ ). Furthermore, there was a notable increase in the percentage of small neurons in the rats submitted to the training compared to the sedentary group ( $P < 0.05$ ). Conclusion. These results demonstrate that the exercise training affected significantly the number and the size of the cardiac neurons in Wistar rats. These neuronal adaptations seem to be a result of the training presumably with the objective of increasing the excitability of the neurons for the vagal action and resulting facilitation of the sinus bradycardia observed in the rest and in the exercise.

## **Track B – Health Sciences and Geriatric Medicine**

#### **PB7 062 AN AUSTRALIAN AGENDA FOR DEMENTIA RESEARCH RELATING TO ETHNIC MINORITY GROUPS**

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Introduction One-in-five Australians are from ethnic backgrounds, as are one-in-four Americans and one-in-six French. This proportion is projected to rise with increasing global migration. Methods and materials During a one-day meeting invited experts presented reviews on key areas followed by group discussion with invited stakeholders. Consensus on nine key research recommendations for Australia was reached. Results The review of each area revealed a paucity of Australian and international literature relating to dementia research in ethnic minorities. There is low quality of evidence to inform care to these groups. No dementia epidemiological study in Australia has been conducted that included ethnic minority persons with poor English skills; this limits service planning. Persons from ethnic minority groups present later for assessment, usually at crisis point, and underutilize services. Diagnosis is complicated by the lack of culture and language appropriate assessment tools. Medical management is based on research on predominantly Caucasian subjects. The level of cultural competency of medical and care staff is not known and in Australia a high proportion of care staff are from an ethnic minority background. Challenges to minority research include: the heterogeneity of minority groups; cultural differences that necessitate changes to traditional research designs; lower participation rates; lack of valid assessment instruments; need for appropriate translation and bilingual staff; and limited significance of some projects decreasing the chance of receiving funding and increased costs. Suggested methods to increase ethnic minority research include setting national and cross-national research agendas, encouraging grassroots impetus, providing pilot funding, linking researchers and ethnic communities intra- and internationally, having a central repository of resources and results and influencing policymakers to demand research. Conclusion More dementia research

involving ethnic minority groups is needed. The development of research agendas is one strategy to encourage this.

#### **PB7 063 PREVALENCE OF COGNITIVE IMPAIRMENT ADJUSTED BY AGE AND EDUCATIONAL LEVEL: SEX AND PATHOLOGY EFFECTS**

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Introduction: The estimation of the prevalence of cognitive impairment in a representative sample of Spanish older people using the Mini-Mental State Examination (MMSE) and applying corrective factors based on age and educational level was the aim of this research. Secondly, we evaluated the relationship among cognitive impairment and social and medical conditions. Methods and materials: A representative sample was randomly selected, 600 people, aged 65 and older, living in Naron Council (A Coruña). Socio-demographic and biomedical data have been collected and cognitive status has been assessed using the MMSE, the cognitive impairment cut-off was corrected by age and educational level. Results: A total of 591 subjects completed the assessment (98.5%). We determined variations in the prevalence from 35.2% without applying age or educational level adjustments to 22.2% if applied. Average score in women was significantly lower than in men (22.6 vs. 25.5) for all age levels and showed higher probability of cognitive impairment (odds ratio [OR], 2.19). Negative correlation was observed between the age and the MMSE score (Spearman correlation rho = - 0.45, p<0.001), increasing the possibility of developing cognitive impairment yearly (OR = 1.11). Cognitive impairment has been associated with an increase of morbidity and mortality in the elderly. This association has been found with the presence of dementia (p = 0.000), heart failure (p = 0.017), anaemia (p = 0.043), stroke (p = 0.016) and auditory deficits (p = 0.007). Conclusions: There is a high prevalence of cognitive impairment among elderly. To avoid overestimated ratios, it's necessary to adjust the cognitive impairment's cut-off by age and educational level in the assessment using the MMSE in old population. We found cognitive impairment was significantly associated with health problems (heart failures, strokes, anaemia or dementia)

#### **PB7 064 CARDIO ANKLE VASCULAR INDEX AS A PREDICTOR OF COGNITIVE IMPAIRMENT IN THE DWELLING ELDERLY PEOPLE: FIVE YEAR FOLLOW UP**

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Introduction: Symptomatic cerebrovascular disease correlate cognitive function; however, whether high arterial stiffness marker without symptomatic cerebrovascular disease can predict for advancing cognitive impairment is unclear. Cardio-Ankle Vascular Index (CAVI) is an index of arterial stiffness without influencing by blood pressure. We evaluated whether the CAVI is associated with advancing cognitive impairment after 5 years in dwelling elderly people. Methods and Materials: In August 2004, we recruited 93 subjects aged above 75 years from free health screening in Japan. Patients with cerebrovascular dementia and symptomatic peripheral artery disease were excluded. We divided the subjects into two groups by CAVI in baseline. More than 10m/sec with CAVI was defined as an AS (+), and less than 10m/sec was defined as an AS (-). Cognitive function test including Hasegawa Dementia Scale Revised (HDSR) were performed and compared in two groups every year from 2004 to 2008. Results: HDSR in baseline did not difference between both groups (AS (+) vs. AS (-) = 26.5vs. 26.4 points). HDSR in AS (+) significantly decreased more one year later compared with HDSR in AS (-) (AS (+) vs. AS (-) = 26.5, 25.1, 25.6, 25.8, 24.7 (P < .005) vs. 26.4, 26.3, 26.7 26.4, 26.7 points (n.s.), between AS (+) vs. AS (-), P < .001, two way ANOVA). After adjustment for age and sex, quantity of fall in HDSR as five years was significantly large in AS (+) than AS (-) (-1.8 vs. 0.3 points, P < .006). The ratio of more than 4 points decline in HDSR for every year, was significantly higher in AS (+) than AS (-) (P = .026, OR was 1.66, 95% CI [1.05, 2.81]). Conclusion: The finding of the present study is that CAVI predicted the occurrence of cognitive declining beyond the prediction by age, gender and blood pressure.

#### **PB7 065 IS PRESBYACUSIS A RISK FACTOR FOR DEMENTIA? ACODEM STUDY**

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Background: Although it's intuitively logic to think that there is probably a relationship between presbyacusis and cognitive disorders, there is no evidence for that. AcouDem study aimed at showing that cognitive disorders prevalence was significantly higher in older patients with hypoacusis than those with a normal audition. Research question: Is

presbyacusis a risk factor for dementia? Methods: Comparative transversal epidemiological study in an institutionalised elderly population in the fourth age. 319 subjects aged over 75 years have been assessed for their auditory acuity by a verbal acoumetry and for their cognitive status by 3 validated tests. The prevalence of patients with cognitive disorders was compared between patients with presbyacusis and those having a normal audition by means of Chi<sup>2</sup> test. Results: The mean age was 85.3 years. Groups with or without auditory defect were comparable for all other characteristics. The relative risk for cognitive disorders development was 2.48 in patients with presbyacusis (IC95% = 1.54-3.99, p < 0.0001). Odds ratio between presbyacusis and cognitive disorders remained significant, independently of age: OR = 2.09; IC95% = 1.07-4.07, p = 0.004 between 75 and 85 year old and OR = 2.46; IC95% = 1.20-5.07, p = 0.02 after 85, and of sex: OR = 2.33; IC95% = 1.32-4.12, p = 0.005 for women and OR = 3.43; IC95% = 1.38-8.51, p = 0.01 for men. Conclusion: AcouDem is the first study as well as the first stage to prove a link between presbyacusis and dementia. Next stages will be a case-control study followed by a randomised control trial in order to test the efficiency of auditory prosthesis and orthophonic rehabilitation in slowing down cognitive impairment in patients with slight to moderate dementia.

#### **PB7 066 IADL DISABILITY IN DIFFERENT STAGES OF ALZHEIMER'S DISEASE AND FRONTOTEMPORAL DEMENTIA**

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Introduction: Disability measured by limitations in Instrumental Activities of Daily Living (IADL) is an important prognostic factor in patients with dementia. This study aims to identify which IADL, measured with a modified version of the Lawton Scale, were affected in patients with Mild Alzheimer's Disease (AD), Moderate AD and Frontotemporal Dementias (FTD) and if there were differences between the stages of AD and between the different types of dementia. Methods: A total of 386 patients were included. Patients were evaluated at the Memory Clinic of Hospital San Ignacio, an academic hospital in Bogotá, Colombia, between 2000-2005. National Institute of Neurological Disorders and DSM-IV criteria were used to diagnose AD and the Lund and Manchester criteria were used to diagnose FTD. Standardized tests for cognition and affective disorders were given to all patients. Activities of Daily Living (ADL) were assessed with the Barthel scale and IADL were measured with the Lawton Scale. Results: A statistically significant difference was observed in the Mini-Mental State Exam Score (MMSE) in patients in both stages of AD (p<0.01). Significant differences were also observed between patients with AD and patients with FTD (p<0.01). Overall, there was only one IADL that was not compromised in FTD, all other IADL had a significant decline compared to both stages of AD (p<0.05). Conclusion: IADL disability was observed in the 3 groups. Compared to Mild AD 33% more activities were affected in Moderate AD and 29% compared to FTD. The only IADL not affected in FTD was walking around the house. IADL affected in FTD were those that require adequate executive function, this was not the case for AD. Future research needs to address the pathophysiological pathways and clinical implications of differences in functional decline depending on the diagnosis.

#### **PB7 067 EFFECTS OF COMMUNITY OCCUPATIONAL THERAPY ON SELF-PERCEIVED PERFORMANCE AND SATISFACTION IN DEMENTIA PATIENTS AND CAREGIVERS.**

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Introduction: Dementia has far reaching consequences for patients and caregivers and is a major driver of costs in health care. Major problems are losses in independence, initiative, and participation in social activities, decreasing patients' and caregivers' quality of life. Caregivers often experience feelings of helplessness, social isolation, and loss of autonomy. Unfortunately, drugs are not yet effective in improving the symptoms of dementia. Community occupational therapy (OT) is a tailor-made, client-centred intervention directed at improving patients' daily functioning and participation in social activities and is directed at increasing caregiver's sense of competence in handling behavioural problems. These outcomes are increasingly being considered more clinically relevant than measures of cognitive outcome. A recent randomised controlled trial proved that community OT for people with dementia (n = 135) and caregivers was effective on dementia patients' daily functioning, caregivers' sense of competence and both patients' and caregivers' quality of life, mood and health status. Also the effects on patients' and caregivers' self-perceived performance in daily activities and satisfaction on their individually defined problem areas was investigated. Methods: Single blind randomized controlled trial. Assessors were blinded for treatment allocation. Results: Significant improvements relative to baseline were found on patients' (1.5; 95% Confidence Interval [CI], 1.0 to 2.0; effect size 1.4) and caregivers' (2.0; 95% CI, 1.6 to 2.4; effect size 2.1) self-perception on individually defined problems in daily performance and significant improvements on patients' (1.6; 95% CI, 1.1 to 2.1, effect size 1.5) and caregivers' (1.6;

95% CI 1.2 to 2.1; effect size 1.6) satisfaction with their performance, after 10 visits community OT. Effects remained at 3 months follow-up. Conclusion: These results confirm the client-centeredness of this community occupational therapy programme.

#### **PB7 068 THE RELATION BETWEEN MEMORY COMPLAINTS AND AGE IN NORMAL AGING**

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Introduction: Normal aging can be characterized by a gradual decline in some cognitive functions, which depend on neurologic processes. Some aspects of memory are affected significantly by the aging process. In this context, memory complaints are common among older adults, and may reflect their biopsychosocial status. Memory complaints may signal depression, anxiety, mild cognitive impairment, or initial dementia. The objective of this study was to investigate the association between memory complaints and age in cognitively unimpaired older adults, and the relation between memory complaints and memory performance. Methods and materials: Cognitive screening tests as well as memory complaint questionnaires validated for the Brazilian population were used: Mini Mental State Examination (MMSE), Geriatric Depression Scale (GDS), Memory Complaint Questionnaire, Memory test of 18 pictures, Forward and Backward Digit Span (WAIS-III). 57 older adults were invited to participate, with 4 to 8 years of education, who used to participate in activities in SES. Results: Results did not reveal a significant association between cognitive complaints and age or cognitive performance. Older participants in this sample did not show worse performance or higher level of complaints. Conclusion: We concluded that participating in group activities for many years may protect older from cognitive decline and favor healthy aging.

#### **PB7 069 THE PRACTICE OF GATEBALL AND MAHJONG AMONG JAPANESE OLDER ADULTS AND DESCENDENTS: CONTRIBUTIONS OF LIFESTYLE TO COGNITION.**

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Introduction: In senescence cognitive aging is heterogeneous. In part, it depends on personal choices. There is room for achievement, which may depend on lifestyle choices that favor quality of life and meaning in existence. The aim of this study was to describe the cognitive profiles of community dwelling older adults who belong to the Japanese culture in São Paulo, who practiced gateball and mahjong. These activities are popular in this culture. Another aim was to investigate the frequency of activities carried out in this sample. Methods and Materials: A cross-sectional study compared 30 older adults who practiced each activity (gateball or mahjong). To evaluate cognition the CERAD neuropsychological battery was used, and to analyze activity level the Adelaide Activity Profile (AAP) was used, adapted to Brazilian Portuguese for this research. Results: The results indicated that mahjong group had significantly higher performance than the gateball group, in the word list memory task (immediate recall and delayed recall). The AAP data suggested that the participants of both groups were active individuals. In this sample (n = 60) men were more active in social activities. Women were more active in domestic services, services to others and in intellectual leisure. Conclusion: The differences in cognitive performance revealed that lifestyle, with weekly practice playing mahjong, seem to contribute to maintenance of cognitive functions. It is important to consider the direction of the causal relation between intellectual activity and cognitive performance. It is not known if the individual who has good cognitive abilities is inclined to perform mental tasks, or if the individuals who practice these activities develop superior abilities. It is possible that complex cognitive activities may favor high cognitive performance, contributing for the well-being, autonomy and longevity of the individuals.

#### **PB7 070 REST-ACTIVITY IN PATIENTS WITH FRONTOTEMPORAL LOBAR DEGENERATION (FTLD)**

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Introduction: FTLD is the third most common cause of dementia. Little is known about the impact of FTLD on rest-activity rhythms. This ongoing descriptive study explores characteristics of actigraphically assessed nighttime rest and daytime activity in two FTLD subtypes, semantic dementia (SD) and frontotemporal dementia (FTD). Methods and materials: Two weeks of actigraphy and sleep diary data were collected and analyzed to describe and compare rest-activity patterns. Demographics and patient Clinical Dementia Rating (CDR) scores were collected. Results: To date 31 community dwelling subjects have participated (SD=11, FTD=20), average age 63 years. FTD patients had higher CDR scores (p=.02) compared to SD. There were no differences between subtypes on mean bedtime duration (9.9 +/- 1.3 hours), nighttime inactivity scored as sleep (8.3 +/- 1.2 hours), or nighttime sleep efficiency (83 +/- 7%). Mean daytime inactivity scored as sleep was 24.8 +/- 18%. FTD subjects had more daytime inactivity (3.9 +/- 2.5 hours) compared to SD (2.5 +/- 2.0 hours)(p<.05). Average 24-hour sleep time for both subtypes was 12 +/- 3 hours. Correlation analyses revealed significant negative correlation between

total sleep time at night and total wake time during the day ( $\rho = -.610$ ,  $p < .001$ ). There was a stronger effect size for daytime wake and CDR score in the SD group ( $\rho = -.593$ ,  $p = .054$ ) compared to the FTD group ( $\rho = -.314$ ,  $p = .178$ ). Conclusion: Regardless of subtype, subjects had abnormally long bedtimes and high daytime inactivity. An unexpected finding was that increased nighttime sleep time was associated with decreased daytime wake time, particularly in the FTD group. This finding was not associated with CDR score. Further research is needed to explore the systems responsible for maintaining nighttime rest and daytime activity.

#### **PB7 071 DELIRIUM IN A POPULATION OVER 90-YEAR OLD RECOVERED IN RSA**

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**INTRODUCTION:** Delirium is a Acute Confusional State caused by physiological consequences of a medical disease. Delirium is a predictive index of severity disease and survival time, also in rehabilitation settings standing for index reliable to programme goal for reaching functional rehabilitation. **METHODS AND MATERIALS** In this Study we valued , on random pool of total population of 123 patients , the populations of older over 90yr aged recovered (29 patients) in the care of a RSA (Residential Sanitary Assisted in Italy or Nursing Home) , compared with population younger afferent in RSA Goal in this study is to value the Prevalence and Incidence of Delirium in over 90yr aged population recovered in RSA **RESULTS:** In the populations recovered in RSA studied is evident the prevalence of Delirium in the population over 90 year aged is most common compared to other population studied (44% vs 17%), as major seem to be the Incidence of Delirium in over 90 year population (33.3% vs 12.76%). This data confirm the existence of biological frailty in the very old over 90 year aged. Moreover this data demonstrate reduction of rates Delirium's Incidence compared with prevalence's rates in a Setting of Care focused elderly needs as RSA as opposed to other Non Geriatric Acute Setting (Surgery, Orthopaedics, Medicine, Neurology, Rehabilitation) from which derive. The 3-Months Mortality is major in the 90 year old compared to non 90 year old population (33.3% vs 18%) confirming a predictive role of Delirium. **CONCLUSIONS:** This study showed Delirium is a Marker of Biological Frailty and it is an index predictive inauspicious about the survival of patient. Moreover is marked the RSA, Geriatrics Contents Structures, performs important role of delirium's prevention by means of removal of the risk factor avoidable and a careful control of causes.

#### **PB7 072 WHAT DRIVES QUALITY OF LIFE IN DEMENTIA ACCORDING TO SELF-REPORT – ARE WE BETTING ON THE RIGHT HORSE?**

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Introduction Without a cure for Alzheimer's disease (AD) improvement of Quality of Life (QoL) in AD should have high priority in care, management, treatment and research. However, the factors that mediate QoL in AD are unclear. Many studies focusing on QoL in other chronic diseases have shown significant correlations between QoL and cognitive impairment. We designed the present study to determine which domains of cognitive dysfunction (if any) contribute to modulate QoL in AD. Methods and materials This is an ongoing cross-sectional investigation of community-dwelling older adults with probable AD (mild to moderate). We assessed cognitive function with the CAMCOG-R and a comprehensive neuropsychological testbattery. Psychological and behavioral symptoms associated with dementia were rated with the Neuropsychiatric Inventory (NPI). The QoL-AD was used to measure QoL by self-report and proxy-reports from two perspectives (i.e. proxy-patient and proxy-proxy). Results At the time of writing, 70 community-dwelling older adults with AD had been recruited (mean age 78.8(3.0) years, 66.6% women and 45% completed high-school education). Informants were either the spouse (64.6%) or child (35.4%). Mean CAMCOG-R score is 66.1(13.9). Partial correlations showed that the most robust association with self-rated QoL was language (Pearson  $r = .629$ ,  $p = .005$ ); with proxy-rated QoL (from both perspectives) executive functioning ( $r = -.575$ ,  $p = .013$ ) and with proxy-patient-rated QoL NPI ( $r = -.595$ ,  $p = .009$ ). Conclusion Our results show significant correlations between cognitive dysfunction and QoL in AD, but different correlations for self-report, proxy-patient and proxy-proxy reports. These findings highlight the multiplicity of perspectives on QoL in AD and suggest that impaired ability to communicate may represent the most robust predictor of QoL for older adults with AD.

#### **PB7 073 IMPACT OF AN EDUCATIONAL PROGRAM FOR CAREGIVERS OF DEMENTED PATIENTS**

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Introduction: Caregivers of elderly patients with Alzheimer's disease and related disorders often face high distress, resulting in frailty. We implemented an educational program with 5 sessions for informal caregivers. We provide information about the disease and its

management, with the goal to improve the everyday life and reduce the burden. Methods and materials: preliminary results of a prospective study. We evaluate quality of life and vulnerability of the caregiver with the Pixel scale, and his burden with the Zarit caregiver burden scale. Evaluation is performed before the educational program (T0), when it ends (T1) and 6 months later (T6).Degree of satisfaction (at T1) and knowledge of caregivers (at T0 and T1) are also evaluated by questionnaires. Results: the program has involved 16 caregivers (13 women; 3 men) whose relation to the patient was spouse in 12 cases, daughter in 3 cases and 1 close friend. The mean age of the patients was 79.8 years and they had a mean MMSE score of 19.6. The degree of satisfaction with the program was high. However, no change was observed between T0, T1 and T6 for the quality of life score (respectively 73.6, 71.4 and 75.7%), the vulnerability score (20.7, 29.3 and 25.7%) and the Zarit caregiver burden scale (36, 35.9 and 34.7). Our knowledge questionnaire was also unchanged with 3.17 errors (on a scale of 21) at T0 and 3 at T1, but its sensitivity was probably limited. Conclusion: our results suggest that there is no improvement in the caregiver's burden with an educational program. However, these caregivers report a high degree of satisfaction and we cannot exclude that these results were influenced by the small number of participants. More inclusions are needed in our ongoing program.

#### **PB7 074 EVIDENCE AGAINST AN ASSOCIATION BETWEEN ALCOHOL INTAKE AND COGNITION IN THE ELDERLY. THE ZARADEMP PROJECT.**

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**Introduction:** Recent studies are in favour of moderate alcohol intake to be protective against dementia onset. However the plausibility of this association is questionable and debated. **Methods and materials:** The ZARADEMP project is a longitudinal study which main aim was to investigate the incidence and risk factors of dementia. A stratified random sample of individuals aged 55 and above, drawn from census lists of Zaragoza (Spain), was invited to participate and 4,803 people were included. Subjects were followed up 2 and 4 years after enrolment. At each study wave, cognitive performances were assessed using Mini-Mental State Examination as well as the "Geriatric Mental State" and "History and Aetiology Schedule" questionnaires. The diagnosis of dementia was based on DSM-IV-TR criteria. Usual total daily alcohol intake was carefully recorded from a validated questionnaire and quantified in grams per day. Logistic and multiple linear regression models were used to estimate the relationship of baseline alcohol intake with subsequent cognitive decline or dementia risk over 4-year follow-up after adjusting for potential confounders. Analyses were computed in men and women separately. **Results:** The proportion of lifetime alcohol abstainers was 87% in women and 34% in men. Crude analyses showed that, in men, former alcohol drinkers were at higher risk of cognitive decline or dementia at follow-up than lifetime abstainers ( $OR = 1.58$ ,  $85\% CI = 1.0-2.5$ ). Multivariable analyses were not in favour of moderate alcohol intake to protect against dementia in neither men nor women. **Conclusion:** In a large population-based study of Spanish elderly, when distinguishing lifetime abstainers, former drinkers and current drinkers, we do not observe an association between alcohol consumption and dementia or cognitive decline incidences. One must remain cautious before promoting the beneficial effect of alcohol on the health of elderly individuals.

#### **PB7 075 INFLUENCE OF ANTI-DEMENTIA DRUGS ON PURCHASES OF PSYCHOTROPICS IN PATIENTS WITH ALZHEIMER'S DISEASE**

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**Introduction** The aims of this study were to describe how patients with Alzheimer's disease (AD) purchased psychotropics, and the difference between patients using and not using anti-dementia drugs (cholinesterase inhibitors or memantine). **Methods and Material** This nation-wide study was based on the National Prescription Register, which records all purchases of reimbursable prescribed drugs made by permanent non-institutionalized residents in Finland. Before getting eligibility to reimbursement for anti-dementia drugs, the patient with AD must send a medical certificate from his neurologist or geriatrician to the Social Insurance Institution in Finland to verify the diagnosis and the severity of the disease. At the end of the year 2005, there were 28093 registered patients with AD. During the year 2005, 24100 of them had purchased anti-dementia drugs and 3993 had not. There were no differences in age and sex distribution between these groups (32 % men, 68 % women, mean age 80 years). Defined Daily Dose (DDD) was used to prescribe the amounts of purchased drugs. **Results** Psychotropics were widely used among patients with AD. Patients using anti-dementia drugs purchased more likely than non-users any kind of psychotropics except conventional antipsychotics and tricyclic antidepressants. During one year period 57% (n=13837) of patients with anti-dementia drugs and 41% (n=1643) without, purchased psychotropics. The respective numbers for antipsychotics were 23% and 17%, for hypnotics and sedatives 32% and 24% and for antidepressants 32% and 21%. Patients using anti-dementia drugs seem also to purchase bigger amount of psychotropics (mean 293 DDD during one year period) than the non-users (mean 265 DDD). **Conclusions**

The purchasing of psychotropics was substantial in patients with AD, and the use of anti-dementia drugs did not lower it.

**PB7 076 THE BERLIN STUDY ON STRUCTURES AND OUTCOMES OF SMALL-SCALE LIVING ARRANGEMENTS FOR PEOPLE WITH DEMENTIA**

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**Introduction** During recent years a new form of small-scale living facility evolved in Germany. It takes the form of a shared housing arrangement for 6 to 12 older persons, frequently suffering from dementia. Situated predominantly in large apartments in mostly urban settings, these arrangements are being served by community care service and are completely disconnected from traditional residential facilities. It is postulated that these arrangements are beneficial to residents in terms of health outcomes, compared to traditional residential care. Nevertheless, research on outcomes is widely lacking. **Methods and Materials** Using a longitudinal design, new residents of small-scale living arrangements suffering from dementia (MMSE < 24) are surveyed for one year. They are assessed at the time of moving in as well as six and eleven months later. Measures for physical and psychological health outcomes include ADL functioning and behavioural aspects and additional social factors. Secondly, using a cross-sectional questionnaire design, all small-scale living arrangements in Berlin are surveyed concerning service structures and resident characteristics. Both approaches are supplemented with data collected in the same way on special care units for people with dementia to allow for comparisons. **Results** Residents which were recruited into the longitudinal study have an average age of 81 years, symptoms of depression and behaviour problems were equally observed in all residents. The results indicate that the percentage of severe dementia disorders was higher in special care units than in small-scale living arrangements. Psychotropic drugs were slightly more often prescribed for residents in nursing homes. **Conclusion** Small-scale living arrangements of the described kind constitute a new segment of care that is rapidly growing. Service structures, resident characteristics and preliminary outcome results indicate that they are a reasonable option for some older persons with dementia.

**PB7 077 PERCEPTIONS OF THE ALZHEIMER'S DISEASE IN THE FRENCH POPULATION – A COMPARISON OF TWO STUDIES**

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**Introduction.** The social perception of Alzheimer's disease is poorly explored, although this picture necessarily influences the behaviour of people involved, how they deal with symptoms, diagnosis and care. **Methods and material.** Two studies will face different methodology to explore the social representations of Alzheimer's disease in France. A study by qualitative interviews and focus groups was conducted among a hundred people. Three types of people have been interviewed: people not concerned, caregivers, health professionals. A quantitative telephone survey was conducted among a representative sample of 2013 people aged 18 and over. Descriptive analysis (Chi2 prototypical analysis) and inferential (logistic regression) were done. **Results.** The qualitative study helps to highlight the emotional dimension of Alzheimer's disease perceptions: fear and powerlessness are strongly present, shared by all persons surveyed. Clinical aspects of the disease do not appear spontaneously, and assimilation between Alzheimer's disease and old age is consistent. In the quantitative survey, the perception of the disease varies by age: if the 18-65 year-old associate the disease with memory loss, for the elderly dependency is the main issue. Alzheimer's disease is the third concern for respondents (59%). This fear increases significantly with age as well as the proximity to the disease. It is related to an attitude of unease towards Alzheimer's patients. However, 91% of respondents would like to know their diagnosis. **Conclusions.** The perception of the disease is extremely negative and leads to a tendency to distance the patient, symbolically or in practice. Efforts to change the perception on patients are to promote and evaluate.

**PB7 078 THE IMPACT OF CIRCADIAN RHYTHM AND ACETYLCHOLINE LEVELS ON SLEEP AND MEMORY WHEN CONSIDERING CHOLINESTERASE INHIBITORS IN THE TREATMENT OF ALZHEIMER'S DISEASE**

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**Introduction:** In Alzheimer's disease (AD), symptom exacerbation in the late afternoon or evening, or at night, suggests disturbance of chronobiology and natural rhythmicity.

**Methods:** With reference to available literature, we reviewed the relationship between sleep, memory and AD, and the importance of rhythmicity and acetylcholine levels when considering medication. **Results:** Disruption of the sleep wake cycle for patients with AD is greater than for similarly aged healthy individuals: sleep is more fragmented and disruption increases with disease progression. Sleep disturbances can exacerbate behavioural disorders. Acetylcholine is involved in maintaining normal sleep patterns, which are important for memory consolidation. During slow-wave sleep, low levels of acetylcholine are needed to consolidate declarative memory. Disrupting nocturnal cholinergic activity may provoke sleep disorders and worsen memory problems. Such disturbances may be influenced by the type of cholinesterase inhibitor prescribed for patients with AD, and the time of administration. Consideration of differences in pharmacokinetic and pharmacodynamic properties of cholinesterase inhibitors and their effect on circadian fluctuations of cholinergic transmission may help in optimising therapeutic benefits. With some cholinesterase inhibitor therapy, plasma levels of the drug are high when normal circadian rhythmicity would produce low levels of acetylcholine release. However, plasma levels of galantamine reflect the natural circadian rhythmicity of acetylcholine release, with high levels during the waking day and low activity at night, which may be beneficial for sleep, memory and, possibly, evening agitation. **Conclusions:** Taking into account the pharmacokinetic properties of cholinesterase inhibitors may prevent interference with sleep architecture and optimise cognitive effects

**PB7 079 IMPACT OF BEHAVIOURAL AND FUNCTIONAL SYMPTOMS OF ALZHEIMER'S DISEASE: A CARER'S PERSPECTIVE**

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**Introduction** Problems related to activities of daily living (ADLs), eg., dressing, washing, and handling money, and behavioural difficulties, eg., mood swings, agitation, and aggression, are common in Alzheimer's disease (AD). Furthermore, the recent dementia carer's survey indicated that these symptoms were amongst the most troubling aspects of the disease for carers. **Methods** The dementia carer's survey explored the impact of dementia on carers throughout Europe. It was an 100% anonymous, self-completion questionnaire, conducted through Alzheimer Europe's member organisations in Germany, Spain, UK (Scotland), France and Poland. Overall, 1181 completed questionnaires were returned (minimum 200 per country), and evaluation of responses helped to identify the aspects of AD that carers find most burdensome. **Results** The symptom group of activities of daily living (ADLs) was most commonly cited as the most problematic area (68% of carers), due to difficulties with specific symptoms such as showering/bathing, being left alone, and incontinence. Fifty percent of carers found behavioural symptoms to be troubling, specifically agitation/aggression, personality changes, and irritability. Perhaps surprisingly, cognitive difficulties were problematic for only 45% of carers. The initial impact of these symptoms is illustrated by the list of specific difficulties that first prompted the carer to seek help. Memory/confusion (81%), and concentration/attention (56%) were the most common reasons for seeking help, as well as ADL- and behaviour-related problems: finding belongings (55%), financial activities (46%), following conversation (46%), shopping (41%), and personality changes (39%). Considering the longer term, the survey found that a notable proportion of carers (20–50% depending on disease severity) spent >10 hours/day performing caregiving tasks. **Conclusions** This survey illustrates the burden that disease symptoms place on carers, and why it is so important to identify (and consequently, target) those symptoms that are found to be most troublesome.

**PB7 080 SPARED AND IMPAIRED ABILITIES AT TRANSITION TO SEVERE ALZHEIMER'S DISEASE**

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**OBJECTIVES:** To describe through comprehensive geriatric evaluation patients with Alzheimer's disease (AD) at transition to the severe stage (MMSE <10). **DESIGN:** Cross-sectional study based on the longitudinal REAL.FR study. **SETTING:** The REAL.FR (Réseau sur la Maladie d'Alzheimer Français) study, France. **PARTICIPANTS:** One hundred twenty-six patients identified among the 686 patients of the REAL.FR cohort.

**MEASUREMENTS:** Comprehensive geriatric evaluation when an MMSE score <10 was first observed during the REAL.FR follow-up. Cognitive (MMSE, SIB), behavioral (NPI), nutritional (MNA) and functional (ADL) assessment and evaluation of support received (Zarit score, use of support services). **RESULTS:** MMSE and SIB scores showed the best-preserved cognitive abilities were social interaction and response to own name, while praxis, orientation, memory and language showed greatest decline. Loss of independence in daily living followed a hierarchical order, locomotion being best preserved (71% independent patients) and personal hygiene deteriorating most (15.5%). Behavioral disturbances were frequent (>70% of patients had at least one disturbance of frequency\*gravity ≥4), principally apathy, aberrant motor behavior and agitation. The MNA showed that 68.5% were malnourished or at risk of malnutrition (score <23.5). Caregiver burden remained mild to moderate for 69.8% (Zarit score ≤40). 80.2% of patients still lived at home and 71.6% used at least 2 support services, mainly physician visits (62.8%) and home helps (54.9%). **CONCLUSION:** At transition to severe AD,

identification of remaining cognitive and functional abilities and principal behavioral disturbances allows appropriate management targeted at preserving these abilities and treating complications in order to optimize patients' quality of life.

**PB7 081 EVALUATING THE SEVERE COGNITIVE IMPAIRMENT IN A SPECIALIZED CLINIC**

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**Introduc/Objective:** We describe the process of translation and adaptation, for the Portuguese language of the scales TSI (Test for Severe Impairment, SMMSE (Severe Mini-Mental State Evaluation) and SIB (Severe Impairment Battery) that evaluate the moderate and severe dementia. The objective was to translate and evaluate the applicability Portuguese version of the mentioned scales and compares them with the MEEM score. **Methods:** After careful process of translation (forward and backtranslation) for the Portuguese language, the final version of the TSI, SMMSE and SIB was gotten. To evaluate the applicability, a pre-test was did in a group of 24 patients, age of 50 years or older, with diagnosis of dementia, either the scores 2 and 3 determined through the CDR and patients that had been evaluated in the period of June to August, 2007, in the Behavioral Neurology Outpatient Clinic at the Clinics Hospital of the Ribeirão Preto, São Paulo, Brazil. **Results:** The patients had understood adequately the items of the three scales. The average score of the TSI was of 11,5 (maximum of 24), SMMSE, 12,4 (30) and the SIB was 13,6 (50). These values had been higher than the MEEM score, that was about 6,9 (maximum of 30). **Conclusion:** The final version for the Portuguese of the scales was considered adjusted for clinical use in serious demenciaos patients. The validation of these instruments contributes for the process of better communication with the patient, thus preventing frustrations related to the interventions not adjusted.

**PB7 082 RESILIENCE CONDITIONERS AMONG CAREGIVERS OF AGED PEOPLE WITH ALZHEIMER**

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**Introduction:** It is believed that resilient caretakers have a better ability and competence to deal with negative effects brought by stress, anxiety and depressive symptoms of aged individuals with Alzheimer disease. The purpose of this study was to characterize some resilience conditioners of caregivers to aged individuals with Alzheimer disease. **Method:** Cross-sectional study. A pre-test was performed with ten subjects of an estimated 150 caregivers of elderly patients seen at the Behavioral Neurology Ambulatory at the Clinics Hospital in Ribeirão Preto (HCFMRP/USP). The caregivers have worked in this activity for over one year, caring for Alzheimer patients aged over 60 years, clinically evaluated and with CDR and MEEM results. Data was collected using the Beck Depression Inventory, the Pesce Resilience Scale, and the Caregiver clinical-social and demographic profile Questionnaire. The possible associations were analyzed using Fisher's Exact Test. **Results:** Every Alzheimer patient in this study received a CDR score between 0.5 and 2, and MEEM showed that nine subjects had diminished cognition. Among the caregivers, it was observed there was no depression and all had a good resilience index. The Fisher test showed a significant association between the caregiver's age and the Resilience Scale ( $P = 0.024$ ). Caregivers older than 50 years reported being fulfilled with this activity. On the other hand, 100% of the caregivers under 50 years of age have under-median resilience. The caregiver's self-evaluation of their mental health and the aged individual's CDR point to a tendency of association with the resilience ( $P=0.20$  and  $P=0.16$ ), which can be confirmed with the ongoing research. **Conclusions:** Resilience of the elderly patient caregivers increases with age. Evaluation of the caregivers mental health and the CDR of the elder may have relationship with resilience.

**PB7 083 EFFICACY OF PPAR-GAMMA AGONIST PIOGLITAZONE IN ALZHEIMER**

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**Purpose** PPAR-gamma agonists have been shown to exhibit neuroprotective effects and alter beta-amyloid homeostasis. The aim of this study was to test the effects of the PPAR-gamma agonist pioglitazone on cognition and regional cerebral blood flow (rCBF) in patients with AD and MCI. **Methods** Thirty-nine patients with AD or amnestic MCI with type II diabetes mellitus (DM) were enrolled after providing informed consent. Patients were randomly assigned treatment with pioglitazone 15-30 mg daily (n=20, pioglitazone group) or not (n=19, control group). We assessed changes from baseline to Month 6 in MMSE, ADAS-Jcog, and WMS-R logical memory-I, and rCBF on single photo emission

CT (SPECT). **Results** At baseline, no significant differences were found on measures of cognition and rCBF between the two groups. At Month 6, the ADAS-Jcog score significantly decreased in the pioglitazone group, while they significantly increased in the control group. The WMS-R logical memory-I scores significantly increased in the pioglitazone group, but not in the control group. SPECT studies showed a significant increase of rCBF in the parietal and frontal lobes in the pioglitazone group, while showed no significant changes in the control group. Conclusion PPAR-gamma agonist pioglitazone in animal models of AD has showed the reduction of numbers of activated microglia associated with a lower plaque burden and a modest reduction in soluble beta-amyloid levels. Consistent with these experimental studies, we demonstrated that pioglitazone exhibited cognitive and rCBF improvements in AD and MCI patients with DM. Pioglitazone may offer a novel strategy for the treatment of AD and MCI.

**PB7 084 THE ATROPHY OF PARAHIPPOCAMPAL GYRUS AND LIPID METABOLISM - A VSRAD ANALYSIS OF SENILE DEMENTIA**

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**Introduction.** The VSRAD, voxel-based specific regional analysis system, indicates the degree of brain atrophy and has been known as a powerful tool for the diagnosis of early Alzheimer's disease. The aim of this study is to elucidate the relationship between regional brain atrophy and factors influencing senile dementia. **Methods and materials.** 152 outpatients were recruited to this study (mean age 78.0 +/- 6.3 years old, 46 males). All patients were examined by brain MRI and analyzed the degree of atrophy of gray matter (indicated by %) and parahippocampal gyrus (indicated by z score) by VSRAD. The ratio of hippocampal gyrus atrophy over whole brain atrophy was also analyzed. The relationship between those parameters and clinical factors was analyzed. **Results.** Patients with low serum albumin level (< 3.5 g/dL) showed severer whole brain atrophy (14% vs. 8%), and decreased MMSE score (15 vs. 21) than normal albumin level group. Also patients with low serum HDL-cholesterol level (< 40mg/dL) showed severer whole brain atrophy (12% vs. 6%), and decreased MMSE score (15 vs. 21) than normal HDL-cholesterol level group. However, patients with high serum total cholesterol level (> 220 mg/dl) showed lesser whole brain atrophy (7% vs. 10%) than normal total cholesterol level group, and patients with high serum triglyceride level (> 150 mg/dL) showed lower z score (1.4 vs. 2.4) and lower hippocampal gyrus atrophy ratio (2.7 vs. 5.4) than normal serum triglyceride level group. On the other hand, relationship between hypertension and whole brain atrophy was only observed among mild cognitive impairment group (MMSE = 24 or more). **Conclusion.** These findings suggest that life style modification, such as lipid metabolism modification, blood pressure control, and nutrition control, may play a preferable role on the development of senile dementia.

**PB7 085 ACTION RESEARCH ON PERSON-CENTERED CARE USING DEMENTIA CARE MAPPING FOR ELDERLY INDIVIDUALS WITH DEMENTIA: QUALITATIVE ANALYSIS FOR FEEDBACK DISCUSSIONS**

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**Dementia Care Mapping (DCM)** is an evaluation system that includes the action observation technique and provides feedback for improving the quality of person-centered dementia care. DCM was conducted for six hours once a month during a three-month period. Feedback was given to the care staff who participated in this study. The feedback consisted of discussions between nurses and caregivers and the researchers. Subsequently, all care staff were given written reports of these discussions. Each care report was analyzed using Berelson qualitative analysis and the effects on elderly individuals with dementia were clarified. The subjects were elderly individuals with dementia and their care staff at a long-term care insurance geriatric facility. DCM briefing sessions were held for care staff in May 2007 in order to provide feedback and discuss the quality of care for each elderly individual. Monthly DCM sessions were conducted from June to August for twelve elderly patients with dementia. Two-day feedback conferences were held after each DCM session and descriptions of the feedback were written as reports for all staff. All staff reports were analyzed three times using content analysis according to qualitative analysis method. A total of seven categories were extracted during content analysis. Most items were categorized as care plans based on interpersonal relationship construction with the staff, followed by care plans involving talking about the activity in order to familiarize each elderly patient, and care for role- and work-related activities. The present findings suggest

that the DCM intervention improved the care staffs awareness of dementia care and the quality of person centered care for elderly individuals with dementia.

**PB7 086 EPISODIC MEMORY AS PREDICTOR OF CONVERSION TO ALZHEIMER'S DISEASE IN MILD COGNITIVE IMPAIRMENT**

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**Introduction** Identification of early Alzheimer's disease (AD) has become very important as new treatments are being developed. Episodic memory tasks appear to have predictive power for indicating early AD as episodic memory function is anatomically located within medial temporal lobe structures, which is the location with highest densities of AD neuropathological lesions. Most studies that have addressed the issue of neuropsychological prediction of conversion to AD in MCI patients, have emphasised the diagnostic value of free delayed recall deficits. This prospective, longitudinal study aims at investigating whether cued recall tasks are also able to predict conversion to AD amongst MCI patients. Methods and materials At baseline the cognitive part of the Cambridge Examination for Mental Disorders of the Elderly (CAMCOG), a Dutch variation of Rey's Auditory Verbal Learning Test (free delayed recall), the Memory Impairment Screen plus (MISplus; verbal cued recall) and the Visual Association Test (VAT; visual cued recall) were administered to 40 patients diagnosed with MCI. After 18 months, MCI-patients were reassessed and a follow up diagnosis was established. Of those who were seen for follow up (n=31), 7 fulfilled (NINCDS-ADRDA) criteria of probable AD, while 24 did not convert. Results The forward binary logistic regression analysis, with free delayed recall, MISplus and VAT as possible predictors, showed that only the MISplus remained in the analysis, indicating that this test contributed most to the prediction of conversion (Wald X<sup>2</sup>(1)= 5.78, p = .016 (O.R. = 0.28, C195%:0.099-0.790)). With the MISplus, a predictive accuracy of 87% was obtained. With the VAT and free delayed recall, predictive accuracy was lower, respectively 84% and 77%. Conclusion Verbal cued recall is a better predictor of conversion to AD in Mild Cognitive Impairment than free delayed recall and visual cued recall.

**PB7 087 VISUOSPATIAL DISORDERS IN SEVERE DEMENTIA AND**

**DIAGNOSIS OF POSTERIOR CORTICAL ATROPHY: A CLINICAL CASE**

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**Introduction** Higher visual and spatial functions can be primarily affected in neurodegenerative diseases. However, because patients first complain about vision disorder, diagnosis may be dramatically delayed. We describe the case of a patient whose complaints about visual and attentional problems, first inadequately characterized, were later related to a perfectly identifiable visuospatial perturbation, even after 7 years of evolution, leading to the diagnosis of a posterior cortical atrophy (PCA). **Method and results** This 58-years-old patient had first cognitive difficulties in 2000. The association of attentional, mild memory disorders and apraxia led to a diagnosis of Alzheimer's disease (AD). In 2007, the patient consulted in our geriatric yard because of a rapid deterioration in cognition. MMS score was at 9/30. Neuropsychological assessment indicated an atypical cognitive profile, with massive visuospatial and constructive disorders, an alexia, an apraxia and language disorders. Time orientation, episodic memory, judgment abilities and executive functioning were globally preserved. A second assessment found the clinical characteristics of PCA : Balint syndrom, Gerstmann syndrom and confirmation of apraxia and severe visuospatial disorders. Analysis of clinical history with the patient's wife showed inaugural visuospatial problems that had not been taken into account at that time. In the cerebrospinal fluid, typical AD biological abnormalities were found. Anatomical (MRI) and functional (SPECT) imagery showed abnormalities in the occipital and parietal lobes, comforting the diagnosis of PCA. **Conclusion** PCA is a rare clinical syndrome characterized by deficits firstly affecting higher visual and spatial perception, evolving towards dementia. Histopathological changes are often those of AD, but located predominantly in posterior cerebral areas. PCA is rarely diagnosed at early stage, due to its first atypical symptoms. In elderly, hypothesis of PCA is seldom suggested. Performing a simple visuospatial test and a detailed analysis of patient clinical history could improve diagnosis.

**PB7 088 TECHNOLOGY CAN DEFINITELY SUPPORT THE WELL-BEING OF PEOPLE WHO LIVE AT HOME WITH (MILD) DEMENTIA.**

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More and more attention is devoted to aging in place. For some people, this is more obvious and easy than for others. For people with (mild) dementia for example, this seemingly simple wish, suddenly becomes unrealistic and out of reach. Also for (informal) caregivers the burden increases as the health of the person deteriorates. Fortunately, a

number of rather quick win solutions/aids can be identified that may have a positive effect on people's lives. This paper presents the methods, results and conclusions of a research and validation project that studied the effects of a number of technological aids on the daily lives of people with (mild) dementia and their caregivers. A number of different technical organizations, knowledge institutions and care organizations cooperated to provide 40 households with (mainly) technological aids to provide support to a number of activities in their daily life. For each household, first a needs analysis was carried out to extract the most urgent needs of people and to match the corresponding aid or technology. Subsequently, these technologies or products were installed in their homes and people could use them. All these products have been evaluated by means of ethnographic home tours and interviews after a number of weeks of usage. For a number of participants, both care-receivers and caregivers, these aids have caused beneficial effects in people's daily lives. Effects that have been reported are, for example, comfort, feeling of safety, more independency, less frustrations and less of a burden for the caregiver. Results and main recommendations will be discussed in this paper. In conclusion, we are optimistic about possible support that can be given, but it is crucial that different disciplines start to work together as a team with one and the same goal; to support people in their daily lives.

**PB7 089 THE EFFECT OF COMPUTERIZED COGNITIVE TRAINING ON COGNITIVE FUNCTION IN OLDER PATIENTS WITH MILD DEMENTIA**

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**Introduction** With the increase in the number of elderly worldwide, a significant number of people suffer from age-associated diseases such as dementia. The medical treatment of dementia is limited in its effectiveness and it is thus important to investigate alternate methods of therapy, such as cognitive training. Previous studies of cognitive training in this population group have shown limited value, possibly due to methodological constraints. We thus conducted a randomized controlled study to evaluate the influence of computerized cognitive training on cognitive function of older patients suffering from mild dementia. **Methods** Patients were randomized to either participate in bi-weekly computerized cognitive training sessions of half-hour duration each over a period of a month, or to a control group where usual daily activities were continued. The "Savon" program (Melabev, Jerusalem), which includes memory, language, arithmetic and geometric exercises, was used as the intervention for the training group. Both groups underwent computerized cognitive assessment using Mindstreams® (NeuroTrax Corp., N.Y.) initially and at completion of the study. For each Mindstreams ® index, the differences were compared within each group utilizing "Wilcoxon Signed Ranks test" and between the groups utilizing "Mann-Whitney U test". Results 56 participants completed all stages of the research (27 from the training group and 29 from the control group). There were no statistically significant differences between the training and control groups at baseline. Compared to controls, there were significant improvements in global cognition and memory in the training group (P value <0.01). Conclusion Computerized cognitive training resulted in significant cognitive improvement, especially in memory, in older patients suffering from mild dementia. These findings suggest that patients with mild dementia retain the capacity to learn and that cognitive training is of therapeutic value. Based on these results, further research should be encouraged.

**PB7 090 HYPERHOMOCYSTEINEMIA, METHYLENETETRAHYDROFOLATE REDUCTASE GENOTYPE AND ALZHEIMER'S DISEASE**

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**Introduction:** Recent research has focused on homocysteine (Hcy) as a neurotoxic factor. The aim of our study was to evaluate the relationship between elevated total plasma Hcy levels, single nucleotide polymorphism of Methylenetetrahydrofolate-Reductase (MTHFR) genotype and Alzheimer's disease (AD). **Methods and Materials:** 30 patients over 65 years old were included in this study: 10 AD patients, 10 vascular dementia (VaD) patients, 10 healthy control subjects. We performed on all the subjects Mini-Mental-State-Examination (MMSE), cerebral Computed Tomography (CT) or Magnetic Resonance Imaging (MRI), Neuro-Psychiatric-Inventory (NPI), Geriatric-Depression-Scale (GDS), total plasma Hcy, serum Vit B12 and Folate, DNA extraction from peripheral blood lymphocytes for MTHFR C677T and 1298A/C gene single nucleotide polymorphism evaluation. The presence of atherosclerotic organ damage was investigated by means of clinical history and instrumental diagnostic procedures in all subjects in order to include in the control group only those without any evidence of atherosclerotic organ damage. Moreover, we excluded from our study all subjects suffering from possible causes of Hyperhomocysteinemia (HHcy) other than age. **Results:** 60% of AD patients resulted to have HHcy and, regardless of Hcy levels which could be age-related, 60% of our AD patients carried an heterozygous or homozygous C677T gene mutation, or an heterozygous or homozygous 1298A/C gene mutation or a compound heterozygous C677T and 1298A/C gene mutation. Moreover, 15 of our 30 subjects suffered from behavioural disorders; 11 of these 15 were carrier of a MTHFR gene mutation. **Conclusion:** Elevated levels of Hcy can

cause neuronal cell death through glutamate dependent excitotoxicity, DNA hypermethylation and poly-ADP-Ribosome-Polymerase's hyperactivation mediated neuronal apoptosis. These elements can explain the possible role of HHCy and MTHFR gene mutations in the pathogenesis of AD and behavioural disorders.

**PB7 091 ABNORMALITIES OF HORIZONTAL AND VERTICAL SACCADES IN DEMENTIA WITH LEWY BODY**

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Introduction : Mosimann et al. (2005) reported problems with horizontal saccades in dementia with Lewy body (DLB) but not in Alzheimer's disease (AD). The goal of the study is to go further in this field examining both horizontal and vertical saccades. Methods: we examined horizontal and vertical saccades in 10 healthy elderly and 15 patients with DLB. Two conditions were used: the gap (fixation target extinguishes prior to target onset) and overlap (fixation stays on after target onset); the former task is known to promote more reflexive saccades. Eye movements were recorded with EyelinkII eye tracker. Results: (i) As for controls, DLB patients showed shorter latencies in the gap than in the overlap task by 118ms (versus 105ms in controls). (ii) Yet, for both tasks mean latencies were longer for DLB patients than for controls and this was the case for both directions. Mean latencies for horizontal saccades were 343ms vs 183ms (in the gap task), 476ms vs 292ms (overlap). For vertical saccades latency values were 376ms vs 197ms (gap) and 480 vs 267ms (overlap). Conclusions: Long saccade latency in DLB patients for both directions even in the gap task reflects wide-spread deficits in the cortical (e.g. parietal and frontal) and subcortical areas including the distinct brainstem generators of horizontal (paramédian pontine reticular formation) and vertical saccades (medial longitudinal fasciculus )

**PB7 092 FOLLOW-UP OF SEVERE DEMENTIA AFFECTED PATIENTS AFTER DISCHARGE FROM A SPECIAL ACUTE CARE UNIT: A PILOT STUDY**

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Introduction Alzheimer's disease (AD) complications are responsible for many acute admissions and emergency hospitalisations. Predictive factors of hospitalisation are exhaustion of the informal caregiver, poor nutritional status and loss of ADL abilities. Objectives: To limit unjustified early readmission to hospital. Methods and materials: Setting: Special Care Unit for older adults with AD in the Toulouse University Hospital. Participants: 184 patients (among the 445 admitted to the SCU from January to November 2008) identified as "at high risk for rehospitalisation". Patients who experienced severe disruptive behaviours such as aggression, or psychosis were included. Patients newly admitted to nursing home (NH) suffering from behavioural and psychological symptom of dementia (BPSD), patients living alone in the community, and patients whom informal caregiver was exhausted were also included. The intervention was an individualised follow-up designed to be feasible and practical. Each patient underwent a comprehensive geriatric assessment. At the time of discharge, the follow-up was explained to the GP (general practitioner) and the caregiver. It targeted individualised objectives ( i.e. preserving functional abilities detect and prevent BPSD, prevent falls, weight loss or exhaustion of the caregiver). The geriatric nurse called the caregiver during the first week after discharge, and after at 1, 3 and 6 month. The medical consultation occurred 3 weeks after discharge. In crisis situation such as relocation to NH, BPSD, or medical issue the team could be phoned. Intervention such as phone counselling, support to the caregiver or medical consultation, could be implemented depending on circumstances. Results The rehospitalisation rate at one month after discharge was 10, 6% in 2006 (from January to November of each year), compared to 11.6% in 2006. Conclusion Prevent unjustified emergency hospitalisations is a major challenge in the care of AD patients. Randomised controlled trials are needed to evaluate the effectiveness of such collaborative care.

**PB7 093 DELETION OF THE PROGRANULIN GENE IN A FAMILY WITH FRONTOTEMPORAL DEMENTIA OR LATE ONSET PARKINSON DISEASE**

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Background : Progranulin gene (PGRN) mutations cause ubiquitin-positive frontotemporal lobar degeneration (FTLD) linked to chromosome 17. In these diseases, age at onset is variable and the neurological troubles may occur after 75 years old. Material and methods : We identified a near complete deletion of the PGRN gene in a French family with a rich

history of dementia, language reduction, behavioural modifications, and parkinsonian syndrome. Results : The proband was aged 64 at first visit and complained of progressive swallowing difficulties. He further developed a typical progressive non fluent aphasia and became mute 6 years later. He also had severe apathy, disinhibition and emotional blunting. His brain MRI showed considerable atrophy of the left frontal, temporal and parietal lobes. He died 8 years after onset and the neuropathological analysis showed typical FTLD-U lesions. The PGRN deletion was equally present in one 82-year old sister presenting with typical Parkinson disease (PD) with left rest tremor, bradykinesia, extrapyramidal rigidity and gait troubles. Her neuropsychological examination only showed mild impairment in executive functions consistent with PD. Although she had neither language nor behavioural symptom, her cerebral CT scan showed significant left frontotemporal atrophy, suggesting that she may be developing FTLD at a preclinical stage. Conclusions : This observation underlines the diversity of clinical presentations associated with PGRN mutations, and the considerable variability of the age at onset. The link between PD and PGRN deletion can only be discussed at present time. A diagnosis of autosomic dominant FTLD is possible in geriatric populations.

**PB7 094 THE IMPORTANCE OF A MULTIDISCIPLINARY APPROACH TO FRACTURED DEMENTED PATIENTS**

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Comorbidity in geriatric patients is of prognostic value on quality of life and survival but it often causes the exclusion of elders from clinical trials that are used to draft guidelines. We present the case of a 79 year old man suffering from multi-infarct encephalopathy, decompensated ischemic-hypertensive cardiopathy, persistent atrial fibrillation who was admitted to hospital for a dislocated right hip and periprosthetic omolateral fracture. His physical conditions contraindicated surgical treatment. Months later he was admitted to "Villa Grazia", a clinic specialized in treating mild to moderate demented patients through cognitive and physical rehabilitation programmes. At admittance the patient could not walk and had been bedridden for months. His right leg was shorter than the left and was turned outward. The functionality of the right hip was reduced and the right long extensor muscle of big toe was showing a deficit. He could not move the right leg and showed only a slight flexion of the right leg. With the agreement of the orthopedics of the Hospital S. Eugenio he underwent a revision hip replacement after which he was readmitted to "Villa Grazia". A brace was needed to correct the slight outward deviation he still had. He started a rehabilitation program of passive and active assisted kinesis at the end of which the mobility of the right hip improved to a fairly good level parallel to an increase in muscle tone and trophism. The patient was able to perform postural changes on his own using his upper limbs, he could sit and stand without help. He could walk using a forearm crutch. This case shows how the synergy of different medical facilities helps reducing the hospital stay, improving outcomes and quality of life even in patients affected by dementia are usually excluded from guidelines.

**PB7 095 GENERAL PRACTITIONERS AND DEMENTIA: UTILITY OF A SPECIFIC NEUROPSYCHOLOGICAL REPORT IN MANAGEMENT?**

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Introduction As recommended, general practitioners (GPs) have to play an important role in dementia management. Their understanding of neuropsychological assessment could be helpful. A standardized grid summarizing neuropsychological assessment results accompanying reports of memory centers specialists could be relevant. Such a grid would provide a quick reading of preserved and impaired cognitive functions as well as behavioral symptoms. In addition GPs could be more involved in early screening and monitoring. Methods and materials A specific grid was designed and validated for memory centers specialists. The usefulness of this grid for GPs was investigated. French GPs have been contacted by means of 2 questionnaires concerning: 1 - Their involvement in dementia monitoring. 2- The neuropsychological assessment. These GPs received the same neuropsychological assessment in three different presentations: a report type and two different synthetic grids. Questions have been asked for their understanding, opinions, expectations and interests according to the type of report. Results The expected results are: 1 - GPs will be involved in the screening and the monitoring of dementia patients. 2 - They will be interested in the availability of a synthetic and popularized grid easily meaningful in the reports of specialists. Conclusion French GPs have a central role and are involved in the early detection and monitoring of cognitive impairment. 1 - GPs may enjoy practical tools allowing them to better understand neuropsychological data. 2 - Further studies could show if they are more involved in early screening and contribute to be more effective in the disease management. If so, it could lead to a cost effectiveness improvement.

**PB7 096 IMPACT OF DONEPEZIL THERAPY ON FUNCTION IN RELATION TO MMSE IN PATIENTS WITH ALZHEIMER'S DISEASE**

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**Introduction:** To evaluate the effect of donepezil on function in relation to Mini-Mental State Examination (MMSE) scores in patients with Alzheimer's disease (AD). Cognition often correlates with activities of daily living (ADL) in patients with AD. **Methods and materials:** Data from 2177 patients with mild to severe AD (MMSE 5–26) were pooled from 6 randomized, double-blind donepezil studies. Because different functional scales were used in these studies, a standardized functional scale (SFS) was developed by mapping individual items from each of 5 common functional scales to matching items on the Disability Assessment for Dementia and transforming scores to a 100-point scale (0 representing total independence/100 representing total dependence). Changes from baseline to Week 24 on individual SFS items were assessed in placebo and donepezil groups and in mild (MMSE 18–26; n = 1155), moderate (MMSE 10–17; n = 879) and severe (MMSE 5–9; n = 143) subgroups. **RESULTS:** At Week 24, 11 of the 12 SFS item scores showed greater decline in the placebo group than the donepezil group with significant treatment differences in favor of donepezil for 5 ( $P < .05$ ). In the mild category, 8 items showed a greater decline in placebo patients, however treatment differences were nonsignificant. In the moderate category, all 12 items showed a greater decline in placebo patients with significant treatment differences in favor of donepezil for 7 ( $P < .05$ ). In the severe category, 7 items showed a greater decline in placebo patients with a significant treatment difference in favor of donepezil for 1 ( $P < .05$ ). Both instrumental and basic ADL were stabilized by donepezil treatment. **CONCLUSIONS:** Donepezil treatment was associated with a reduced decline in ADLs in patients with mild to severe AD. In addition, a novel method of standardizing and pooling different ADL scales was employed.

**PB7 097 THE ASTHENOEMOTIONAL SYNDROME IN ELDERLY: CLINICAL, LABORATORY AND NEUROPSYCHOLOGICAL DATAS**

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**Introduction** The Asthenoemotional Syndrome (AES) is one of the six basic syndromes described in Organic Psychiatry and the most frequent in clinical practice. It is relatively unknown as it was described by Lindqvist & Malmgren, 1993, who, created a classificatory scheme based on german psychiatry concepts and clinical experience. It is important to disseminate in the clinical environment what AES represents, demonstrate that it is not uncommon and that the symptomatologic ensemble that defines the syndrome is common to several diseases that are not entirely developed. The main objective of the study was to identify the factors related to AES etiology. **Methods and materials** We examined 129 individuals, seventy two (52 men, 72 women, age between 60 and 93 years,  $77.61 \pm$  years) were identified as possible SAE cases. All patients suspected of AES identified by anamnesis, were submitted to laboratory and neuroimaging investigations, neuropsychiatric exam including the MMSE, CAMDEX and the clock drawing test (CDT). **Results** We observed: Hypothyroidism 29.2%; Alzheimer's disease 23.6%; Hyperthyroidism 13.9%; normal pressure hydrocephalus 11.1%; hyperdensity on cerebral white matter 9.7%; mild cognitive impairment (MCI) 8.3%; pancreatic cancer, subdermal hematoma and type C Hepatitis performed 1.4% each. Thyrotrophic hormone (TSH) was the only one of diagnostic utility. MCI and Hyperthyroidism patients had a better performance on total memory tests than normal pressure hydrocephalus ( $p=0.032$ ). Concerning recent and evocative memory tests, MCI patients had higher scores compared to normal pressure hydrocephalus ( $p=0.045$ ). Hyperthyroidism patients displayed better performance than Alzheimer's disease ( $p=0.001$ ), hyperdensity on cerebral white matter ( $p=0.001$ ) and normal pressure hydrocephalus ( $p=0.001$ ), whereas MCI patients had higher scores when compared to hyperdensity on cerebral white matter ( $p=0.032$ ) and normal pressure hydrocephalus patients ( $p=0.045$ ). Conclusion AES affects social performance and can be diagnosed accurately based on its symptoms. TSH measurement and neuropsychologic tests may help identify specific causes of AES.

**PB7 098 CROSS-CULTURAL VARIATIONS IN THE HEALTH EXPECTATIONS OF INDIVIDUALS WITH ALZHEIMER**

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**Introduction:** As the prevalence of Alzheimer's disease increases, effective health care necessitates understanding the expectations of patients and their caregivers. Health expectations are a person's probability-driven beliefs regarding the likelihood that specific health-related events will occur. These beliefs are informed by socio-cultural attitudes, which in turn can influence when a diagnosis is sought and access to services. Although relatively little research has been conducted, findings suggest that unrealistic patient expectations may be related to psychosocial maladjustment, and perceived societal expectations to provide care may be associated with caregiver burden. This presentation examines the expectations expressed by individuals with early-stage Alzheimer's disease and their caregivers. **Method & Materials:** As part of a cross-cultural study exploring the pre-diagnosis period of Alzheimer's disease, four Anglo-Canadians from Calgary, five French-Canadians from Ottawa, eight South-Asian Canadians from Toronto, ten Chinese-Canadians from Vancouver, and their primary caregivers participated in semi-structured interviews which explored their expectations of the condition and health care. All interviews were audio-recorded, transcribed, and analyzed using an analytic inductive framework. **Results:** The findings suggest that while caregivers articulated more preferences for medical care compared to patients, cross-cultural differences were evident in their specific expectations. Anglo-Canadians and French-Canadians tended to view dementia as a disease, and held strong expectations for medical treatment and drug therapy. In contrast, South-Asian Canadians and Chinese-Canadians viewed memory loss as a natural and expected part of aging, with South-Asian Canadians emphasizing the importance of social support and Chinese-Canadians identifying acceptance of the condition as coping mechanisms. **Conclusion:** Cross-cultural differences exist regarding beliefs and expectations about Alzheimer's disease and aging. A better understanding of these expectations may promote patient-centered care for individuals affected by Alzheimer's disease.

**PB7 099 THE EFFECTS OF DONEPEZIL ON PATIENTS WITH MILD TO SEVERE ALZHEIMER'S DISEASE RESIDING IN ASSISTED LIVING FACILITIES**

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**Introduction:** Assisted living facilities (ALFs) are a rapidly expanding residential option for the elderly population. However, as the number of elderly individuals residing in ALFs increases, so does the prevalence of dementia in this environment. A recent retrospective study suggested that 67% of 198 ALF residents had dementia, 59% of which was identified as Alzheimer's disease (AD) based on DSM-IV criteria. Due to the increasing prevalence of AD in ALFs, it is important to consider the potential benefits of treatment in this environment. While donepezil, an acetylcholinesterase inhibitor, has been shown to preserve patient function and slow symptom progression in AD patients, there have been no prospective studies to date evaluating donepezil in AD subjects residing exclusively in ALFs. This study assessed the efficacy and safety of donepezil in patients with mild to severe AD residing in ALFs. **Methods and Materials:** Approximately 100 subjects with mild to severe AD residing in ALFs were evaluated in this 12-week, multicenter, open-label study. The primary efficacy measure was the Mini-Mental State Examination. Additional efficacy measures included the Neuropsychiatric Inventory, Disability Assessment in Dementia scale, Caregiver Activity Survey, and Alzheimer's Disease-Related Quality of Life. Safety assessments included neurologic examinations, clinical laboratory tests, and adverse events. Following psychometric and safety baseline evaluations, subjects received 5 mg donepezil once daily for the first 6 weeks, after which their dosage was increased to 10 mg once daily for the remaining 6 weeks based on tolerability. Both efficacy and safety measures were assessed at Weeks 6 and 12. The outcome of the study was based on analysis of the primary efficacy variable at study end point. **Results:** These analyses are ongoing. The results of this study will be presented at IAGG. **Conclusions:** Appropriate conclusions will be determined based on the results.

**PB7 100 IMPROVEMENT OF DUAL TASK PERFORMANCE IN PATIENTS WITH MILD TO MODERATE DEMENTIA.**

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**Introduction:** In patients with dementia attention-related motor performances such as dual tasks are especially impaired. Deficits in Dual-Task performances may represent a relevant causal model for the high risk of falling in these patients. It has not been studied so far, whether such dual task performances can be improved by a specific training in impaired patients with dementia. **Target:** To study the effectiveness of a combined motor and attention-related training on dual task performances in patients with dementia.. **Methods:** Study participants. 52 geriatric patients ( $81.49 \pm 7.51$  yrs.) with mild to moderate dementia (MMSE  $21.41 \pm 2.93$ ). Intervention: a 10-week controlled-randomised Intervention study. Intervention group (IG) (2hrs./2 times a week) progressive strength and functional trainings, attention-related training (dual7 single Tasks). Control group (CG): 1hour/

2 times/week: unspecific stretching exercise while seated.. Gait performance (max gait speed) (V), Stride Length (SL), and other gait variables had been measured by a computed based gait analysis system GAIRITE®). Cognitive performance (Counting in forward in steps of 2 (serial 2 forward = S2), counting backwards in steps of 3 (serial 3 retro=S3), had been measured by voice recorder and tested during single and dual task conditions. Study endpoint had been the decrease of gait speed and cognitive performance during dual tasks compared to single tasks. Results: Compared to the control group the intervention group showed a significantly smaller decrease in gait performance during the more challenging cognitive task (S3retro) after training (V: IG: -19,4±13,6%, vs. CG:-36,6±17,9%; P<0,001; SL: IG: -5,09±12,59%, CG: -16,96±15,70%; P<0,001), as during the less challenging cognitive task (DT-S2) no significant differences could be reported. In the IG the cognitive performance (correct calculations per second=cc/s) during DT-S3 conditions (T1: 0,31±0,20cc/s; T2: 0,65±0,35cc/s, P<0,001) improved, cognitive performance in the control group remained unchanged (T1: 0,39±0,27cc/s; T2: 0,38±0,29cc/s). Conclusions. A combined Motor- and Attention-related training increases significantly dual task performances in demented patients comparable to performance levels in patients without dementia. Kontaktadresse: PD Dr. phil. med. habil. Klaus Hauer Bethanien-Krankenhaus/Geriatrisches Zentrum am Klinikum der Universität Heidelberg Rohrbacherstr.149 69126 Heidelberg Tel.: 06221-3191532 FAX: 06221-3191505 Email: khauer@bethanien-heidelberg.de

**PB7 101 NEUROPSYCHIATRIC SYMPTOMS IN ALZHEIMER'S DISEASE: USING BUBBLE PLOTS TO EVALUATE DONEPEZIL TREATMENT EFFECTS**  
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Introduction: In order to further our understanding of target symptoms identification and treatment response in patients with AD, these analyses investigated a novel analytical technique relating neuropsychiatric symptoms across individual strata of MMSE scores in patients with AD treated with placebo or donepezil. Methods and materials: Data were pooled from 1106 patients with mild to severe AD (MMSE: 5-26) in 5 randomized, double-blind, placebo-controlled studies of donepezil who had data for the 10/12-item Neuropsychiatric Inventory (NPI). Bubble matrices were generated by plotting individual baseline MMSE scores (y-axis) against the 12 NPI items (x-axis). A bubble, representing the magnitude of effect size (NPI raw mean change/SD for mean change at week 24 for corresponding NPI item and MMSE score), was fitted into each matrix cell. Treatment effects were analyzed by evaluating differences between placebo and donepezil matrices and measuring the number and magnitude of positive and negative changes. Statistical analyses were performed using the McNemar and Wilcoxon Signed-Rank tests. Results: Comparing overall bubble patterns between placebo and donepezil (N = 241 pairs of MMSE scores and NPI items) showed a significant donepezil treatment effect (57% of bubble cells showed a positive change, P<0,024). Changes between the placebo and donepezil matrices were predominantly positive for 10 of the 12 NPI items. An overall positive treatment effect was observed for the magnitude of positive and negative changes (P<0,049). Nine of the 12 NPI items showed an overall positive change in item score. Conclusion: Using this novel analytic technique it is possible to evaluate an overall effect on individual neuropsychiatric symptoms at each level of MMSE score. This approach may help identify target symptoms and evaluate their responsiveness to treatment.

**PB7 102 COMPARING EARLY ONSET DEMENTIA TO LATE ONSET DEMENTIA**  
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**BACKGROUND :** Diagnosis of early-onset dementia is a problem that physicians have to face more and more frequently, with the increase of memory clinics. Nevertheless this diagnosis is under estimated and remains a challenge. Literature shows differences in the etiologic characteristics and clinical features between early (eod) and late onset (lod; age of onset > or = 65 years) dementia but there is a huge heterogeneity in function of studied populations. **OBJECTIVES :** The aim of this study is to focus on the differences between eod and lod among a population of over 800 patients, assessed in a memory clinic during year 2008. **METHODS:** We studied, in a retrospective way, eod patients and their caregivers demographic characteristics, type of diagnosis, clinical features and severity at the time of diagnosis, and the type of complain leading to the consultation, and compared to lod population. **RESULTS:** even if there was traumatic brain injuries and alcohol in the étiologies, frontotemporal dementia and Alzheimer's disease remain the more frequent causes in our population. Eod patients were more frequently addressed by psychiatrists, with a follow up for depression, or behavioural disturbances. The caregivers have greater perceived difficulties, and are often unable to take care properly of their relatives. **CONCLUSION:** Early onset dementia is a relatively common and frequently misdiagnosed condition. It is important to identify these patients better, because they need a specific

medical and nursing project, taking into account the differences in the type of diagnosis, the course, and management. Therefore authorities must open to this population, financial aids, and caregiving structures.

**PB7 103 RELATIONSHIP BETWEEN THE INTELLECTUAL ABILITIES AND THE TAKING OF A PRESCRIBED MEDICATION**

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The autonomy to take prescribed medications is an important factor in ensuring safe community living for older people. Detection of potential incapacity to take medication is of particular interest to the health care team during discharge planning. It is known that cognitive function plays a major role in the activity of taking medication. However, the literature reviewed does not clearly specify which intellectual abilities are involved or what level of disability indicates a risky medication management. The goal of the study was to acquire better knowledge about the relation between intellectual abilities and the taking of medication. **Methods:** A cross-sectional study was conducted in two geriatric units of an acute care hospital. Fifty-eight participants were recruited during their hospitalization. The taking of medication was measured with a medication auto-administration program (MAAP) over a period of at least five days. The intellectual abilities were measured with classic tools and with the process scale of the Assessment of Motor and Process Skills (AMPS). **Results:** A logistic regression model adjusted for education, medication intake method changes, as well as complexity of medication was applied to the most relevant variables identified in preliminary analysis. It showed that the Mini Mental State Exam (MMSE), the Rivermead Behavioral Memory Test (RBMT) and the AMPS are related with the MAAP result. Furthermore, the logistic regression model with AMPS is not affected by co-variables, contrary to MMSE and RBMT. Finally, AMPS showed a good potential as a screening tool for medication intake difficulties (sensitivity of 92% and specificity of 80%). **Conclusion:** This study confirms the relation between the taking of medication and intellectual abilities. Moreover it identifies a stronger relation with the process skills.

**PB7 104 INCIDENCE OF DEMENTIA AND RATE OF CONVERSION OF CDR=0,5 CASES, IN A COHORT OF ELDERLY LIVING IN SAO PAULO, BRAZIL**

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Incidence of dementia is a major public health problem in aging populations, particularly in developing countries where the elderly population has grown explosively. Identification of risk groups is vital to implement health promotion. The Clinical Dementia Rating (CDR) is a valid scale to classify the severity of dementia cases (mild, moderate, severe), also enabling the identification of borderline cases, when the subject no longer has a normal cognitive status for his age, but has not yet met criteria for dementia. There are many evidences that this group has a significantly higher rate of conversion to dementia than normal. This study aims to verify the incidence of dementia in a cohort of elderly (70+) living in São Paulo, a large urban center in Brazil, particularly among borderline cases with a CDR=0,5, and to identify factors associated. A sample 156 members of the cohort (n=424) included every elderly with a MMSE below 26 and a sample of those with a MMSE equal or above 26, all clinically evaluated for dementia. A Portuguese version of CDR (previously validated by authors) was applied to the closest relative or carer. After refusals and deaths, 92 elderly were re-evaluated after an average 3-years interval. From the 77 who did not meet criteria for dementia in baseline (39 CDR=0 and 38 CDR=0,5), 23% converted to dementia – 10,3% in CDR=0 and 36,8% in CDR=0,5 (RR=3,58). Among those with a CDR=0,5 and a box-score above 1 conversion rate was 50% (RR=4,8). Incidence of dementia was high, as expected given cohort's age, and comparable to the literature. The 3-year risk of conversion to dementia, was higher among those with CDR=0,5 and much higher if the box score was above one. Implications for health planning and research will be discussed.

**PB7 105 INTEREST OF LOCOMÉTRIX TO ASSESS GAIT'S PROFILE IN SPECIFIC OLD POPULATIONS.**

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Introduction: a global assessment is essential in geriatric situations. It is well known that alterations of gait appear early with cognitive decline. An analysis of the gait profile is difficult in clinical practice; clinical procedures are useful to determine the risk of falling. A new instrumental method (Locometrix®) is tested to characterize the gait of old subjects. Material and method: 47 patients were evaluated: 21 normal subjects (NS), 14 mild cognitive impairment patients (MCI), and 12 Alzheimer patients (AD). They were 65 years or older, with no fall or hospitalisation history in the last 6 months. They all walk easily, with no walking aid, without pain, they did not have any prosthesis and were living at home. The patients were assessed by a walk of 40 meters with accelerometric device (Locometrix®). This procedure was realized in simple (ST) and dual task (counting down) (DT). A neuropsychological evaluation (MMSE, Mattis scale, Grober and Buschke test,

Rey complex figure test, divided attention test and Lawton scale) was performed to determine cognitive profiles. Petersen criteria were used to classify MCI. Results: Locométrix shows that NS and AD subjects are different for speed in ST and DT, stride frequency in DT and stride length in DT with p value <0.05. Furthermore, MCI are different from NS by the frequency in TS ( $p < 0.05$ ). Performance in counting down in ST permits to differentiate NS and AD subjects. In DT, performance in counting down is different between the three groups. Conclusion: In simple and dual task, Locométrix identifies specific parameters in correlation with cognitive profile. And the counting down in DT shows a significant difference between the three groups.

**PB7 106 DAY CARE HOSPITAL FOR PEOPLE WITH LATE ONSET AND EARLY ONSET DEMENTIA**

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**BACKGROUND :** Early-onset dementia (eod, age at onset < 65) is suffering of too few investigations. However, even when the diagnosis is settled, the follow up of these patients shows many acute problems, different than in the late onset dementia (lod). Patients and caregivers are involved in professional and family responsibilities, that are leading to difficulties in the daily management. **OBJECTIVES:** The aim of this study is to focus, on the needs of this population, and the response given to patients followed in a day care hospital program, where a support for lod patients is also provided. **METHODS:** We studied, in a retrospective way, eod patients and their caregivers demographic characteristics, type of diagnosis, clinical features and severity at the time of diagnosis. We added the assessment of the Neuropsychiatric Inventory, and the burden of Zarit. We also note the kind of benefits of psychological support and cognitive stimulation for the patients **RESULTS:** The caregivers have greater perceived difficulties, NPI and burden were higher, They need financial, social and logistical support, in the long term. The acceptance of the disease is hard, and they suffer of the social bad representations. Their inclusion among lod patients is not a problem. **CONCLUSION:** Day care hospital programs for eod patients, associated with support program for their caregivers seems to be a good response to the particular difficulties showed by this population. Caregivers find relief and informations they are lacking so much, patients are repromoted by activities adapted to their capacities.

**PB7 107 ACTIVITIES OF DAILY LIVING THAT MATTER MOST TO CAREGIVERS**

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**INTRODUCTION:** This study was designed to ascertain the most relevant activities of daily living (ADLs) for caregivers of loved ones with Alzheimer's/memory loss. **METHODS AND MATERIALS:** Caregivers, recruited from an aggregated sample pool pulled from magazine and product inserts, direct mail, phone survey opt-ins and Alzheimer's websites, were invited by direct mail and email to participate in an interview. Approximately 40 caregivers were interviewed in each week of August and September 2008. For the interview, caregivers were presented with a list of 11 ADLs and asked to select up to 5 that were the most relevant/important to them. **RESULTS:** 138 caregivers were interviewed in August and 160 in September. Approximately 75% of the caregivers and two-thirds of the patients were female. On average, 65% of the caregivers were  $\geq 40$  years, with the mode (22%) being 55–64 years. Over 80% of patients were  $\geq 65$  years, with the mode (45%) being 75–84 years. Disease severity for the majority was rated as mild (56%) or moderate (32%). Of all caregivers, nearly 70% said reminding to take medications and 60% said going out (shopping, social activities) were the most relevant activities, while around the house activities (bathing, walking, eating) were less prominent. For caregivers of both loved ones who were ( $n = 135$ ) or were not ( $n = 163$ ) treated, reminding to take medications and going out remained the most relevant activities, but respondents of treated patients were almost twice as likely to report house activities as relevant than were those of untreated loved ones. **CONCLUSION:** Reminding to take medications and going out were the most relevant ADLs to all caregivers. House activities were more relevant to caregivers of treated loved ones. These results have implications to guide pharmacologic and non-pharmacologic interventions that have a meaningful impact on the patient and caregiver.

**PB7 108 SCREENING FOR MILD COGNITIVE IMPAIRMENT IN IDIOPATHIC PARKINSON'S DISEASE: IS THE CLOCK DRAWING TEST USEFUL?**

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**Introduction:** The Clock Drawing Test (CDT) has been recently shown to detect patients with Mild Cognitive Impairment (MCI). The objectives of this study were to validate the CDT in screening for MCI in idiopathic Parkinson's Disease (PD-MCI) and to compare

three scoring methods. **Methods and materials:** Nineteen (19) patients with PD-MCI and 20 healthy controls (HC) matched according to age, education and gender were recruited. According to Petersen's criteria, diagnoses of PD-MCI were made if individuals scored around 1.5 SD below the mean of normative data in at least one of the five cognitive domains assessed. Global cognitive status was evaluated using the Mattis Dementia Rating Scale. The CDT was scored according to the Rouleau (10-point), Cahn (10-point) and 18-point scoring systems. **Results:** The distribution of the PD-MCI subtypes was as follows: non-memory single domain (37%), non-memory multiple domains (32%), memory multiple domains (21%), and memory single domain (10%). PD-MCI patients received their diagnosis when aged 59.5 (SD= 11.0) years, and their disease duration was 9.8 (SD= 5) years. ANOVAs controlling for global cognitive function revealed that all three CDT scoring methods differentiated PD-MCI from HC (Rouleau:  $p = .001$ ,  $d = 1.54$ ; Cahn:  $p = .000$ ,  $d = 1.94$ ; 18-point:  $p = .002$ ,  $d = 1.36$ ). Sensitivity and specificity for PD-MCI respectively ranged from 78.9% to 89.5% and from 70% to 80%. Taking into account the likelihood ratio (LR), the Cahn's protocol was the best to distinguish clinically diagnosed PD-MCI from HC. With a cut-off point established at 9, it correctly classified 89.5% of the PD-MCI and 70% of the HC. **Conclusion:** Although a screening cognitive test would never replace an exhaustive neuropsychological evaluation, our results confirm that the CDT could help to identify patients with PD-MCI. Hence, the CDT can quickly and effectively alert clinicians as to which individuals are at higher risk of developing dementia.

**PB7 109 AN INTEGRATED MEMORY CLINIC OF A DISTRICT GENERAL HOSPITAL IN HONG KONG: A RE-VISIT**

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**Introduction:** Elders with cognitive disabilities should have access to memory clinics which have developed using a range of service models but providing similar functions. **Material:** The development and operation of an integrated memory clinic are described. **Results and Conclusion:** United Christian Hospital, a district hospital in Hong Kong, started a memory clinic in 1999 for patients aged 65 and older. This is a service that essentially hived from the Psychogeriatrics Clinic operated by psychiatrists. However, this clinic bears several prominent differences. The team comprises not only psychiatrists but also geriatricians. Others include: occupational therapist and psychiatric nurses. Clinical assessment (medical and psychiatric) is inter-disciplinary and is performed either solely by geriatricians or psychiatrists. Assessment tools used include: MMSE, GDS, Lawton IADL Scale, Neuropsychiatric Inventory and Relatives Stress Scale. Routine blood tests, calcium, fasting glucose, thyroid function, vitamin B12, folates and VDRL are checked. Plain head CT with width measurement of medial temporal lobe is almost a routine. Assessments are discussed and care plans are formulated. We described our findings in the first 100 patients (63 women) with mean age of 83.3. 95 patients completed assessment. 93 had CT scan. 86 met DSM-III-R criteria for dementia. 3 had other organic brain syndrome. 6 were not demented. 43 had Alzheimer's disease, 12 vascular dementia and 31 mixed. Among the non-demented, 2 had depression and 6 had no mental disorders but had physical illness which could affect memory. All depressed patients improved with treatment. However no case of reversible dementia recovered. According to needs, upon discharge, 39 were followed up at Geriatrics Clinic whereas 43 at Psycho-geriatrics Clinic. This alternative model of memory clinic with full inter-disciplinary integration of geriatric and psychogeriatric inputs could facilitate assessment and management of dementia. Our memory clinic is a

**PB7 110 EXPLORING THE EFFECTIVENESS OF COGNITIVE STIMULATION THERAPY FOR MILD TO MODERATE DEMENTIA**

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**Background:** As populations age, the prevalence of Alzheimer's disease (AD) and related dementias have increased. Pharmacological treatments for mild to moderate dementia have resulted in limited improvements in cognition, highlighting a need for effective non-pharmacological approaches. Cognitive stimulation therapy (CST) is a person-centered group program for optimizing cognitive function through reality orientation and reminiscence therapy. The program is based on an extensive review of the literature on non-pharmacological approaches for this population and is consistent with research that suggests cognitively stimulating activities may facilitate the prevention of certain forms of dementia including AD. CST may be administered by any health care professional. This critical literature review examined the effectiveness of CST and related intervention strategies. **Methods:** A resource librarian assisted with appropriate search strategies and an expert verified search terms. Twenty-four databases and 13 'grey' sources were searched. Clinical trials examining the effectiveness of CST in enhancing/optimizing cognitive function of individuals with mild to moderate dementia and comparable programs were included. Two reviewers analyzed papers meeting the inclusion criteria, using the McMaster Critical Literature Review Guidelines and Jadad Validated Quality Scale. **Results:** The search yielded 23 papers. Twelve met the inclusion criteria and were of relatively high quality. Cognitively stimulating programs appear to be effective in optimizing residual cognitive functioning for individuals with mild to moderate dementia and may improve overall quality of life. **Conclusions:** Although research in this area is limited, the strength of evidence suggests that CST and related interventions may provide a useful structural framework on which to build

rehabilitation programs for individuals with mild to moderate dementia. Due to the complex nature of this disorder, such strategies may be most effective when implemented as part of a holistic multimodal approach. Further research into this area is required.

**PB7 111 QUANTIFICATION OF BRAIN LESIONS FOR FUNCTIONAL MAGNETIC RESONANCE IMAGING RESEARCH ON OLDER ADULTS USING AN INDEX VARIABLE: PRELIMINARY RESULTS AT 4 TESLA**

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**Introduction:** Brain degeneration is common in older adults. Neuroimaging studies have reported a 5-90% incidental finding rate for a diverse extent of problems, including diffuse and local lesions and global atrophy. Even so, functional magnetic resonance imaging (fMRI) research comparing patients with particular disorders under investigation and matched healthy subjects often merely examines group differences, regardless of apparent heterogeneity of brain damage. Unfortunately, brain damage inevitably affects blood circulation and functional responses, making inference of functional changes difficult. Existing lesion rating scales rely on a thorough evaluation of clinical imaging, which is not always possible for an fMRI study. We propose a T1-weighted imaging index of brain lesions for fMRI investigations. Methods: Healthy older adults (NC) and people with mild Alzheimer's disease (AD; n=25, women=13, age=65-89 years, education=16±4 years, 3MS=71-100) underwent MRI scans (4-Tesla Varian-Oxford human imaging system). A T1-weighted whole brain anatomic image was acquired using 3DMPFLASH (FOV=307x192x192, matrix=256x160, 1.2mm thickness). For validation purposes, a T2-weighted image was acquired using FSE on several occasions. A brain lesion index (BLI) was constructed by summarizing problems in the white matter (WM) including lesions in periventricular areas, deep WM, and basal ganglia, infratentorial abnormal signal intensities, and global atrophy. Characteristic differences of the BLI among participants were calculated for the subjects. Results and Discussion: Various aspects of structural problems were detected in the study sample. The most common type of deficits were periventricular WM lesions (100% for AD and 83% for HC subjects), followed by deep WM lesions and brain atrophy. This is consistent with previous studies. The BLI ranged between 3.5-14 in AD (3.0). It reasonably 4.2 and 1.5-11.5 in NC (average 6.4±average 9.7 measures the overall brain damage in the subjects. There existed a clear overlap in the BLI distribution among people in the two groups. Conclusions: Our study suggests that caution needs to be taken in comparing group differences in brain functional changes. The BLI may be applied to practically adjust variations in the functional data. Ongoing research on a larger sample will evaluate how the BLI relates to cognitive and functional measures.

**PB7 112 THE FACTORS ASSOCIATED WITH DEMENTIA IN AUSTRALIAN ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES**

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**Introduction** This project, based in a remote region of Australia, determined the risk factors for dementia amongst older Aboriginal and Torres Strait Islander peoples. Methods and materials 363 Aboriginal people aged over 45 years from the Kimberley region in Western Australia were assessed with the Kimberley Indigenous Cognitive Assessment (KICA), previously developed and validated by the researchers. All those scoring less than 37 on the KICA, and a proportion of those scoring 37 or more were reviewed by specialist clinicians and consensus diagnoses obtained from two independent specialists blinded to KICA results. Information on risk factors was collected from participant or informant report, medical records and geriatrician review. Results The prevalence of dementia was 12.4%, 5.2 fold greater than the overall Australian prevalence of 2.4%. Factors associated with dementia included older age, male gender (OR 3.1, 95% CI 1.4, 6.8) and no formal education (OR 2.7, 95% CI 1.1, 6.7). After adjusting for age, sex and education, dementia was associated with current smoking (OR 4.5, 95% CI 1.1, 18.6), previous stroke (OR 17.9, 95% CI 5.9, 49.7), epilepsy (OR 33.5, 95% CI 4.8, 232.3) and head injury (OR 4.0, 95% CI 1.7, 9.4). Conclusion Factors associated with dementia in this sample indicate that an accumulation of health insults may contribute to the development of dementia at an earlier age in Aboriginal and Torres Strait Islander peoples. Chronic disease, injury and a lack of formal education are highly prevalent in the Aboriginal and Torres Strait Islander population, and these factors were found to be strongly associated with dementia. The poor access to quality health services for Indigenous people living in remote areas may also contribute to the development of ageing conditions such as dementia. Further methodologically rigorous studies to document cognitive impairment in indigenous populations worldwide are needed.

**PB7 113 COMMUNITY KNOWLEDGE OF DEMENTIA AND ITS RISK FACTORS**

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**Introduction:** Patients in the doctor's waiting room create an opportunity to raise awareness of dementia and its risk factors and encourage positive attitudes to risk reduction, symptom

presentation and active management. Method: Our design is to recruit 1000 patients aged over 30 years to receive a one page survey about dementia and its risk factors. They are randomly assigned to one of two groups: group 1 receiving only the survey and group 2 receiving an additional dementia information page, Alzheimer's Australia 'Mind Your Mind' summary of dementia risk factors. Results: Analyzing the first 120 responses on SPSS produced the following: 65% group 1 and 56% group 2 described dementia as 'memory loss', and 19% group 1 and 26 % group 2 as a 'brain problem'. The source of information about dementia was mostly from acquaintances, 50% of each group, and next, the media: 39% and 34% groups 1 and 2 respectively. Only 3/59, all from group 1, indicated they would not seek help for memory problems but of the combined groups, 86% answered they would seek help from a doctor, although only 17% indicated they had heard about dementia from a doctor. When asked if they would like a memory test, 56% and 59 % of groups 1 and 2 respectively answered 'yes' but only 14% of the combined groups over 70 years answered that they had been offered one. Patients were asked if they thought dementia risk factors could be reduced and 49% group 1 and 59% group 2 responded positively. Only 11% of the combined groups did not wish to learn more about dementia risk reduction with no difference between groups Chi<sup>2</sup> 4.553, p=.871. Conclusions: Initial data indicates the usefulness of the Alzheimer's Australia 'Mind Your Mind' risk reduction summary in improving attitudes, knowledge and awareness about dementia.

**PB7 114 A SURVEY OF DEMENTIA OUTCOME MEASUREMENT TOOLS FOR INDIGENOUS AND CULTURALLY AND LINGUISTICALLY DIVERSE GROUPS**

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**Introduction:** One of the aims the Australian Dementia Outcomes Measurement Suite (DOMS) project was to examine the appropriateness of recommended dementia outcomes measurement tools for culturally and linguistic diverse (CALD) groups and indigenous groups within the general Australian population. Methods and materials: The first step was to examine the cultural applicability of recommended measures by looking at publications about their use (and therefore language translation) in different countries across the globe. The next step used clinical experts to examine the item content of the recommended dementia outcomes measurement tools. Finally a bibliographic literature review was conducted to find relevant cross-cultural instruments and procedures. Results: The language translation survey found that the older and more established dementia measures have many language translations. However having a workable language translation is only the first requirement. There is still a need to establish cultural equivalence and for the development of clinical and normative data. In terms of item content analysis, many of the recommended instruments contained small problems with item wording and a potential for cultural bias. Cultural bias was found for some clinical / proxy rating scales which described behaviour and general functioning. Western value judgements and cultural stereotypes were also embedded within some instruments. Some cognitive testing items were identified as having questions which reflected, to some extent, a degree of acculturation and specific knowledge about the dominant culture. Some instruments examined from an indigenous perspective contain inappropriate language, concepts and timeframes. There is also a need to examine the performance of both urban and remote indigenous groups on culturally appropriate instruments. A number of cross-cultural instruments and procedures were found including some recently developed in Australia. Conclusions: This paper provides a brief survey of published measurement tools for the measurement of dementia in culturally and linguistically diverse groups and indigenous populations.

**PB7 115 OPERATIONS IN PSYCOGERIATRIC UNIT OF MEDIUM STAY IN BARCELONA, CATALUNYA (SPAIN). DESCRIPTION OF PACIENTS ADMITTED**

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**INTRODUCTION** The Unit of Psychogeriatric of Medium Stay was open in September 2001. It is in the Hospital Sociosanitari del Hôpital. The Unit is formed by five beds in a closed unit. The patients are admitted for temporal stay for: 1/ Control of Behavioral problems; 2/Physical Therapy; 3/Diagnostics of dementing process; and 4/control of medical pathologies in demented patients. MATERIAL AND METHODS Analysis of medical records of patients admitted in the period. RESULTS Between September 2001 and June 2006 231 patients are admitted. 130 (56.3 %) are women. Married 108 (46.8 %), widows 107 (46.3%). Medium age: 80 ± 8.3 years (49-97). Medium stay: 30.5 ±15 days (1-97). Diagnostics: Alzheimers Disease 101 (43.7%), Vascular 36 (15.6%), Frontotemporal 11 (4.8 %), Dementia-Parkinson 14 (6.1 %), Lewy Body Disease 6 (2.6%), Normotensive Hydrocephalus 5 (2.2%). The reason for admission are: Behavioral disorder 164 (71%), Physical therapy 33 (14.3%), Diagnostics 14 (6.1%). Origin of patients are: house 182 (78.8%), hospital 36 (15.6%), nursing home 8 (3.5%). Functional state at admission are: Barthel Index 40.5 ± 25, at discharge 56 ± 26. Charlson Comorbidity Index: =< 2 192 (83.1%); > 2 39 (16.9%). Nutrition are correct in 133 (57.6%) and altered in 93 (40.2%). Depression is present in 81 (35%). Medium punctuation in Global Deterioration Scale (GDS) are: 6.2 ± 0.7. Medium punctuation in Neuropsychiatric Inventory (NPI) are

$35 \pm 20$  points. Aggressiveness is present in 74 (32%), insomnia in 156 (67.5%), psychosis in 88 (38.1%), nutritional alteration in 52 (22.5%). CONCLUSIONS Patients admitted are 80 years old, GDS>6, are functionally dependent, come from home, and the most common problem for admission are insomnia. Medium stay in unit are 30 days.

**PB7 116 THE EFFECTIVENESS OF THE TEA-ZEN WELFARE APPROACH TO IMPROVING THE MENTAL HEALTH OF OLDER ADULTS WITH MILD DEMENTIA**

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Purpose : This study applied a Tea-Zen-Welfare program to the elderly with mild dementia and examined the effectiveness of this program in decreasing depressive symptoms and suicidal ideation of the program participants. 'Tea-Zen-Welfare Approach' is an Interdisciplinary approach which has been developed by our research team based on the Korean tea culture with Zen-meditation in terms of welfare. Methods : This study was conducted in the Prevention Care Rehabilitation Center, Busan Metropolitan City in Korea. Ten older adults(average age 75) with mild dementia participated in a 12-session Tea-Zen-Welfare program from September 1st, 2008 through December 4th, 2008. This study utilized a one-group pretest-posttest design. In order to measure the effectiveness of the program, both Geriatric Depression Scale(GDS) and Scale for Suicide Ideation(SSSI)-BECK were used both the Wilcoxon singed-rank test and the paired t-test were conducted using SPSS. This program consists of the following three major components: (a) understanding tea culture and enhancing positive interaction with people via tea drinking ceremonies (b) practicing the meditation, and (c) applying social work practice. These components embedded in the each session of the program, and some of the examples of session topics include understanding origins of tea, facilitating five senses through colors, flavors, and beauties of tea, meditating, and practicing tea-gymnastics. Results : The statistical tests results indicated that the program was effective in decreasing depressive symptoms of the study participants. Eight out of ten study participants' test scores were decreased( $p<0.05$ ). Moreover, it was found that the study participants' suicidal ideation test scores were also significantly decreased at the post-test assessment( $p<0.05$ ). In terms of the program process evaluation, participants reported high satisfaction toward the overall program, staffs and volunteers. Conclusion : This Tea-Zen-Welfare program, based on the Korean traditional culture, was effective in reducing depressive symptoms and suicidal ideation among the elderly with mild dementia. We can suggest that the program can be applied to elderly with alcohol problems.

**PB7 117 MEMANTINE SHOWS BENEFICIAL EFFECTS ON FUNCTIONAL ABILITIES IN MODERATE-TO-SEVERE ALZHEIMER'S DISEASE**

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Introduction: Functional abilities are severely impacted in Alzheimer's disease (AD). Loss of the ability to perform complex (instrumental) and basic activities of daily living (ADL) leads to decreased independence and increased caregiver burden. This post-hoc analysis investigates the effect of memantine (20mg/day) on ADLs, combined from Alzheimer's Disease Cooperative Study-Activities of Daily Living 19-item (ADCS-ADL<sub>19</sub>) and 23-item (ADCS-ADL<sub>23</sub>) scales, in patients with moderate-to-severe AD. Methods and materials: Patients with MMSE<20 from 6 randomised, placebo-controlled, double-blind, 6-months studies of memantine were included. ADCS-ADL<sub>19</sub> and ADCS-ADL<sub>23</sub> were pooled, and 14 identical items, with a score range of 0-39, were identified and included in the analysis. Basic ADLs (BADLs) were defined as eating, walking, toileting, bathing, and grooming, and instrumental ADLs (IADLs) as non-basic ADLs comprising: using a telephone, watching television, conversing, clearing a table, finding belongings, obtaining a beverage, disposing of garbage, travelling outside the house, and being left alone. Change from baseline on single-item, BADL (range: 0-15), IADL (range: 0-24), and total 14-item ADL scores were analysed for observed cases using ANCOVA, with centre and treatment as categorical explanatory variables and score at baseline as a covariate. Results: 959 patients (76 years, 67% women, baseline MMSE score: 12.3) were treated with memantine and 867 patients (76 years, 63% women, baseline MMSE score: 12.2) received placebo. 82% of the memantine-treated and 77% of the placebo-treated patients completed the studies. Memantine-treated patients had a less decline from baseline on the 14-item ADL score, compared with placebo ( $p<0.0001$ ). Memantine also showed benefits for BADLs ( $p<0.05$ ) and IADLs ( $p<0.001$ ), compared with placebo. Memantine-treated patients showed less worsening than placebo-treated for the ADL items: toileting ( $p<0.01$ ), grooming ( $p<0.01$ ), finding belongings ( $p<0.01$ ), and travelling outside the house ( $p<0.05$ ). Conclusion: Memantine shows benefits, compared with placebo, for both basic and instrumental ADLs for patients with moderate-to-severe AD.

**PB7 118 RELATIONSHIPS BETWEEN HYPERCHOLESTEROLEMIA AND COGNITIVE IMPAIRMENT**

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Background: To study the relationships between cognitive impairment and hypercholesterolemia in an elderly population with a memory complaint. Methods: Links

between hypercholesterolemia, statins and cognitive functioning have been studied among 496 consecutive subjects attending a geriatric outpatient clinic. Cognitive function was assessed using the Mini-Mental-State-Examination (MMSE) and validated neuropsychologic tests (Cognitive Efficiency Profile = CPE). A cerebral tomodensitometry, and biologic sample including total cholesterol, LDL-cholesterol, HDL-cholesterol, triglycerides dosages and ApoE genotype determination were also performed. At the end of this evaluation, the patients were classified in 3 groups according to their cognitive status: normal cognitive functioning, mild cognitive impairment (MCI), Alzheimer Disease (AD). Subjects with other dementia (vascular dementia, Lewy Body Disease...) were excluded. Results: In this  $76 \pm 8$  years elderly population including 71% women, 42% of patients suffer from AD, 34.5% had a MCI and 23.5% had a normal cognitive functioning. After adjustment on age, sex, weight, education level, ApoE genotype and cardiovascular diseases, a positive correlation between plasmatic cholesterol dosages and cognitive impairment was found. Patients with hypercholesterolemia (total cholesterol > or = 6.5mmol/l) had lower cognitive function than patients with normal cholesterol (MMSE score  $24 \pm 4/30$  vs  $26 \pm 3/30$ ,  $p < 0.01$ ; PEC score  $56 \pm 18/100$  vs  $62 \pm 17/100$ ,  $p < 0.001$ ). Furthermore, patients with AD had total cholesterol significantly more elevated than patients with normal cognitive function ( $6.1 \pm 1.0$  vs  $5.7 \pm 1.1$ mmol/l,  $p < 0.01$ ). However, no significant association between statins therapy and AD prevalence was found, after adjusting on age, sex, education level, ApoE genotype and cardiovascular diseases (OR: 1.53; IC 95% = 0.88-2.66). Conclusion: This study indicates a significant association between hypercholesterolemia and cognitive impairment or AD in an elderly population with memory complaint. Nevertheless, the statins therapy is not associated with a slightest prevalence of AD.

**PB7 119 ALZHEIMER'S DISEASE, PRESBYCUSIS AND HEARING AIDS: INVESTIGATION OF A NEW STRATEGY**

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Introduction: Alzheimer's disease and deafness are two major public health issues more particularly occurring in elderly patients. Since pharmacological strategies are still limited, non pharmacological approaches must be defined. Recently, it has been shown that the relative risk for cognitive disorders development was higher in institutionalized patients with presbycusis than in those with a normal hearing. Few studies have reported cognitive and behavioural benefits of deafness management in demented patients. However, up to now, no case control study or randomized controlled trial have been led through standardized methodology in this field of research. Methods and materials: The purpose of our survey is to seek for the prevalence of presbycusis and to evaluate management of hearing aids among 150 French Alzheimer patients compared to a matched control population of non-demented subjects. Firstly, a one-year follow-up study is investigating the relationship between auditory status and cognitive functional decline. Secondly, a twelve-month randomized controlled trial aims at studying the benefits and the tolerance of bilateral hearing aids in 30 hearing-impaired patients suffering from mild-to-moderate stage Alzheimer's disease. Benefits are assessed in the field of cognition, behaviour, quality of life and medical economy through standardized tests, questionnaires and scales. Results: Preliminary results show that audiometric tests are pathological for 88% of Alzheimer patients. Though half of them are suffering from this hearing impairment in everyday life, only 18% of them are fitting with hearing aids. According to Alzheimer patients and their relatives, communication skills and social interactions are enhanced. Unfortunately, for 62 % of Alzheimer patients which are suffering from presbycusis without audiological care, nobody advised them to wear hearing aids. Conclusion: If benefits related to management of bilateral hearing impairment are proved, an awareness campaign will be necessary and social covering to support this new strategy will have to be considered.

**PB7 120 COGNITIVE DIFFERENCES BETWEEN EARLY-ONSET AND LATE-ONSET IN ALZHEIMER'S DISEASE**

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Aims: To describe the differences in the performance of cognitive assessment tasks between patients with early or late onset of Alzheimer's Disease. Method: Prospective study. Patients with early and late onset of Alzheimer's Disease (AD) were included in the sample, defined as follows: early-onset patients (EAD) were younger than 70 years of age; and late-onset patients (LAD) were older than 75 years of age. Diagnosis of Alzheimer's Disease was done based on NINCDS-ADRDA criteria. The Global Deterioration Scale were used to classified the patients in stages. Neuropsychological battery included: Mini-Mental State Examination (Folstein), Logical Memory WMS-III, Digit Span, Boston Naming Test, Verbal Fluency (phonetic and semantic tasks), Clock Test and ideomotor praxia. The statistical analyses of the data were done with SPSS 14.0. Results: 81 patients

were included in the sample, and divided as follows: early-onset N = 37 and late-onset N = 44. Mean age was: 66 for EAD, and 82 for LAD. 24,5 % of the EAD group were men, and a 13,6% in LAD group. Not differences were found in the educational level between the two groups. Nor even differences were found in the GDS being all patients in the 4 stage. We found significant differences between the groups in their performances in the MMSE (p: .000), the Boston Naming Test (p: .003), phonemic fluency (p: .004), semantic fluency (p: .008) and ideomotor praxia (p: .000). No significant differences were found in Logical Memory WMS-III, Digit Span forward or backward and not even in the Clock Test. Conclusions: 1.- There are significant differences in the performance of cognitive tasks between early-onset and late onset patients with AD 2.- The cognitive differences between early and late onset in AD are related to language and praxis 3.- Early-onset AD patients have better performance in naming, phonemic and semantic verbal fluency and ideomotor praxias compared with late-onset AD patients.

#### **PB7 121 THE EDUCATIONAL LEVEL, IN RELATION WITH ALZHEIMER**

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**OBJETIVE:** To establish the relationship between educational level, and diagnosis of Alzheimers disease, and vascular dementia. **METHODS:** Retrospective cross-sectional study. Data collected by clinical interview: demographic data, medical history, cognitive assessment, functional and behavioral. We included patients diagnosed with probable Alzheimers dementia (AD), according to NINCDS-ADRDA criteria, and patients diagnosed with probable vascular dementia (DV), according to NINCDS-AIREN criteria. The patients were classified by years of education: ≤ 10 years of formal education / > 10 years of formal education. Data analysis made with SPSS 14.0 with a significance level of 95%. **RESULTS:** A total of 204 patients: 165 diagnosed with AD and 39 diagnosed with DV. Average age for AD: 79.75; and for DV: 79. Men were 28.5% of patients with AD and women were 43.6% of patients with DV. In AD's group a 91.1 % had educational minor or equal level to 10 years. We found significant differences between the two groups (p 0.024). In DVs group 22.2 % had educational level of more than 10 years. We found no statistical differences between the two groups (p 0.562). **CONCLUSIONS:** 1. We found a relationship between educational level and the diagnosis of AD. 2. No relationship was found between the educational level and prior diagnosis of DV. 3. The educational level appears to have a protective role for the development of AD

#### **PB7 122 ELDERLY PATIENTS WITH END STAGE RENAL DISEASE:**

**COGNITIVE IMPAIRMENT, DEPRESSIVE SYMPTOMS AND QUALITY OF LIFE**  
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**INTRODUCTION:** End Stage Renal Disease (ESRD) is an important public health problem. Patients with ESRD show greater cognitive impairment compared to the general population, associated with depressive symptoms. Besides the disease itself, these factors can negatively influence patients' quality of life (QL) and they are more severe among the elderly. The study aimed to estimate the prevalence of cognitive impairment, depressive symptoms and evaluate QL in elderly patients with ESRD on Renal Replacement Therapy (RRT) compared to younger patients. **METHODS AND MATERIAL:** A cross-sectional study evaluated all patients (n=182) on RRT in a university hospital of São Paulo State, Brazil. The Mini Mental State Examination (MMSE) and Beck Depression Inventory were applied, together with the SF-36 to evaluate QL and a standardized form for recording sociodemographic and clinical variables. Associations were analyzed using the Chi square and Mann-Whitney tests. **RESULTS:** Mean patient age was 57.5 years-old, while among the 67 elderly individuals, age varied from 60 to 88 years-old. Analysis of the MMSE results showed that the elderly presented a significantly greater proportion of cognitive impairment (73%) compared to younger patients (p=0.001), while 27.6% presented depressive symptoms (p=0.27). Concerning QL, significant differences occurred in scores obtained by the elderly patients for functional capacity (54.5; p=0.05) and vitality (64.2; p=0.002), while a tendency toward statistically significant differences was obtained for the physical aspects (31.0; p=0.08) and mental health domains (68.9; p=0.08). **CONCLUSIONS:** Elderly ESRD patients on RRT presented greater cognitive impairment and greater compromise of QL in relation to their functional capacity and vitality compared to younger patients, suggesting the need for special care and the offer of support and more specific guidance to more cognitively impaired individuals and their families.

#### **PB7 123 HIGHER SYNCHRONIZATION LIKELIHOOD IN PATIENTS WITH MCI: A MEG STUDY**

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**Objetivos:** The integration of information across brain regions is being a matter of recent investigation with functional neuroimaging techniques. In Magnetoencephalography (MEG) several methods of functional connectivity have developed. Synchronization Likelihood (SL) is non-linear measure of functional connectivity. **Methods:** Here, we measure brain magnetic activity in 9 healthy subjects and 14 Mild Cognitive Impairment (MCI) patients. **Results:** During the performance of a memory task MCI patients showed higher synchronization values across left temporal and right frontal region in the gamma band. Conversely, control subjects showed higher synchronization between the anterior and posterior region and between the left and right posterior sensors in the gamma band. **Conclusion:** These patterns of synchronization indicate a double dissociation between patients and control and could allow to have a better understanding of the neurophysiological basis of cognitive impairment in MCI patients.

#### **PB7 124 IS THE MINIMENTAL STATE EXAMINATION A MARKER OF LONG-TERM MORTALITY? TOLEDO STUDY OF AGING.**

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**INTRODUCTION:** Several studies show the MMSE being a useful instrument as a marker of mortality. This study tries to determine if the MMSE is a marker of long-term mortality in the Spanish population of over 65 years of age. **MATERIAL AND METHODS:** Population cohort study in people of over 65 years of age of the judicial party of Toledo. The subjects were extracted by a Multistage Aleatory Sampling in 1994 for a study of prevalence and incidence of dementia. 3,214 subjects were evaluated in 1994. In 1996, 2,651 were evaluated (incidence survey). Follow-up of mortality (1996-2007). **MEASUREMENTS:** Sociodemographic data, Katz and Lawton Index, yesavage's GDS, Folsteins MMSE, consumption of alcohol and tobacco, social support (OARS), self reported comorbidity and performance measurements. **STATISTICS:** The Standardized Residual (SR) in the MMSE were identified through linear regression adjusted by age, sex and educational level. The SR were encoded in 4 Standart Deviation groups (SD) <-1.5, -1.5 to 0, 0 to 1 and >1. In order to adjust the risk of mortality of cognitive level for the reported confounding factors, Coxs Proportional Hazard Analysis model was used. Coxs analysis was performed on 1,982 persons (729 deceased) for accumulative losses. **RESULTS:** 2,651 subjects were evaluated (56,4% female); the mean age was 75.9 (6.9) years. The mortality percentage was 75.7, 38.3, 35.1, 43.0 and 38.8 for respectively the <-1.5, -1.5 to 0, 0 to 1 and >1 (p <0.001) SD. In the Cox's analysis adjusted by cofactors, no significative relation between the cognitive level and mortality (p=0.13) was noted, showing that the principal confounding that deteriorates the association is the entry of functional evaluation variables. **CONCLUSION:** Our study doesn't confirm the association between cognitive level and long-term mortality.

#### **PB7 125 MAGNETOENCEPHALOGRAPHIC PROFILES OF MCI PATIENTS**

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**Objective:** We investigate, by means of Magnetoencephalography (MEG), whether spatio-temporal profiles, of neuromagnetic activity could differentiate between MCI and age-matched elderly participants. **Methods:** neuromagnetic activity was obtained from 15 elderly MCI patients and 20 age-matched controls during the performance of a modified version of the Sternberg paradigm. **Results:** The performance during the memory task did not show differences between groups. MCI patients showed bilateral higher activity in the ventral pathway formed by the ventral prefrontal region, the mid temporal region, the medial temporal lobe and the inferior parietal lobe. **Conclusions:** this increased activity in MCI patients could be considered as a compensatory mechanism in order to achieve a behavioural performance similar to the control group. The biomagnetic profiles obtained by MEG in MCI patients could be useful to differentiate between healthy aging and MCI patients.

#### **PB7 126 FUNCTIONAL DIFFERENCES BETWEEN AN EARLY-ONSET IN LATE-ONSET ALZHEIMER**

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**OBJETIVES:** 1) Describe the functional impairment in patients diagnosed with Alzheimers disease (AD) 2) To analyze the influence of age on the functional dependence in these patients. **PATIENTS AND METHODS:** A prospective study. Patients diagnosed with AD (according to criteria of NINCDS-ADRDA were used) in the memory unit. They were divided into two groups according to age at diagnosis of AD [ $<70$  years of early-onset AD (EAD) and  $> 75$  years of late-onset AD (LAD)]. Clinical, functional and neuropsychological index (Katz, Blessed, Lawton, battery of neuropsychological tests). Discusses the influence of age on the data of functionality. Statistical analysis: comparison of medium and proportions by chi-square. 95% confidence interval. SPSS 14.0.

**RESULTS:** 81 patients were divided into two groups: EAD, n = 37 and LAD, n = 44. The mean age was 66 years for the group of 82 to EAD and LAD. 24.5% of the EAD were men and 13.6% of LAD. There were no differences in clinical variables, demographic, and educational. No significant differences in Lawton ( $p = 1.000$ ) or in Blessed ( $p = 0.200$ ). But in Katz index ( $p = 0.024$ ). There were significant differences in neuropsychological tests between the two groups and the striking difference in MMSE ( $p = 0.000$ ) at diagnosis of AD. **CONCLUSIONS:** 1) Older patients are more functional dependence at the time of diagnosis of AD than younger. 2) Both patients are instrumental activities affected, but the older are more dependent on the basic activities of daily living

**PB7 127 INFLUENCE OF THE NEUROPSYCHIATRIC SYMPTOMS IN ALZHEIMER DISEASE (AD) IMPAIRMENT (IDEAL STUDY)**

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**INTRODUCCIÓN** Neuropsychiatric symptoms (NS) often appear in the evolution of AD creating a great impact on the patient and caregivers. This study aims to analyze the influence of NS in the cognitive and functional evolution of patients with moderate AD. **MATERIAL AND METHODS** IDEAL study is a multicentric epidemiological study in which 180 investigators included 1413 patients with moderate AD. We analyzed several aspects of the disease: sociodemographic features, cognitive (MMSE) and functional (Barthel Index) evolution, prevalence of depression (Cornell S.), neuropsychiatric symptoms (NPI-Q) and treatment at baseline and six months later. **RESULTADOS** The average age of patients was 77.8 years (46-97) and they had a moderate cognitive impairment (MMSE mean: 15.58) and a mild degree of dependence (Barthel mean: 77.8). The prevalence of depression (Cornell S.  $\geq 8$ ) was 55.2%. We found at least one neuropsychiatric symptom in 93%: the most common were apathy/indifference (60.4%), anxiety (55.5%) and depression/dysphoria (50.4%) and less frequent were hallucinations (18%), disinhibition (16.8%) and elation/euphoria (9.3%). The symptoms that led to a greater stress of the caregiver were delusions, agitation/aggression and hallucinations and the least were excitement/euphoria and eating disorders. 51.4% received memantine, 31.5%, donepezil, 21.7% rivastigmine and 17.7% galantamine. One fifth (21.5%) received antipsychotic drugs: risperidone (59.4%), quetiapine (16.8%) and haloperidol (15.8%). 45.4% took antidepressants: sertraline 20%, citalopram 16.6% and escitalopram 13.9%. Six month after baseline we found an increase of the cognitive and functional impairment (MMSE 14.73 vs. 15.58 and Barthel I. 73.13 vs. 77.98) ( $p < 0.001$ ) but we didn't find any correlation between the neuropsychiatric symptoms (NPI-Q score) and cognitive ( $p = 0.52$ ) and functional ( $p = 0.59$ ) evolution. **CONCLUSIONES** The neuropsychiatric symptoms are very common in the AD and produce a significant impact on the patients and a great burden on their caregivers but the presence of these symptoms don't modify the cognitive or functional evolution.

**PB7 128 ALZHEIMER'S DISEASE AND DRIVING. OBSERVATIONAL STUDY**  
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**OBJECTIVES** To drive motor vehicles represents independence, trial ability and competence. At present, the decision to limit or to prevent someone to drive is controversial because it entails a great deal of legal and social connotations. Some laws exist warning against driving vehicles (DV) in patients with dementia, but little is known about which proportion of subjects over 70 years don't drive anymore and what is the reason for. The aim of this study is to determine whether changes in the DV could constitute a predictive factor for the diagnosis of Alzheimer's disease (AD). **PATIENTS AND METHODS** Relatives of AD, mild cognitive impairment (MCI) patients and healthy volunteers older 70 years who attended a Dementia Uni between January 2008 and December 2008 were invited to answer a questionnaire inquiring on 17 dichotomous items on three variables: 1) changes in driving habits, 2) registration of failures, and 3) record of accidents. A statistical descriptive analysis were done to compare between groups ( $t$  Student,  $\chi^2$ ) **RESULTS** We analyzed 64 questionnaires from 38 AD patients, 15 MCI subjects and 11 control volunteers. Percentages of people who ever had driven (actually or in the past) were: 44.73%, 40% and 54.54% respectively for each group. Among active drivers, MCI patients, unlike controls, showed changes in the DV (lane departures, doubt, distraction with external auditory stimuli, inadequate responses to unexpected situations and increased irritability); no AD patients did drive actually. **CONCLUSIONS** Unlike healthy people, MCI patients show changes in the DV which could be considered as a possible predictor for future dementia. Larger size sample should be needed to assess these results and to allow definitive conclusions.

**PB7 129 QUANTITATIVE MEASUREMENT OF BRAIN HYDRODYNAMICS IN VASCULAR DEMENTIA, ALZHEIMER'S DISEASE AND NORMAL ELDERLY SUBJECTS : A STUDY BY PHASE-CONTRAST MAGNETIC RESONANCE IMAGING.**

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**Introduction** Phase-contrast magnetic resonance imaging (PC-MRI) is a noninvasive technique which allows quantification of cerebrospinal fluid and cerebral blood flows. The goal of this work is to study the relation between brain hydrodynamics and neuropsychological tests in a group including subjects with vascular dementia, Alzheimer's disease, and normal elderly persons. **Method and materials** This prospective study included 15 subjects (mean age, 80 years; range 75 to 85). All patients underwent MRI at 1.5T and neuropsychological tests: Mattis Dementia Rating Scale and executive function tests such as verbal fluency, Stroop test. The scanning protocol included flow images, acquired with a 2D cine PC-MRI sequence. Different velocities encoding were set for the vessels, the aqueduct, and the cervical subarachnoid space. Two acquisition planes were selected: a section through cervical level, used to measure flows in the cervical arteries and a section through Sylvius aqueduct to measure blood flows in the basilar artery and the straight sinus. Data were analyzed with a semi-automated in-house image processing software. For the arterial flows, arterial pulse volume, cerebral vascular resistance, and arterial compliance were calculated. For the cervical subarachnoid spaces and the aqueduct, stroke volume was calculated. Correlations between cerebral hydrodynamic parameters and neuropsychological tests were calculated. **Results** Amongst all cerebral hemodynamic parameters, arterial compliance showed significant correlation with the Stroop test results ( $p=0.03$ ). The stroke volume at cervical level was correlated to the verbal fluency testing results ( $p=0.02$ ). There was a trend toward correlation between verbal fluency testing and arterial compliance ( $p=0.06$ ), and Wechsler Adult Intelligence Scale and cervical subarachnoid peak flows ( $p=0.06$ ). **Conclusion** There was a correlation between arterial compliance and Stroop test results, and between stroke volume at cervical level and verbal fluency testing. These results indicate that there might be a correlation between cerebral hydrodynamic parameters and executive function tests.

**PB7 130 COGNITIVE LEISURE ACTIVITY AS A PROTECTIVE FACTOR IN A PROSPECTIVE AGEING STUDY IN GERMANY**

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**Introduction:** Growing epidemiological evidence suggests that premorbid participation in cognitive leisure activities reduces the risk of dementia. We investigated if this protective effect was present in the population-based Interdisciplinary Longitudinal Study on Adult Development and Aging (ILSE) and thus modulated the risk for developing either mild cognitive impairment (MCI) or Alzheimer's disease (AD) in a representative birth cohort born between 1930 and 1932. The investigation of a representative birth cohort offers decisive advantages, such as an exclusion of age effects and age-related cohort effects. **Methods and materials:** 500 participants of the ILSE-study were examined in 1993/94 (t1), 1997/98 (t2) and 2005/07 (t3). Participants were carefully screened for physical and mental health through extensive medical interviews as well as physical and neuropsychological examinations throughout all examination waves. In addition the participants were asked to fill out a questionnaire concerning their current frequency of participation in cognitive and other leisure activities (e. g. reading, solving crossword puzzles). Participants were categorized as highly, moderately or poorly cognitively active according to their questionnaire statements. **Results:** 381 participants of the original cohort were re-examined at t3. Prevalence of MCI increased from 13 % to 23 % and 29 % over time. In addition 7 % of the participants developed AD at t3. Subjects who were highly cognitively active at t1 showed a reduced risk of developing MCI or AD in the 13-year follow-up period compared to healthy controls ( $OR=0.23$ , 95 % CI 0.06-0.81,  $p<0.05$  – scores adjusted for education and household income). **Conclusion:** Our results confirm the hypothesis that a high level of premorbid cognitive activity constitutes a protective factor for the development of MCI and AD. This effect remains significant after adjustment for education and household income.

**PB7 131 DETERMINANTS OF COURSE PATTERNS OF MILD COGNITIVE IMPAIRMENT (MCI)**

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**Introduction:** The concept of MCI was developed to gain a predictor for future dementia. Annual conversion rates differ in short- and long term studies and the lack of a linear trend between both suggest that MCI subsumes a heterogenic group of more than one disorder, which may be stable, improve or progress to dementia. To distinguish progressive MCI from stable or remittent MCI, this study investigates indicators predicting the course of MCI and allowing a prognosis of the risk of future dementia. **Methods:** 357 subjects from the AgeCoDe cohort with MCI at baseline were followed up for 36 months by interviews and cognitive testing. Groups of remittent, unstable, stable and progressive MCI were built and analysed by multivariate and CART analysis for possible baseline-predictors for future course. **Results:** The group of progressive MCI consisted of 22.4% of all subjects with MCI. The following variables were found to predict the conversion to dementia in a statistically significant manner ( $p < 0.01$ ): MCI subtype, Hypercholesterolemia, history of TIA, renal insufficiency, and a poor score of 14.5 points or lower in the CERAD Wordlist

learning and recall subtest. The latter alone increases the risk of conversion to dementia from 22.3% to 48.6%. A score of > 14.5 points decreases the risk of progressive MCI to 10.8%. No clear determinants were found for courses of unstable and stable MCI. Conclusions: In persons with MCI a poor score of 14.5 points or lower in the CERAD Wordlist learning and recall subtest is the best predictor of progression to dementia. For courses of unstable and stable MCI no clear predictors were found.

#### **PB7 132 COGNITIVE STIMULATION EFFICACY: THE CAREGIVER**

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Introduction Cognitive stimulation treatment might contribute to the well-being of both dementia patients and carers, by taking into account undividual needs and using a person-focused approach. The Cognitive Disorders Unit at Maggiore Hospital in Bologna carried out a psycho-cognitive stimulation program for small groups of patients affected by mild or moderate dementia. The program required caregivers' involvement who were instructed by professional personnel during dedicated meetings to use informal stimulation techniques. Aim of our study was to evaluate efficacy's perception of such a program by the caregiver. Methods and materials 74 patients (M/F 33/41, mean age 76.38+ 6.32, range 58-87 yrs, mean MMSE 21.24+ 3.43, range 12-29) attending our memory clinic and 60 caregivers (M/F 20/40, spouse 51.6%, children 43.3%, others 1.7%, living together 61.7%) participated to the cognitive stimulation program. Caregivers were asked to fill a questionnaire about "efficacy perception" before, immediately after and two months later the cognitive stimulation treatment. The questionnaire evaluates frequency of cognitive impairment in different domains: memory, attention, orientation, language, identification and praxia, logical-abstract thinking, social attitudes, self-esteem, mood. Answers were given according to Likart 5 grade scale (1=never 5=usually). A questionnaire about satisfaction was also administered (Likart 5 grade scale: 1=very unsatisfied 5=very satisfied) Results Caregivers show a high level of satisfaction towards several aspects of this initiative: organization (mean score 4.33+0.73), program usefulness ( mean score 4.23+0.72), topics (mean score 4.18+0.69). 72% think that attending the cognitive stimulation program has facilitated the daily management. In their opinion patients improved in items of the following domains: memory ( $p<0.035$ ), orientation ( $p<0.000$ ), logical/abstract thinking ( $p>0.003$ ), praxia ( $p<0.000$ ), mood ( $p<0.000$ ). Conclusions Our results show that caregivers perceive improvement in mastering cognitive, mood and functional adaptation after attending an integrated cognitive stimulation program. Improvement is maintained after two months from treatment.

#### **PB7 133 ASSOCIATION BETWEEN PERCEPTION OF SUBJECTIVE MEMORY AND MANUAL SKILLS IN WORKSHOP FOR ELDERLY IN DIGITAL INCLUSION**

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Introduction: In order to satisfactorily perform the tasks of daily life manual skills must be emphasized as important. Hands not only serve as an information receiver, but also as a response executer. The manual skill interacts with the cognitive functions, forming a complex system of integrated movements. Thus, the objective of this work was to verify the association of subjective perception of memory with manual ability in the elderly participants of a workshop of digital inclusion. Methods and materials: 51 elderly people (60 to 78 years) participants in the workshops of Digital Inclusion Project Potentiation of the Institute of Geriatrics and Geriatrics and Gerontology of the Pontifical Catholic University of Rio Grande do Sul – PUCRS, Brazil were evaluated. For the development of the research were used a questionnaire containing general information, the Functional Assessment Brief, the test of subjective perception of memory, Memory Test Logic I and II and the Action Research Arm Test (ARAT). Results: it was observed that women perceive their memory in a more negative way than men. Men showed better performance on the Logical Memory Test from Home, more in general, both sexes had satisfactory results. Already in Late Logical Memory test of the medium is considered. There was significant correlation between the initial and delayed memory, manual skill on the right side to the left side, manual skill on the right side to the subjective perception of memory. Conclusion: The results of this study support the hypothesis that there is an association between the subjective perception of memory and manual skill. This is an original study, since other studies involving memory and perception of manual skill were not found. Additional studies involving this issue are suggested.

#### **PB7 134 THE SELF-PERCEPTION AGEING FROM THE BODY IMAGE SIZE IN OLDER WOMEN ASSISTED BY HEALTH INSURANCE AT BRASILIA, FEDERAL DISTRICT, BRAZIL**

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Introduction: The contemporary society super overvalues young human being and more important than the benefits/defects of youth are the bodily impressions conveyed to the outside world. Objective: Understanding the ageing and its relationship to body image formed by self-perceptives signs of overall health status and its mediation by behavioral, cultural and social factors. Methodology: Study quanti-qualitative and descriptive correlational. It used a questionnaire to obtain information concerning the sociodemographic characteristics, subjective perception and health self-refer problems and body image perception. To data analysis: used up procedures of descriptive statistics, association measures and non-parametric analysis, adopting significance level of 5%. Results & Quarrel: The average of elderly women interviewed is 66 years old (60,7%). Most are widowed (53%), receive retirement through governmental departments (100%), lives alone (38,1%), has completed higher education (84%), has an average monthly income of 10 minimum wages (60,3%) and belongs primarily to the Economic Class A (68,8%). In terms of health indicators: 65,3% has a positive health perception. Moreover, most of the group mentioned as the main presence of "health problems" is the need for carrying out cosmetic-surgical interventions (97,4%), and that 84% reported having done any cut of this procedure, and the most predominant application was botulinum toxin (40%). About body image dissatisfaction, classified by Stunkard Figures Scale: 54% of the surveyed were dissatisfied, mainly by weight excess (35,1%) which was associated with BMI, in which the increase in this Index category increased the dissatisfied percentage of elderly women. Conclusion: It noted in this context, the need for completion of other studies that incorporate the same proposal from a directly qualitative approach and to analyses the speech of elderly women about their expectations and body images, current and desired.

#### **PB7 135 SUCCESSFUL AGEING IN LATE SIXTIES: FACTS AND FACTORS**

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INTRODUCTION Successful ageing (SA) could be defined as ① living long and ② living both subjectively satisfactory and objectively high-functioning life until the endpoint of life. In this study it was considered as being composed of 3 domains: ① independent community living and social engagement in the social domain, ② life satisfaction and spared cognitive function in the psychological domain, and ③ physically independent daily living and disability-free state in the physical domain. METHOD AND MATERIALS Facts and factors concerning the SA was investigated in the young elderly (N=2,223 with 914 males, 41.1%) aged from 66 to 71 in a outskirts of a Korean metropolitan area. Barthel's ADL, Lawton's IADL, Life Satisfaction Index-A, Short-Form-36 Health Survey, Mini-Memory Test and Katz Adjustment Scales were employed for the assessment of SA subdomains. Standardised measurements for independent variables were UCLA Loneliness Scale, Social Readjustment Rating Scale, Geriatric Depression Scale and Self-Efficacy Scale. Other factors were also included in as independent variables. RESULTS 25.6% was classified as having high SA, 64.1% as having middle SA and 10.3% as having low SA. Low Geriatric Depression Scale score and high Self-Efficacy were psychological factors were related to the higher level of SA. Of physical variables young age, male sex, adequate body-mass index and low score on the Short-Form-36 Health Survey were related to higher SA. It was related to such social factors as education, income, economic status, spouse and life stress during the past year and also to life habits including smoking, drinking and regular exercise. CONCLUSION SA is an integrated concept consisting of multiple domains. Based on the criterion of this study, about 10% is already experiencing the low SA. It seems to be influenced by many biological, psychological and social factors and life habits. And many of the influencing factors seem to be modifiable.

#### **PB7 136 THE ANTI-AGING EFFECT OF BLACK RICE AGAINST H<sub>2</sub>O<sub>2</sub>-INDUCED PREMATURE SENESCENCE**

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Introduction : The cellular aging model using human diploid fibroblasts (HDFs) has become a classical experimental model, since HDFs lose their ability to proliferate and become senescent. In addition, HDFs exhibit the stress-induced premature senescence (SIPS) phenotype by oxidative stress. In the present study, after the induction of SIPS by treatment with H<sub>2</sub>O<sub>2</sub>, the anti-aging effect of black rice was investigated. Methods and materials: After induction of SIPS in WI-38 cells by treatment of H<sub>2</sub>O<sub>2</sub> for 60 min, cell viability and lipid peroxidation were determined. Furthermore, cellular life span was calculated by established method, last PDL+log2(collected cell number/seeded cell number). Results : H<sub>2</sub>O<sub>2</sub>-treated WI-38 cells showed the decrease in cell viability and elevation in lipid peroxidation, indicating induction of SIPS. However, the both of pre- and post-treatment of methanol extract from black rice to WI-38 cells under SIPS exerted dose-dependent elevation in cell viability and inhibition in lipid peroxidation. In addition, black rice extract showed the extension of cellular life span. Conclusion : The present results

indicate that black rice delay cellular aging process through the attenuation of oxidative stress, suggesting the promising anti-aging agent.

**PB7 137 INCIDENCE OF UNDIAGNOSED SKIN CANCERS IN GERIATRIC HOSPITAL**

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Incidence of undiagnosed skin cancers in a geriatric hospital. J. Fontaine, S. Mielczarek, S. Meaume, P. Senet Université Pierre et Marie Curie Paris VI, France Service de gerontology, AP-HP, Hôpital Charles Foix, pavillon l'Orbe, 7, avenue de la République, 94205 Ivry sur Seine cedex, France. Background. The incidence of nonmelanoma skin cancers is closely correlated with age. The aim of this prospective study was to evaluate the prevalence of undiagnosed skin cancers among patients hospitalized in rehabilitation and long term care units in a geriatric hospital. Patients and methods. All the patients, resident in four rehabilitation and long-term care units and for whom no dermatological advice had been given, were systematically examined by a dermatologist. Clinical data included patient age at the time of the study, gender, relevant historical information, skin phototype and description of the cutaneous lesions. Biopsies were performed for all lesions of suspicious appearance. Results. Three hundred and six patients (79.4 % women and 20.6 % men aged from 55 to 103 years) were included in the study. Among all the patients, 69.3 % were hospitalized for more than one year. Skin phototype was clear for 93.5 % of the patients. Thirty-two out of 306 patients (10.5%) presented 42 suspicious lesions and these were diagnosed by histological examination as 16 basal-cell carcinomas, seven squamous cell carcinomas and two in-situ melanomas. Skin cancers were localised on the head and neck in 80% of the cases. The prevalence of patients with skin cancers was 5.6% in this population. Conclusion. The prevalence of skin cancers among patients hospitalized in geriatric hospitals justifies improved training of geriatricians regarding early recognition and dermatological assessment of cutaneous tumors.

**PB7 138 GERIATRIC ASSESSMENT IN DIGESTIVE CANCER PATIENTS : CONTRIBUTION OF THE GERIATRICIAN**

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Objective. To evaluate the contribution of a complete geriatric assessment (C-GA) by a geriatrician after a mini geriatric assessment (m-GA), more easily and rapidly used by gastroenterologists, in elderly digestive cancer patients. Methods. In a pilot prospective study, we included 20 consecutive patients with digestive tract cancer aged 75 years or more. Patients were examined by a gastroenterologist with a m-GA composed of 8 simplified items : comorbidities, memory, mood, nutritional status, dependency, polymedication, creatinine, social context. Oncologic treatment was decided in multidisciplinary staff. Then, patients were examined by a geriatrician with a C-GA: comorbidities (CIRS-G), cognitive function (MMSE), mood (mini-GDS), nutritional status (MNA, albumin), walking (falls, stand on foot), dependency (ADL, IADL), evaluation of treatments, renal function, hemoglobin, social evaluation; the geriatrician then proposed adaptation in care. Results. Eleven men and 9 women were included, with a mean age of 80.5 years [min-max 75-87], presenting with cancer of colon-rectum (9), oesophagus (3), pancreas (3), biliary tract (3), small intestine (1) and anus (1). Eleven patients had metastasis. Evaluation by the m-GA by gastroenterologists resulted in a modified oncologic treatment in 10 patients, non-oncologic treatment in 2 patients. Eight patients received standard treatment. Further C-GA by a geriatrician resulted in modified non-oncologic treatment in 17 patients and social care in 8 patients. Conclusions. All patients presented with a geriatric problem (m-GA), some of them justifying a change in oncologic treatment by gastroenterologists. Geriatric assessment by a geriatrician resulted in no further change in oncologic treatment in this small sample of elderly cancer patients. However, the geriatrician's evaluation allowed to optimize care in non-oncologic and social care.

**PB7 139 NEUROENDOCRINE CANCER OF THE PROSTATE: REPORT OF ONE CASE AND REVIEW OF LITERATURE**

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Mr. C, 86 years old, was hospitalized for exploration of hematuria. His antecedents include moderate Alzheimer's disease, renal insufficiency (creatinine clearance 12 mL/mn), hypertension, coronary stent and prostate surgery 18 years ago (adenomyoma). The explorations found: An anemia at 8 g/dL with EPO deficiency and bleeding. • A prostatic mass with normal cystoscopy. • The scanner showed a prostatic mass with invasion of the rectal • anterior wall and the bladder's floor and an ureteric compression with left ureterohydronephrosis. PSA were normal. • After discussion with urologists, neuroendocrine cancer is suspected. This was confirmed by a minimal increase of NSE and most of chromogranin A. The patient had a blood transfusion and hormonal therapy was initiated (androgen privation by LHRH agonists). Neuroendocrine cells originally exist in the normal prostate acini and duct, regulating prostatic growth, differentiation and secretion. Neuroendocrine cancers of the prostate are very rare (2.1% of prostatic cancers)

and are often diagnosed at the stage of complications. They are insensitive to hormonotherapy, however their care usually includes LHRH agonists trying to curb the cancer evolution. Surgery is difficult because the diagnosis is often at the stage of local complications. Other treatments are radiation therapy and chemotherapy with platinum. As always with uncommon diseases, it's difficult to do prospective studies for treatment. Evolution is often unfavorable quickly.

**PB7 140 IMPACT ON AUTONOMY OF BIWEEKLY DOCETAXEL AS FIRST-LINE CHEMOTHERAPY REGIMEN IN ELDERLY WITH METASTATIC BREAST CANCER (MBC)**

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Introduction: Besides quality of life and symptom palliation, autonomy appears as a major factor to consider in elderly patients undergoing chemotherapy. The main objective of this study dedicated to elderly women with first-line MBC was to evaluate the impact of a biweekly docetaxel regimen on autonomy, through the assessment of instrumental activities of daily living (IADL) during and after treatment. Methods: Women > or equal 70 years old with measurable MBC not previously treated by chemotherapy for metastases, together with standard satisfactory haematological, renal and liver functions and scores of autonomy (IADL or ADL&superiororequal;4) were scheduled to receive up to 6 monthly cycles of docetaxel biweekly (50 mg/m<sup>2</sup>). Results: Between 05/2005 and 07/2006, 27 patients were included. Baseline characteristics: median age 76 (70-86); PS 0/1 48%/52%; median IADL/ADL scores 8 (4.5-8)/6 (5.5-6); metastatic sites: bone 54%, lung 46%, liver 44%; prior adjuvant chemotherapy/hormone therapy 30%/48%. A total of 117 cycles were administered. Median treatment duration was 3 months. The trial was stopped prematurely due to 2 toxic deaths both related to pulmonary events: one lung interstitial toxicity attributed to docetaxel and one pneumocystis infection. Significant grade 3-4 toxicities observed on treatment (%cycles/%patients): neutropenia (14%/27%), nail changes (3%/12%), dyspnea (3%/12%), diarrhea (1%/4%), mucositis (1%/4%). Evaluation at 2 months showed 18%, 9% and 44% of patients with decrease of IADL, ADL, or geriatric depression scores. Among 26 evaluable patients, there were 4% complete responses, and 23% partial responses. Disease control rate was 41%, while 27% had progressive disease. Conclusion: Despite interesting disease control and low objective toxicities rates, especially on autonomy parameters, docetaxel biweekly is associated with unexpected fatal events precluding its routine use in elderly patients.

**PB7 141 FOLLOW-UP AND 6-MONTHS OUTCOME OF ELDERLY CANCER PATIENTS AFTER INITIAL ONCOGERIATRIC ASSESSMENT.**

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Objectives. To study the follow-up and 6-months outcome of elderly cancer patients (>70y) after a Comprehensive Geriatric Assessment (CGA). Patients and method. Retrospective and descriptive study of the evolution and the 6-months outcome during the treatment of 104 cancer patients after the initial CGA. Results. The average age was 80.2±5.4 years. Women outnumbered men (55.8 vs. 44.2%). The patients had gastrointestinal (78.9%), breast (9.6%) or other cancers (9.6%), most often with lymphatic node (42.3%) and/or metastatic (30.8%) development. Most of the patients (87.5%) belonged to Group III of Balducci-Extermann's classification: "frail elderly". The CGA influenced the initial cancer therapy in 36.5% of cases, including decisions of surgery, chemotherapy, hormonotherapy and therapeutic abstention. Surgical treatment (22.1%) was always performed and was accompanied by a post-operative complication in 37% of cases. Initially proposed chemotherapy determined (45.2%) was not feasible in 5.8% of cases. Usually done in day hospital (67.6%), the chemotherapy protocol was amended or terminated in 28.2% and 15.4% of cases respectively, mainly because of its toxicity (91.7%). Radiotherapy (14.4%) and hormonotherapy (3.8%) were always possible, without modification or discontinuation of treatment protocol. During the 6-months long follow-up, 47 patients (45.2%) required at least one hospitalization in a short stay unit and 26 patients (25%) at least one hospitalization in a functional re-education unit, outside the strict oncologic treatment framework, mainly due to the cancer evolution and/or to the loss of autonomy. The mortality rate of the overall population was 30.8% at 6 months. Conclusion. The majority of patients belonged to the Balducci-Extermann's Group III "frail elderly". In our study, only chemotherapy presented safety problems requiring

adjustment or discontinuation of treatment in half of cases. Finally, half of the patients required one hospitalization at least for a reason other than cancer treatment.

**PB7 142 A FRENCH SCREENING TOOL TO IDENTIFY CANCER PATIENTS NEEDING A COMPREHENSIVE GERIATRIC ASSESSMENT**

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Introduction: The number of cancers in the elderly is increasing. A preliminary screening step before Comprehensive Geriatric Assessment (CGA) could help to identify patients who really need CGA. To screen patients over 75 years with a first diagnosis of cancer, we designed a simple tool for oncologists (called FOG) assessing 5 risks of frailty: functional status, nutritional status, depression, cognition and comorbidity. We assumed that patients with 1 to 3 risks were concerned by CGA. We aimed to measure the accuracy of this tool compared to CGA. Methods and patients: All cancer patients diagnosed in the university hospital of Poitiers (France) who agreed to participate and signed the informed consent were included. Oncologists completed the FOG during the first consultation. Then, the gerontologist performed CGA blinded to the results of the tool. In 2007, patients were randomized for CGA. In 2008, all patients had CGA which was presented as an integrated step for the management of their cancer. Sensitivity and specificity of the FOG were measured. Results: From the 514 eligible patients, 275 patients were included. The gerontologist performed CGA in 160 (58%) patients (46 in 2007), while 115 (42%) patients (83 in 2007) did not come to the appointment or declined. Patients who participated in the study were younger ( $p=0.006$ ), had a lower risk of impairment of functional status ( $p=0.04$ ) and a lower risk of depression ( $p=0.05$ ) than patients who declined. Finally, 116 (74%) out of 156 patients had 1 to 3 risks identified by the CGA. Sensitivity was 86% [80%-92%] and specificity 45% [30%-60%]. Conclusions: In our study, 3 out of 4 patients really needed CGA. The FOG identified 85% of the patients needing CGA and could be helpful for oncologists. When CGA is presented as an integrated step of the management of cancer, its acceptability is better.

**PB7 143 MULTIDISCIPLINARY INTERVENTION AT A PALLIATIVE CARE UNIT. THE ROLE OF THE FAMILY.**

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Death and disease are both experiences that make families face one of the biggest challenges in life. This essay deals with the case of a family crisis treated with a multidisciplinary intervention that led to a healthy psychosocial adaptation. The patient is a 75 year-old male, married and father to five children. Medical history: Diagnosis: Bladder cancer (1-2007), with prostatic spreading and lung metastasis. The patient underwent chemotherapy treatment till May 2008 and had a bilateral nephrostomy (6-2008) and colostomy (7-2008). Because of clinic and radiological progression, active treatment is discarded. Current state: After 48 hours displaying psychomotor agitation, heteroaggressive and inappropriate behavior, he comes to the Emergency Room Service (ER) (28-7-2008) to have the nephrostomies checked due to malfunction and also because of his behavioural disorder. Emergency (ER) intervention: The patient refuses any diagnostic or therapeutic intervention. A brain CT-Scan is performed to discard the existence of brain metastasis: no significant findings (the radiologists recommend to perform a MNR). At ER, the assessment of the palliative care team is requested, and after this, we decided to ask for a psychiatric intervention: delusional ideas of prejudice related to his family. Diagnosis at ER: Acute confusional state/delirium. In these circumstances, being unable to make any decision, the psychiatrist promoted an involuntary admission at the Acute Palliative Care Unit. Palliative care unit intervention: The goals at admission were as follows: to discard brain metastasis, have a differential diagnosis, improve family relations as well as patient's self-esteem, and have him back home at hospital discharge. A multidisciplinary intervention took place while the patient was staying at hospital. Both the patient and his family were treated using cognitive-behavioural therapy. Conclusions: The multidisciplinary intervention was successful because not only the patient was satisfied but also the therapeutic goals agreed by both parts were achieved

**PB7 144 TUMORS OF THE PANCREATIC AREA IN THE ELDERLY: A COHORT STUDY OF 36 PATIENTS**

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Aim of study Describe the diagnosis and treatment-decision process in patients aged 70 years and older with pancreatic tumor within the Geriatric Oncology Program of Lyon (PROLOG) Methods Older patients with a diagnosis of pancreatic mass underwent a multidimensional geriatric assessment (MGA). Patient cases were then discussed in oncogeriatric collaboration meetings in order to define individualized treatment and

management plan. Results Thirty six pts (26 women) aged 70 years and older were included in the cohort study (mean age: 78.6, 70-88). Most pts had adequate functional status (ADL = 6/6; 25 pts; IADL = 8/8; 22 pts); moderate comorbidity (mean CIRS-G score: 9.25; 24 pts with Grade 3 or 4 Comorbidity); adequate cognitive function (MMSE score  $\geq 24$ ; 27 pts) whereas malnutrition was common (MNA <23: 29 pts) and polypharmacy ( $\geq 5$  medications) was reported in 11 pts. Depressive symptoms were detected in 19 pts; most pts had correct physical capacities. The tumor site was mainly pancreas (33), 5 and 3 of them were endocrine tumors and ampulloma of Vater's papilla respectively. Pathologic diagnosis was not confirmed in 5 pts. At diagnosis, pts had lost weight (17) or jaundice (9), pain (9) or glucose metabolism disorders. Based on oncogeriatric collaboration meeting conclusions, treatment recommendations were chemotherapy (17), pancreatic surgery (14), biliary tract prosthesis (8) and also supportive care (nutritional support, psychotherapy, palliative care). Conclusion Prognostic of tumors of the pancreatic area depends on the pathological diagnosis. Older pts with pancreatic tumors require both a comprehensive oncological review and a multidimensional geriatric assessment. Then, individualized effective care plans can be proposed based on oncogeriatric meeting recommendations.

**PB7 145 INTEREST OF STROKE UNITS FOR THE ELDERLY PATIENTS.**

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Introduction Stroke units have demonstrated their interest in the early management of strokes in terms of survival and reduction of loss of autonomy. However, few studies have examined the benefit of such units for very old subjects. The purpose of this study was to compare the evolution of elderly patients admitted to geriatric sub-acute care after a stroke according as they come from a stroke unit or not. Methods and materials We analysed retrospectively the files of 169 patients admitted in our sub acute care unit after a stroke from January 2006 to June 2008. We compared the group coming from stroke units (SU) to the one coming from other structures (OS). Results Ninety seven patients came from SU and 112 from OS. There were no significant differences in terms of age, sex ratio, mechanism of the stroke and mean delay from the stroke to the arrival in sub-acute care unit. The average NIHSS at admission was also not different but was missing in 97% in OS versus 53% in SU. The nutritional status was significantly better in patients coming from SU (albumin was  $33.5 \pm 3$  vs  $31.8 \pm 5$ ;  $p<0.008$  and pre-albumin was  $0.2 \pm 0.05$  vs  $0.17 \pm 0.07$ ;  $p<0.001$ ). The number of patients returning home, transferred in institution or dying in the first months was similar according to the origin. Otherwise, physical autonomy at the end of the stay in sub acute care unit was better for patients coming from SU than for those coming from OS (41% vs 57%;  $p<0.05$ ). Conclusion If stroke units seem to be important for the short term prognosis of elderly subjects, we must now demonstrate that appropriate care for them in sub-acute care units can optimize it.

**PB7 146 DIFFUSE SYSTEMIC SCLEROSIS IN ELDERLY: ABOUT 5 CASES**

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Objective. Systemic sclerosis is a rare, multisystemic, autoimmune disease, affecting small arteries, micro vessels and fibroblasts resulting in vascular obliteration, collagen accumulation and fibrosis of skin and internal organs. The peak incidence is found between 45 and 64 years of age. Few data are available in older patients. Methods. Descriptive study of 5 cases of diffuse systemic sclerosis in elderly, in or out-patients, in geriatric and internal medicine department of a French university hospital. Results. Five patients (4 w, 1 m; 73-88y when referred to us) who were aged 63 to 87 years old at diagnosis. First symptoms occurred from 3 to 58 years before diagnosis, for 4 patients it was Raynaud's phenomenon. Four patients had prognostic visceral lesion at diagnosis: 2 had pulmonary interstitial fibrosis (PIF) and 2 had both pulmonary hypertension (PH) and PIF. Specific anti-nuclear antibodies were found in 4 patients: anti centromere (n=3 at the threshold of 1/1280) and anti Scl 70 (n=1). Recommended scheduled specific surveillance tests were rarely done. Multidisciplinary care was provided, with 3 to 6 specialized practitioners taking care of each patient. They were all treated with calcium channel blockers, 2 were treated by antagonist receptor of endothelin 1 and one was treated with cyclophosphamide for PIF. One patient died within one month following diagnosis of the PIF and HP. Another died 4 years after the diagnosis of PF and 3 years after PH diagnosis. Conclusion. In those 5 cases, diagnosis was usually made 25 years after the first symptoms and readily presented severe visceral lesions. It seems important to make an early diagnosis of systemic sclerosis because multidisciplinary care can also improve quality of life in elderly patients.

**PB7 147 THE EFFECT OF A SUPPORTIVE EDUCATIONAL PROGRAM ON KNOWLEDGE, SELF-CARE BEHAVIOR, AND THE LEVEL OF SEVERITY OF HEART FAILURE**

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**Introduction** The research aimed to investigate the effectiveness of a supportive educational program on knowledge, self-care behavior, and the level of severity of heart failure based on the self-care theory proposed by Orem. **Methods and materials** The subjects were 60 patients with heart failure who had been admitted to hospital. They were selected by purposive sampling. Of these, 30 were assigned into the experimental group, and the other 30 were assigned into the control group. The former received a supportive educational program together with routine nursing care, whereas the latter received only routine nursing care. Data were collected from October, 2006 to August, 2007. The instruments used included a questionnaire concerning knowledge about the prevention of water and sodium retention; a questionnaire regarding self-care behavior; and a questionnaire concerning the level of severity of heart failure. Data were analyzed in terms of descriptive statistics and inferential statistics. **Results** The findings of the study showed that, after participating in the supportive educational program, the experimental subjects' knowledge and self-care behavior to prevent water and sodium retention increased with a statistical significance at the .001 level. In addition, after participating in the supportive educational program the experimental subjects mean scores of knowledge and self-care behavior were higher than those of the control subjects with statistical significance at the .001 level. However, the level of severity of heart failure within group and between groups of subjects were not statistically significantly different at the .05 level. **Conclusion** The supportive educational program could be used to promote knowledge and self-care behavior of patients with heart failure, so healthcare professionals should implement the program to offer medical and nursing care to patients with heart failure to help them maintain health and prevent possible complications to ensure quality of life.

#### PB7 148 ORTHOSTATIC HYPOTENSION IN ELDERLY PATIENTS IN EMERGENCY DEPARTMENT

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**Introduction** The aim of our study was to analyse its frequency, significance and management of orthostatic hypotension (OH) in emergency elderly patients. **Methods and materials** During 14 consecutive days, we included elderly patients presenting in our emergency department (ED) for medical and surgical reasons. At admission and before any medical management, an orthostatic test was performed: OH diagnosis was considered in presence of systolic blood pressure (SBP) fall  $\geq$  20 mmHg and/or diastolic blood pressure (DBP)  $\geq$  10 mmHg one minute after standing. If OH was proven, a compression knee sock was immediately applied, and OH was controlled after 30 minutes. We followed patients by a phone call at one year after ED admission. Results Orthostatic test was performed in 119/206 consecutive patients  $>$  75 years old admitted in our ED, and was not feasible in 87/206 patients, mainly for fracture suspicion. OH was noted in 37/119 (31%) patients. Patients with OH presented with lower ADL (4.9 vs 5.5, p=.0194), more previous diseases (3.9 vs 3.0, p=.0188), congestive heart failure (16 vs 4%, p=.0252), fall history (49 vs 36%, p=.0297), and symptoms during OH test (33 vs 5%, p=.0003). Socks were applied in 25/37 (68%) patients with OH, and OH was still noted in 9/25 (36%) patients in OH test 30 min. despite socks, with only 5% remaining orthostatic symptoms. At one year, preliminary results showed that patients with OH had a poor socks compliance (19%), with poor outcome: fracture (6%), fall recurrence (25%), house caregivers (73%), hospitalization (81%) and death (20%). **Conclusion** Orthostatic hypotension is a frequent condition in emergency elderly patients, and is associated with a poor outcome at one year. Emergency socks could reduce immediate OH, but its long-term compliance is poor.

#### PB7 149 OPTIMISING STROKE PREVENTION IN THE ELDERLY WITH AF VIA A COMPUTERISED ANTITHROMBOTIC RISK ASSESSMENT TOOL (CARAT)

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**Introduction:** As the population ages, the incidence of stroke due to Atrial Fibrillation (AF) is rapidly increasing. Prevention strategies rely on the use of antithrombotics (warfarin, aspirin). However, these agents present many medication safety considerations including the challenges of risk/benefit assessment, leading to their under-utilisation in practice. This study aimed to develop, and then evaluate the utility and feasibility of, a novel computerised antithrombotic risk assessment tool (CARAT) to aid decision-making regarding appropriate therapy in elderly patients. **Methods:** Development of CARAT was based on algorithms which facilitate systematic patient review by assessing various factors impacting on treatment selection; the inputs were adapted and then computerised. The tool was evaluated and modified through an iterative process, canvassing the perspectives of a multidisciplinary clinical panel on its usability and practicality. To evaluate the tool, hospital-based clinicians pre-tested the CARAT using hypothetical vignettes; a purpose-designed structured questionnaire was administered to gain feedback on the usability of CARAT, including its relevance, currency and evidence-base. **Results:** A final model of the CARAT was developed and evaluated. Overall, 94% of surveyed clinicians (clinical

pharmacologists, cardiologists, haematologists, geriatricians; n=27 yielding 216 responses) were satisfied with CARAT's format. Most (72%) clinician responses agreed with CARAT recommendations for the patient cases; over two-thirds agreed with its estimate of stroke and bleeding risk. However, geriatricians were 3.5 times more likely to disagree with CARAT recommendations than cardiologists, particularly in specific cases (eg high falls risk). Overall, 63% responded that CARAT was at least "somewhat useful" for their clinical practice, with 22% indicating it was 'very useful'. **Conclusion:** The CARAT may efficiently support clinicians in decision-making regarding appropriate antithrombotic therapy in elderly patients with AF. Its full impact on clinician prescribing and patient outcomes is yet to evaluated.

#### PB7 150 LOW PERCEPTION OF DYSPNOEA IN ELDERLY PATIENTS

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Dyspnoea is a subjective difficulty or distress in breathing that consists of qualitatively distinct sensations. Older people are less sensitive to added respiratory loads and their ventilatory response to hypercapnia and hypoxia is reduced by 50% compared with younger people. To our knowledge, there have been few studies on the perception of dyspnoea in the elderly. Some studies have reported that dyspnoea is less intense with age, during acute bronchoconstriction, and others have observed that patients  $>$  80-years of age are at greater risk of not receiving inhaled steroid therapy. These studies suggest that there could be a link between a decrease in perception of dyspnoea and under-use of effective therapy. Elderly patients are characterized by their polypharmacy and many underlying conditions can result in dyspnoea including cardiac failure, chronic obstructive pulmonary disease (COPD) and anaemia. Some studies have reported a 'language' of breathlessness which is able to differentiate people with and without a prior diagnosis of COPD. The pathological conditions characterized by multiple descriptive words suggest that dyspnoea can be described in more than one way. The subjective and unmeasurable nature of breathlessness can make clinical evaluation difficult. To the best of our knowledge, no verbal rating scale has been validated for acute dyspnoea. However, some scales like the numerical rating scale, modified Borg scale, or visual analogue scale (VAS) have been validated in chronic dyspnoea. We have set up a prospective comparative study in an emergency unit to determine the effect of age on the perception of dyspnoea. We also aim to compare and validate three verbal rating scales (numerical verbal scale, modified Borg scale and VAS), and determine the relationship between qualitatively distinct descriptors of breathlessness and causal pathology.

#### PB7 151 PREVALENCE OF PULMONARY ARTERIAL HYPERTENSION IN ELDERLY PATIENTS : AN ECHOCARDIOGRAPHY BASED STUDY

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**INTRODUCTION:** Pulmonary arterial hypertension (PAH) is a life threatening disease associated with a very bad outcome when PAP is higher than 55 mmHg. The PAH is considered as a rare disease whatever aetiology. However, this pathology seems underdiagnosed in elderly patient; no data is available to consider the prevalence of the disease. The aim of this study was to investigate the prevalence of pulmonary hypertension in hospitalized elderly patients who had a transthoracic echocardiography. **METHOD:** This is a retrospective study; data from May 2005 to April 2007 in all patients who were 80 years old and over, and had a measure of systolic pulmonary arterial pressure (SPAP) by a transthoracic echocardiography were analyzed. Patients were classified in 2 groups: group 1 with a PAH, defined by SPAP higher than 45 mm Hg and group 2 without PAH. We analyse the potential relationship between PAH and age, gender, presence of atrial fibrillation, and left ventricular function dysfunction measured by echocardiography. **RESULTS:** Out of 1083 patients included, PAH was present in 32.4%, and 11% have a severe PAH ( $>$  60mmHg). There was no difference according to age and gender (33.19% male 31.82% female). Nearly 30% with a normal left ventricular function (>50%) exhibits a PAH (n= 323). There was a positive correlation between presence of atrial fibrillation and PAH. **CONCLUSION:** This study demonstrates in a selective elderly group a very high prevalence of PAH. A large part of PAH is not explained by Left ventricular dysfunction. Further studies are necessary to analyze the aetiology and the consequences of PAH in elderly population.

#### PB7 152 ELEVATED BRACHIAL-ANKLE PULSE WAVE VELOCITY PREDICTS CARDIOVASCULAR MORTALITY IN THE COMMUNITY-DWELLING ELDERLY

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Carotid-femoral pulse wave velocity (cfPWV) is known to be a marker of arterial stiffness and a strong predictor of cardiovascular diseases(CVD). Recently developed brachial-ankle

PWV (baPWV), measured by form/ABI (Omron-Colin Com.), showed a good correlation with cfPWV and related to aging, systolic blood pressure and other cardiovascular risk factors. The purpose of this study is to clarify whether increased baPWV is predictive of total and cardiovascular mortality in the community-dwelling elderly Methods and materials : We recruited 414 older adults 65years or over (mean, 77 years, men:female, 148:266) in the Japanese rural community By the median of baPWV level, we divided them into two groups: the low baPWV group (men, < 1862 cm / sec; female, < 1932 cm / sec; n=207), the high baPWV group (men, > 1862 cm / sec; female, > 1932 cm / sec; n=207). Results: (1) Within three years, 31 deaths were observed. High baPWV level was significantly associated with the increase in three-year total mortality after adjustment for age, gender, and anti-hypertensive medications (OR=2.58, 95%CI.=1.13-5.87, p=0.024). (2) CV deaths was observed in 13 subjects and High baPWV level was significantly associated with the increase of cardiovascular mortality.(OR=9.39, 95%CI.=1.20-73.67, p=0.033 ). Conclusion: Elevated baPWV is considered to be a independent predictor of total and CV mortality in the elderly.

**PB7 153 CABG IN THE ELDERLY: EFFECT OF AGE ON 30-DAY MORTALITY AND HOSPITAL PERFORMANCE EVALUATION**

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Introduction- The demand for CABG in elderly patients has been increasing. Aim of this analysis is to evaluate the presence of "effect modification" by age in hospital performance evaluation. Methods- National HDRs were used. The study population consisted of all adult patients undergoing isolated CABG during 2003-2005 in Italy. Only hospitals performing more than 250 interventions during the study period were analyzed. Thirty-day in-hospital mortality was considered as endpoint. Patients were stratified by age: <75, >=75 years. Comorbidities recorded in previous and current hospital admissions were used to define patients' health status and to build the adjustment model. A group of 4 hospitals with the lowest mortality rates were used as reference category. An interaction term (age\*hospital) was introduced in the model to test the presence of "effect modification". Adjusted ORs, stratified by age, were estimated when the interaction term resulted statistically significant (p<0.10). Results- The study population consisted of 7173 patients (age>=75=17.5%). A total of 85 hospitals were analyzed. Patients >=75 ranged between 7.5 and 29.8%. Thirty-day in-hospital mortality was 2.64% (2.05 and 5.39 for age <75 and >=75 respectively). Nine hospitals showed a significant "effect modification" by age. In all of theme ORs for patients >=75 were higher than those for patients <75. In two hospitals, the overall mortality rate was comparable to that of the reference category but a strong significant excess risk for patients >=75 was found (ORs = 4.1 and 3.5; p<0.01). Conclusion- Thirty-day in-hospital adjusted mortality rates resulted higher in elderly than in young patients. An effect modification by age was found. These findings suggest that in elderly patients, besides preoperative comorbidities, postoperative complications could increase in-hospital mortality and affect hospitals performance.

**PB7 154 A STROKE STUDY OF AN URBAN AREA OF IRAN: RISK FACTORS,**

**LENGTH OF STAY, CASE FATALITY AND DISCHARGE DESTINATION**

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Background: The Iranian population is aging rapidly which causes huge medical concern for health care of this population. This trend will lead to a rise in stroke incidence in the future, so stroke profile and characteristics could help us in developing health policies for our population. Material and method: a Cross sectional, multihospital-based study performed on all consecutively discharged and diagnosed, ischemic stroke patients in the city of Qom, Iran between March 2006 and September 2007. Findings: 953 patients, 48.9% men and 51.1% women were included. The mean age was  $67.96 \pm 13.82$  years. 64.11% patients were >65 years and 4.93% was <45 years. Hypertension was found in 64% of patients, followed by Diabetes mellitus (36%), Heart disease (HD) (34%), hypercholesterolemia (32%), and smoking (20%). Median Barthel Index score was 85 with an inter-quartile range from 55 to 100. It was significantly associated with the number of risk factors ( $p = 0.046$ ). The average length of stay (LOS) was 7.71 days (95% CI, 7.18-8.23). Females had a significantly longer LOS compared to males (8.40 vs. 6.98,  $p=0.0075$ ) and Patients with HD had a significantly longer LOS (8.88 days, 95% CI, 7.79-9.97,  $p=0.004$ ). Overall one month fatality rate was 15.3%. More than 98% of patients went home after acute phase discharge and only 2% went nursing care. Discussion and Conclusion: HTN & D.M is more frequent than average global findings, acute phase LOS was similar to other studies, one month case fatality was higher than European countries but less than developing countries. The most interesting difference comparing developed countries is the destination which should be addressed. We strongly recommend for establishing a stroke registry, primary prevention and promoting rehab.

**PB7 155 ANTICOAGULATED PATIENTS OLDER THAN 65 AT AN EMERGENCY DEPARTMENT.**

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Introduction: Different cardiovascular pathologies such as atrial fibrillation and venous thromboembolic disease are very common on geriatric population. Oral anticoagulants or antiplatelets are the two most frequent possibilities of choice. Patient older than 65 that are taking acenocoumarol sometimes need urgent care. Methods and materials: We included all the patient that were admitted at an emergency department of an university hospital (Mostoles, Madrid, Spain) in a period of 3 months (january-march 2008) that were receiving oral anticoagulants and were older than 65 years. We collected several items including: sex, gender, mental and dependence state, cause of urgent care, bleeding, type of bleeding, INR value and treatment received at emergency. Results: 169 patient were included in this study. 55% were female, mean age: 77.5 years. Most of them were anticoagulated with oral anticoagulations (Acenocoumarol) because of atrial fibrillation.

The main cause of consulting was disnea related to heart failure. 18 (10,6%) of these were attended because of bleeding (16 were minor bleeding and 2 were mayor), most frequent if the patient had developed a previous bleeding related to anticoagulation therapy. Most patients had an INR level at emergency among therapeutic range (2-3.5). There were no statistically differences between bleeding o not bleeding regarding INR value at emergency, neither age, sex, mental state or taking antiplatelets. Conclusions: 1-Most patients older than 65 years old that take acenocumarol and need emergency care is not related to anticoagulations therapy. 2-The possibility and intensity of bleeding is low. 3-Patients that have developed bleeding related to oral anticoagulant therapy should have an "special" control on INR values. 4-Despite of urgent diseases, most of them keep on therapeutic INR values.

**PB7 156 55- PON1 (PARAOXONASE 1) POLYMORPHISM AND RISK OF ISCHEMIC STROKE (IS) IN THE ELDERLY.**

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Introduction: PON1 is an High Density Lipoproteins (HDL) associated esterase with anti-atherosclerotic properties related to its antioxidant effect on Low Density Lipoproteins (LDL) and its hydrolysis of lactones. Among risk factors (RF) of ischemic stroke (IS), lipid oxidative stress could play a major role in the development of cerebral atherosclerosis and vascular dementia. Our group showed a relationship between PON1 serum activity and IS in the elderly. This study explored the relationship between IS and PON1 genetic polymorphism (192Q/R, 55M/L, promoters: 107C/T, 824G/A). Methods: PON1 polymorphisms were identified by PCR-SSP in 87 subjects suffering from IS (58 men (M) and 29 women (W), mean age:  $82.6 \pm 7.2$  from 66 to 97 years). PON1 polymorphisms distributions of IS group were then compared to 103 healthy subjects (HS) (48 M and 55 W, mean age:  $73.1 \pm 4.7$  from 66 to 88 years). Student's t test compared mean age and Chi2 test compared sex and PON1 polymorphisms distributions between IS and HS. Results: IS were significantly older than HS ( $p < 0.05$ ), especially in 55L-PON1 gene +. In HS group, W numbers were higher than M ( $p < 0.05$ ). 55M-PON1 was overexpressed in IS ( $p = 0.0006$ ) and a positive relationship between 55M/L-PON1 and 107C/C promoter ( $p = 0.01$ ), between 55M-PON1 and 824A promoter ( $p < 0.05$ ) and between 55M-PON1 and 192R-PON1 ( $p < 0.05$ ) were found. Conclusions: This study focused on the overexpression of the 55M-PON1 polymorphism in the elderly with IS whereas in other younger populations 192R-PON1 polymorphism was overexpressed. These results should be confirmed by sex and age matching.

**PB7 157 MANAGEMENT OF ELDERLY PATIENTS WITH HEART FAILURE WITH PRESERVED EJECTION FRACTION. AN OUTPATIENT FRENCH SURVEY.**

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Background: Heart failure with preserved ejection fraction (HFPEF) is very common in the elderly. These patients are often hospitalized but few data are available in a population of outpatients. Objectives: To analyze the clinical characteristics and the management of a large population of outpatients with HFPEF. Methods: A prospective observational study was conducted in French cardiologists who had to include outpatients with stable HFPEF. Results: We included 1168 patients, mean age was  $76 \pm 10$  years and 51% were women. The main cardiovascular diseases were atrial fibrillation (42%), coronary heart disease (34%), peripheral arterial disease (15%) and stroke (10%). A majority of patients had multiple cardiovascular risk factors (66%), particularly hypertension (81%) and diabetes

mellitus (29%). Similarly, these patients had several non-cardiovascular co-morbidities (56%), mainly neuro-psychiatric disorders (23%), pulmonary diseases (19%), renal failure (17%) and walking disorders (11%). Most patients had several HF decompensations (2 episodes in 52% of cases, ≥ 3 episodes in 18%). Blood pressure was  $144\pm19/82\pm10$  mmHg, heart rate was  $78\pm17$  beats/min, creatinine was  $12.2\pm4.1$  mg/l. Median BNP was 450 pg/ml. Mean ejection fraction was  $60\pm9$  %. Treatment included diuretics (88%), renin-angiotensin blockers (87%), betablockers (60%), calcium-antagonists (25%), aldosterone-blockers (18%). Patients also received several non-cardiological drugs such as antidiabetic agents (26%), psychotropic drugs (16%) and gastro-intestinal agents (17%). Conclusions: This observational study of a large population of outpatients with HFPEF included elderly patients, with more co-morbidities and cardiovascular diseases than subjects usually included in therapeutic trials. These heterogeneities could probably explain the difficulty to demonstrate the efficacy of a single pharmacological agent. A multidisciplinary approach will probably be required in order to improve the management. Data on 6 months mortality will be available for the presentation in July 2009.

**PB7 158 ASSOCIATION OF AGE AND DIFFERING ANTHROPOMETRIC PARAMETERS WITH SEVERITY OF CORONARY ARTERY DISEASE**

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Introduction: Once old age and overweight/obesity are associated with coronary artery disease (CAD), the aim of this study is to analize the association of age and differing anthropometric parameters with severity of coronary artery disease in patients undergoing coronary Angiography. Methods and materials: In 97 patients undergoing coronary angiography we assessed the body mass index (BMI), waist circumference (WC), waist-to-hip ratio (WHR – hip circumference was measured at the widest circumference of the buttocks at the area of the greater trochanters), abdominal circumference (AC - measured on a horizontal plane 1 cm above the iliac crest), abdominal-to-hip ratio (AHP) and neck circumference (NC-measured at mid-neck height, between mid-cervical spine and mid-anterior neck just below laryngeal prominence). The severity of coronary artery disease was determinate throught the Friesinger index (FI - the index range from 0 to 15; each of the three main coronary arteries is scored separately from zero – no CAD - to five – high severe). Results: The mean age of patients was  $61.6 \pm 11.4$  and was associate with CAD ( $r=0.254$ ;  $p=0.005$ ). Eighty-one patients (83%) had CAD ( $FI >= 1$ ). Just WHR showed association with CAD ( $0.92 \pm 0.83$  vs  $0.84 \pm 0.12$ ;  $p=0.004$ ), and a moderated correlation with FI showed ( $r=0.544$ ;  $p<0.001$ ). Conclusion: We found an association between age and WHR with CAD severity. So we recommend the use of this parameter to prevent CAD in primary and secondary care attention sets.

**PB7 159 PROBLEMS WITH ASTHMA TREATMENT IN ELDERLY PATIENTS.**

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Nonadherence with asthma therapy is common and may contribute to poor clinical outcomes. Elderly patients with bronchial asthma are a specific group with particular needs. These must be addressed in order to provide appropriate asthma care. Older patients often have problems with compliance and self-management due to age-specific factors. Older patients with asthma are often misdiagnosed, due to an impaired patient perception of symptom severity and not sufficient communication skills. Often the quality of life is impaired by asthma. Improvement in self management skills in a special way may enhance the health status of elderly patients with asthma. The aim of the study was assessment of patients adherence to prescribed treatment of asthma. Methods: 456 patients 65-93 yrs old with diagnosed chronic asthma (medical history, Uniper questionnaire, examinations, positive referable bronchial test) were included to prospective observations of treatment adherence during 12 months by the use patients diary. There were monitoring proper using of inhaled therapy and concomitant drugs. Results: Adherence to inhaled corticosteroids use was about 58%, LABA 63%, SABA 91%, antilecotriens 63% and theophyllinum 71% during 12 month observations. The total adherence to therapy of asthma was good when only one inhaler or one pill per day were prescribed. It was about 72%. However two drugs prescribed per day reduce the adherence to 57% and three to 43%. Powder inhalators were better compliance and technique of using than MDI. There were also problems among older patients with changed therapy themselves during asthma exacerbations. In this case the compliance reduced about 30%. Conclusion: We observed a great problems with adherence with asthma drugs among older patients. There were often underdiagnosed and undertreated asthma in elderly people.

**PB7 160 ARE THE RECOMMENDATIONS FOR TREATMENT OF ACUTE CORONARY SYNDROMES APPLIED FOR ELDERLY IN GERIATRIC CARE UNITS?**

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Introduction In 2007, the French National Authority for Health (HAS) published recommendations for treatment of acute coronary syndrome (ACS). The aim of this study was to evaluate the application of these recommendations among aged patients and the reasons of possible discrepancy. Methods Before beginning the study, all doctors were informed about these recommendations. We included 50 patients over 75 years (mean age 83 years, 60% patients  $\geq 85$  years) admitted in two geriatric care units with an ACS (which was defined by at least 2 criterias among 3: thoracic pain, increased troponin, alteration of segment ST on ECG). Cardiovascular risk factors, conditions of life, cognitive and nutritional status, autonomy, glomerular filtration rate, treatments at admission and at discharge were recorded. At discharge, the application of recommendations was evaluated. We looked for the reasons why recommendations were not applied. Results At admission, 40% of patients received a beta-blocking agent, 34% an angiotensin converting enzyme inhibitor (ACEI) or an angiotensin II antagonist (ARAII), 58% an antiplatelet drug and 26% a statin before ACS. After ACS, a beta-blocking agent was introduced in 68% of patients; the lack of prescription was justified for 8/12 patients. All patients received an antiplatelet drug. An ACEI/ARAII and a statin was started only in 57% and 32% of patients respectively. The lack of prescription of an ACEI/ARAII was justified for 7/21 patients. The lack of prescription of statin was justified by age and/or nutritional alteration for 24/28 patients. Conclusion The difficulty with elderly patients is to apply the recommendations about the treatment of ACS which takes into account results from studies performed with younger patients. The prescription of beta-blocking agents is now well applied in geriatric care units. Prescription of ACEI/ARAII and statin is missed or judged useless.

**PB7 161 OUTCOME OF ELDERLY PATIENTS WITH CARDIOGENIC PULMONARY EDEMA TREATED WITH NITRATES BOLUS IN EMERGENCY DEPARTMENT.**

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Previous data suggested a superior efficacy of high doses of nitrates by bolus compared to continuous perfusion in cardiogenic pulmonary edema (CPE), but data remain scarce. In an observational study, we compared outcome of emergency elderly patients with CPE receiving or not nitrates bolus. Material and methods Monocentric retrospective study in an emergency department (ED) during a one year period. Inclusion of patients  $\geq 75$  years old admitted with a final diagnosis of CPE based upon the medical according to an expert committee. Patients receiving 3 mg nitrates bolus were compared with patients without bolus. Results During the study, 215 patients ( $77 \pm 13$  years) were admitted for CPE (hypertension (63 %), diabetes mellitus (29%), previous heart failure (43%), dementia (5%)). 40/215 patients (19%) received nitrates bolus ("bolus patients"). There was no difference between groups (bolus patients vs no bolus) for past medical history, and ED treatment including oxygen (90 vs 93%, NS) and diuretics (93 vs 84%, NS). Bolus patients had higher systolic blood pressure (SBP  $> 160$  mmHg : 40 vs 12%,  $p<0.01$ ) and received more nitrates continuous perfusion (55 vs 14%,  $p<0.01$ ). There was no difference between groups for pH, PaCO<sub>2</sub>, PaO<sub>2</sub> or lactate dosage but troponine  $> 0.14$  µg/L was more frequent in bolus patients (28 vs 14%,  $p<0.01$ ). Outcome data revealed no differences for hypotension during and after treatment (mean SBP  $118 \pm 19$  vs  $115 \pm 19$  mmHg, NS), but rate of intensive care unit admission was higher in bolus patients (40 vs 17%,  $p<0.01$ ) despite no differences in hospital length of stay (10 vs 9 days, NS) or death (3 vs 11 %, NS). Conclusion Nitrates bolus appears to be well tolerated in elderly patients with CPE, but its efficacy compared to conventional treatment in comorbid elderly patients has to be precised.

**PB7 162 AGING AND LIPID LEVEL IN CORRELATION WITH CORONARY ARTERY DISEASE IN PATIENTS UNDERWENT ANGIOGRAPHY**

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Background and Objectives: Coronary artery atherosclerosis is one of the most prevalent cause of death worldwide. Increasing age is the most powerful risk factor for cardiovascular disease. One of the other major risk factor is dyslipidemia. The purpose of this study was to determine aging and lipid level effect on the coronary atherosclerosis in angiographically documented patients. Materials and Methods: Sixty patients that for clinical reasons had coronary angiography were randomly assigned into check for blood lipid (total cholesterol, triglyceride, HDL, LDL) level. Age of patients were divided into two groups: age. Coronary atherosclerosis lesion that reported by angiography noted as the number of vessel disease. Blood lipid level is as dependent variable. Results: Sixty patients (30 elder, the mean of age is about 67.6 yrs, mean of total cholesterol is 193.3, mean of triglyceride is 118.8, mean of HDL is 38.0, mean of LDL is 122.0) and (30 adult, mean of age about 51.7 yrs, mean of total cholesterol is 198.4, mean of triglyceride is 182.0, mean of HDL is 34.9, mean of LDL is 122.2). The result of coronary angiography noted (elder: 1 vessel disease in 3 pts., 2 vessels disease in 5 pts., 3 vessels disease in 22 pts. and adult: 1 vessel disease in 5 pts., 2 vessels disease in 11 pts., 3 vessels disease in 14 pts.) The significance interaction between age and the number of vessel disease with total cholesterol is ( $p=0.069$ ), with triglyceride is ( $p=0.592$ ), with HDL is ( $p=0.079$ ), and with LDL is ( $p=0.045$ ) Conclusion: There is a more significantly interaction between aging and

the number of vessel disease as a consequence of LDL level. Keywords: Elderly patients, Coronary atherosclerosis, Angiography, Cholesterol, Triglyceride, HDL, LDL

**PB7 163 EXERCISE AS TREATMENT FOR PERIPHERAL ARTERIAL DISEASE: A SYSTEMATIC REVIEW**

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**Introduction** The prevalence of peripheral arterial disease (PAD) rises to 15-20% in persons over the age of 70. The Trans-Atlantic Inter-Society Consensus working group currently recommends walking to a high level of claudication pain as an initial treatment for intermittent claudication (IC); however, there is a subset of older adults who are unwilling or unable to complete such exercise prescriptions due to claudication or the presence of comorbidities. Our aim was to therefore systematically review the evidence for the effectiveness of various forms of exercise, including parameters such as modality, volume, intensity, duration and supervision, on symptoms and quality of life in PAD. **Methods** A comprehensive literature search was performed using multiple databases for all randomized controlled trials (RCTs) of isolated exercise interventions for adults with IC. Hemodynamic, functional and subjective measures of disease severity were included as outcomes. Results Thirty-five trials met the eligibility criteria: 33 aerobic training; 2 lower body progressive resistance training (PRT). In total 2293 subjects were studied and of those almost 80% were male with few over the age of 75. Most modes and intensities of exercise significantly improved walking capacity, with additional comparative analysis revealing no significant difference between walking and some alternative aerobic exercise prescriptions. The relative effect size (ES) for PRT for initial walking capacity was 1.52(0.4 to 2.65) vs. a median ES of 1.61(0.4 to 2.65) for aerobic exercise. Conclusion We have identified 35 RCTs using exercise for treatment of IC. Modes of aerobic exercise other than walking are clearly beneficial for PAD symptoms and overall function. The benefits of PRT appear promising but little data are published on this modality, and additional work is required using PRT, particularly in older cohorts with multiple comorbidities and more severe PAD.

**PB7 164 CHOLESTEROL LEVELS AND USE OF SERUM LIPID MODIFYING AGENTS AMONG ELDERLY PERSONS**

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**Introduction:** Since 1990s the use of serum lipid modifying agents is increased rapidly, mostly among the oldest-old, peaking in the age group 70-79 years in both sexes. The aim of this study was to describe the changes in cholesterol levels and the use of statins (C10AA) among a random sample of elderly persons. **Material and methods:** This study is part of the population-based GeMS cohort study. The target population comprised all the inhabitants of the City of Kuopio, Finland aged 75 or more years on November 1, 2003. From this population, sample of 1000 persons was drawn. This study is based on information from all elderly persons examined in 2004 and 2006 with serum total (TC), low-density lipoprotein (LDL) and high-density lipoprotein (HDL) cholesterol measurement ( $n=622$ ). The basic demographic and clinical data were collected by interviews. To define concomitant diseases, we used the Social Insurance Institution Special Refund Registers. **Results:** The mean TC in 2004 was 5.0mmol/l, LDL 3.1mmol/l, and HDL 1.37mmol/l. In 2006, the levels were: 4.7mmol/l, 2.9mmol/l, and 1.39mmol/l. Of all, 29% ( $n=179$ ) used regularly statins in year 2004 and 34% ( $n=211$ ) in year 2006 ( $p<.001$ ). In 2004, 54% of elderly persons with coronary artery disease and 41% of elderly persons with diabetes used statins. In 2006 respective proportions were 57% and 50%. In 2004, 16% of the elderly persons without coronary artery disease, diabetes and hypertension used statins. In 2006 respective proportion was 21%. **Conclusions:** The use of statins increased and the levels of TC and LDL decreased. The use of statins among the elderly persons targeted to the secondary prevention. Still, 1 in 5 of the elderly without risk factor for cardiovascular outcome used statins.

**PB7 165 PERIFERAL ARTERIAL DISEASE IN THE ELDERLY PATIENTS AND THERAPY WITH CLOPIDOGREL**

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**Introduction:** The peripheral arterial disease (PAD) because of atherosclerosis is present in the elderly around 18,8% over 70 years old; about two-third of these patients are a long time asymptomatic. Coronary heart disease (CHD) is associated in 50-60% of cases, and cerebrovascular events in 25%. Therefore, early diagnose and treatment of PAD could play an important role to delay the progression of atherosclerotic cardiovascular disease into global context. The goal: The present study analysed the effect of Clopidogrel 75 mg./day, versus Aspirin 100 mg./day, in PAD, in relationship with evolution toward fatal coronary or cerebrovascular events. **Method:** There were analyzed retrospectively on three years, 256 patients (males and females) – group A – with PAD stage II Leriche, aged between 59-75 years old, hospitalized at every 6 month, with or without other cardiovascular disease (CHD, stroke), treated with Clopidogrel 75 mg./day, versus a control group of 232 patients – group B – with similar age and pathology, treated with Aspirin 100 mg./day. During the

3 years, 2% from group A treated with Clopidogrel, progressed toward fatal results, while group B treated with Aspirin, progressed in 11% of cases. **Conclusions:** The diagnosis of PAD could be predictive for other vascular atherosclerotic determinations. The antiplatelet therapy in PAD could delay progression of CHD and/stroke. In our study, Clopidogrel was demonstrated to be more effective than Aspirin both in primary and secondary prevention of coronary or cerebrovascular atherosclerosis.

**PB7 166 IMPACT OF AGE IN THE MANAGEMENT OF ACS: MEDICAL POLICY AND HOSPITAL OUTCOME IN ELDERLY PATIENTS**

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**INTRODUCTION**-Age is a powerful determinant of prognosis in ACS, affecting both disease characteristics and medical policy. This analysis aims at describing the impact of age on clinical presentation and hospital outcome in a large sample of ACS patients. **METHODS**-The study population consisted of all adult patients admitted to hospital for an ACS during 2004-2005 in 3 Italian regions (Lombardia, Emilia-Romagna, Friuli-VG). National hospital discharge records were used. Patients discharged or transferred within 48 hours of hospital admission were excluded. According to ICD9CM codes, ACS was classified as UA/NSTEMI and STEMI. Thirty-day in-hospital mortality was considered as end-point. Risk factors and comorbidities, as recorded in previous and current hospital admissions, were used to compute risk-adjusted mortality rates. Patients were stratified by age (<65; 65-75; >75). **RESULTS**-The study population consisted of 70476 patients. On the whole, about 40% of events were classified as STEMI and 60% as UA/NSTEMI. An inverse association between age and the likelihood of presenting with STEMI was found (OR=0.79 age>=75 VS age<65). Among patients aged >=75, more than 24% of UA/NSTEMI and 34% of STEMI were treated in General Medicine Departments (GMD). Of these, only 8.2% of UA/NSTEMI and 4.5% of STEMI underwent a coronary procedure or were submitted to extensive investigations. As expected, in-hospital mortality rates increase with age (<65=1.1%, 65-75=2.8%, >75=10.2%). An additional strong association with the department of treatment was found. For both UA/NSTEMI and STEMI, 30-day adjusted mortality rates of elderly patients admitted to GMD were about twofold higher than those of elderly patients treated in cardiologic departments (7.7% VS 4.2% for UA/NSTEMI; 26.4% VS 16.7% for STEMI). **CONCLUSION**-Elderly ACS patients are less likely to present with ST-elevation but they are markedly less intensively investigated and less likely to be treated in cardiologic departments. This medical policy influences elderly in-hospital mortality rates.

**PB7 167 FACTORS INFLUENCING PROGNOSIS OF THE FRAIL ELDERLY**

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**Introduction.** The life expectancy at the age of 80 is about 11.3 years for women in Japan. However the prognosis of the frail elderly, such as post stroke or pneumonia patients, is very poor. The aim of this study is to evaluate the prognosis of the frail elderly and to elucidate the factors influencing their life expectancy. **Methods and materials.** All discharging patients from our facility were recruited and followed up at least 2 years. After evaluation of 2 years survival, patients were divided into 3 groups, group L surviving 2 years or more after discharge, group S surviving 30 days to 2 years, and early-death group died within 29 days after discharge. Clinical factors and examinations were compared between L and S groups. **Results.** 515 patients were followed up for 2 years. 119 patients for S group (mean 84.4 +/- 6.7 years old, male 49%) and 335 patients for L group (mean 79.6 +/- 9.6 years old, male 33%) were compared. The characteristics of S group were as follows; higher age, higher percentage of male, lower chance to go back own home after discharge (25.2% vs. 63.3% in L group), lower Hasegawa Dementia Scale (5.8 points vs. 14.1), higher percentage of tube nutrition (28.6% vs. 6.9), higher percentage of bed ridden (53.8% vs. 19.4). The morbidity of dementia, cerebrovascular disease, lung disease, heart disease, or cancer, was higher in S group. However, the morbidity of hypertension and hyperlipidemia was lower in S group. All these differences were statistically significant. **Conclusion.** The low 2 years survival rate of the frail elderly (65%) was observed in this study. Cerebrovascular disease and dementia may contribute to lung disease and malnutrition which influence the life expectancy of the frail elderly.

**PB7 168 ASSOCIATION BETWEEN HIGH BLOOD PRESSURE AND DISABILITY IN AN ELDERLY POPULATION**

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Stroke is the major aetiology of disability among the elderly but the direct association between blood pressure level and disability is not well-known. **Objective** To assess the association between hypertension and disability in a cohort of subjects over 70 years old. **Design and methods** 944 outpatients of a geriatric clinic benefited from a complete

geriatric assessment, including Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (DBP) measurements. Blood Pressure was measured 2 times (by a nurse and then, by a physician) after 15 minutes of rest seated, using a validated electronic device. Hypertension was defined by a SBP and/or a DBP  $\geq$  140/90 mm Hg or antihypertensive treatment's consumption. Disability was assessed by 2 validated scales: Instrumental Autonomy of Daily Living (IADL, 14 items) and Autonomy of Daily Living (ADL, 6 items). Patients also benefited from a Brain-CT scan and complete biological testing. A global comprehensive cognitive assessment was performed to diagnose dementia. Results In this elderly population (mean age= 76± 6 years; 70% of women, 48% of demented subjects), hypertension was diagnosed in 71% of cases. Mean SBP /DBP was 144±21/77±13 mmHg. Mean ADL and IADL were respectively 11.9±2.9 and 5.8±0.7. Cardiovascular diseases (Stroke/ transient ischemic attack, coronaropathy, heart failure, atrial fibrillation) were observed in 29% of cases. After adjusting for age, gender, educational level cardiovascular diseases and dementia, hypertensive subjects appeared more disabled than non hypertensive subjects (IADL score = 11.7±3.0 vs 12.4±2.3 p<0.001, ADL score = 5.7±0.8 vs 5.8±0.4, p<0.05). Conclusion Our result indicates a significant association between hypertension and disability independently of cognitive disorders, stroke and cardio-vascular diseases.

**PB7 169 IMPACT OF METABOLIC SYNDROME ON LEFT VENTRICULAR EJECTION FRACTION AS ASSESSED BY 64-MULTIDETECTOR-ROW COMPUTED TOMOGRAPHY**

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Introduction The metabolic syndrome (MetS) which may be due to dysfunction of adipocytokine is associated with increased risk for cardiovascular diseases and related mortalities. We analyzed the association between left ventricular ejection fraction (LVEF) as determined by a non-invasive method, multi-detector row computed tomography (MDCT), and the MetS using an accurate method for determining criteria. Methods and materials Subjects included 513 consecutive patients (male/female= 54%/ 46%, age= 64 ± 11 years) who underwent coronary angiography using MDCT. We quantified coronary artery calcification score, visceral fat area (VFA), subcutaneous fat area and waist circumference, and measured blood pressure, ABI and PWV. We also analyzed plasma levels of adiponectin, lipid profile, HbA1c, blood glucose and uric acid. Results Of the total of 513 subjects, 209 (41%) were diagnosed as MetS. LVEF after adjusting for body surface area in MetS group was significantly lower than that in non-MetS group. Furthermore, there was no difference in LVEF among MetS or non-MetS group in subject age < 70 years, while LVEF in MetS group was significantly lower than that in non-Mets group in subjects  $\geq$  70 years. When all subjects were divided into five groups (0-4) according to the number of metabolic factors, LVEF were significantly decreased as the number increased. Conclusion This study suggested that MetS contributed to reduced LV systolic function, especially in older subjects.

**PB7 170 RELATIONS BETWEEN INDICES OF ARTERIAL COMPLIANCE AND ARTERIAL BLOOD PRESSURE IN HYPERTENSIVE ELDERLY SS.**

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Introduction: Hypertension is a risk factor for a long-lasting arterial walls remodelling leading to stiffness. HDI overcomes some of the problems arising with more-time consuming method (Ambulatory Blood Pressure Monitoring, ABPM) and give information about arteries's walls elasticity. We studied relationship between pulse pressure (PP) measured by HDI (PPHDI), large (LA-C) and small arteries compliance (SA-C) and few well-established indices of ABP. Materials and methods: sample consists of 75 hypertensive Ss, aged 65+. LA-C, SA-C and PPHDI were measured by pulse wave analysis of radial artery (HDI PWCR-2000). Pearson's correlation found relationship between index drawn from ABPM, LA-C and SA-C separately; repeated regressions were applied to study LA-C and SA-C variance in the sample. Receiver Operator Characteristic (ROC) curves for thresholds of PP were generated, and Areas Under the Curve (AUC) calculated for PPHDI, PPABPM to visualize differences in their sensitivity/specificity. Result: Significant correlations between LA-C and HR, PPABPM and PPHDI were found. SA-C relates with HR, and Sistolic Blood Pressure lying and standing. Applying a stepwise regression analysis we found a model with two predictive factors PPHDI and HR that explain LA-C variance. SA-C variance was explained only by SBP lie-down. ROC curves for thresholds showed that PPHDI reached levels of sensitivity/specificity similar to those of the other (PPABPM) more time-consuming method. Conclusion: Surveillance of ABP through hemodynamic indices and in particular SBP, is essential, nevertheless is not known the advantage of this control in a elderly population where organ damage is already evident. PP describe the condition of "arterial tree". It needs necessarily an instrumental

measurement; PPHDI result similar in reliability towards PPABPM, but is more rapid and well applicable in a elderly population.

**PB7 171 IMPROVING STROKE PREVENTION, TREATMENT, CARE AND SUPPORT THROUGH COLLABORATIVE WORKING: THE SOUTH YORKSHIRE (UK) COLLABORATION IN LEADERSHIP FOR HEALTH RESEARCH AND CARE STROKE**

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Background Stroke is the third biggest killer in the UK and the primary cause of disability amongst adults. The increased incidence of stroke with age has also been noted in the UK (Rothwell et al 2005). The South Yorkshire Collaboration in Leadership for Health Research and Care Stroke Theme is a programme of joint clinical, academic and voluntary sector research and development projects aimed at enhancing stroke services through: • reduced incidence of stroke within the South Yorkshire (UK) • improved long-term provision and effectiveness of rehabilitation • improved self-management, independence, recreation and participation of persons living with the effects of stroke. This presentation is aimed at informing the gerontological research and practice community of the programme's aims and objectives. Method The programme is seeking to utilise a range of methods in order to contribute to an improved evidence base around stroke. • Project 1 seeks to raise stroke awareness through the evaluation of targeted public health interventions. • Project 2 aims to improve access to early treatment, particularly transient ischemic attack (TIA) services. • Project 3 sets out to develop and evaluate an educational intervention centred upon patient and carer self-management. • Project 4 addresses issue of inequality in stroke unit provision through qualitative and action research methods. • Project 5 will evaluate, through the use of an RCT, the effectiveness of a Telecare rehabilitation intervention. • Project 6 will explore issues of participation with stroke patients through interpretive and case study strategies. Results The programme will commence in February 2009. Whilst findings will not be available, the poster presentation will provide a detailed account of the proposed methodology. In addition base line data will be outlined and progress on the establishment of collaborative networks between academic, clinical and third sector communities will be described.

**PB7 172 CATHETER EMBOLECTOMY IN THE TREATMENT OF MASSIVE PULMONARY EMBOLISM: A CASE REPORT.**

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Introduction Management of massive pulmonary embolism (PE), defined by an associated cardiogenic shock or hypotension (systolic BP  $<90$  mmHg, and/or a pressure drop  $\geq 40$  mmHg), is particularly difficult in elderly patients, because age and comorbidities are associated with increasing haemorrhagic risk and perioperative complications. Report: An 88-year-old woman, with Alzheimer disease and breast cancer past history, was admitted in geriatric unit for metorrhagia. On the 5th day, outcome was suddenly characterized by a massive pulmonary embolism, with circulatory and respiratory failures (blood pressure 70/40 mmHg). Arterial blood gas analysis revealed hypoxemia of 69 mmHg, hypocapnia of 22 mmHg, pH of 7.39, lactic acid of 7 mmol/l despite 15 l/min oxygen. A pulmonary computed tomography confirmed the diagnosis. Intravenous heparin was immediately started. Embolectomy and thrombolysis were not considered because of associated comorbidities and active genital bleeding. A percutaneous mechanical thrombectomy was performed, using a selective catheterism of the right and left pulmonary trunks with thrombo-aspiration, with a good angiographic result. Patient rapidly improved, allowing circulatory or pulmonary supports to be stopped. After 10 days, patient was addressed to a rehabilitation unit. Discussion: Massive PE is a life-threatening condition with a high early mortality rate (up to 65 % according to some studies) due to acute right ventricular failure and cardiogenic shock. Thrombolysis is potentially life-saving but difficult to use in the elderly because of an increased bleeding risk, such as prior surgery, trauma, or cancer. The American college of Chest Physicians recommends the use of percutaneous mechanical thrombectomy in patients with contraindication for thrombolysis. In our patient, thromboaspiration was preferred to avoid thoracic surgery, and successful for rapidly reversing right ventricular failure. Conclusion Catheterism with thromboaspiration could be a promising tool in management of massive PE in elderly patients with contraindications for thrombolysis and surgical embolectomy.

**PB7 173 EXTENDING CARE TO SENIORS WITH HYPERTENSION THROUGH COMMUNITY PHARMACIES LINKED BY E-HEALTH TO FAMILY PHYSICIANS**

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**Introduction** The Cardiovascular Health Awareness Program plus Action Plan (CHAP+AP) is an ongoing, community-based cardiovascular disease (CVD) and stroke disease prevention program targeting high risk populations. This study describes program activities and outcomes based on ongoing delivery of the program in 13 communities across Ontario. **Methods** Regular assessment sessions are promoted using community-wide advertising, referrals and/or personalized letters from family physicians to older adult high risk patients. Sessions are delivered with support from pharmacists, community nurses, and local organizations. At the sessions, volunteer peer health educators assist participants in using a BpTRU™ automated device to record blood pressure and other risk factors on a standardized form. With permission from the participant, summary risk profile forms are sent to the participant's family physician and pharmacist. Each participant receives a copy of the assessment, along with risk factor-specific cardiovascular health education materials and a list of local resources. Results In 13 Ontario communities there were 4579 assessments completed in 2008. CHAP+AP is run by a local coordinator and a total of 137 peer health volunteers in 13 communities assist with the program delivery. CHAP+AP sessions took place in 107 pharmacies or other community settings during 2008. Attendees' average age was 68.9 (SD=12.9) years and 62% were female. 26% (99 of 383) of family physicians are currently participating in CHAP in these communities. A community nurse was alerted to a participant with high blood pressure 159 times and 28 participants were recommended to see the pharmacist during the CHAP+AP sessions. Conclusion Hypertension represents a significant primary health care problem, and its under-detection and under-treatment leads to an economic burden in health care expenditures and potential years of life lost. Using e-health CHAP+AP offers a viable, sustainable, community-based, low-cost program by which to potentially reduce the older adult population risk for CVD and stroke.

#### PB7 174 WHAT DECISION CRITERIA FOR ANTITHROMBOTIC TREATMENT OF ATRIAL FIBRILLATION IN THE ELDERLY ?

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**Introduction:** Oral anticoagulant treatment (OAT) is more efficacy than aspirin to prevent neurologic complications of atrial fibrillation (AF), but the bleeding risk increases with ageing. The aim of this prospective study was to evaluate the parameters of decision for antithrombotic treatment of AF in the elderly. **Methods :** 209 inpatients, 70 or more aged (84.7±7 years, women 60.8%), with a chronic AF needing OAT were included. The patients were distributed into 2 groups (OAT or aspirin) according to medical decision. All the parameters of decision for OAT or aspirin were recorded: underlying cardiopathy, conditions of life, clinical examination, cognitive evaluation (MMSE), walking evaluation, Charlson's score of comorbidity, evaluation of risk of falls and glomerular filtration rate. Then we compared the thrombo-embolic risk and the bleeding risk to the modified Chads' score of thrombo-embolic risk and to the Beyth's score of bleeding risk. **Results :** 102 inpatients (48.8%) received OAT and 107 inpatients received aspirin (ASP). ASP group was significantly older (86.5±6.5 vs 82.9±7.1 years), with more frequent social isolation, higher systolic blood pressure, and it had more important subjective bleeding risk and risk of falls than OAT group. OAT group had more frequent valvulopathies and a more important subjective thrombo-embolic risk. Thrombo-phlebitis antecedents, dementia, denutrition and walking alterations were slightly but not significantly more frequent in ASP group. Physicians significantly under-estimated thrombo-embolic risk in one third of patients and they over-estimated bleeding risk in half patients in both groups. After 3 months, OAT and ASP groups did not significantly differ for deaths, bleeding or ischaemic events. Falls were more frequent in ASP group. Conclusion : In common practice, OAT treatment was prescribed only in half elderly inpatients with AF because it was important to take into account other parameters than cardio-vascular parameters.

#### PB7 175 FLUINDIONE ANTICOAGULATION LEVEL IN VERY ELDERLY INPATIENTS: THE PREPA STUDY

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**Introduction :** Octogenarians have an increased risk of hemorrhage associated with Vitamin K antagonists (VKA). Fluindione is the most prescribed VKA in France, but very little information is known about the dose-response relationship and the factors influencing it. Our objective was to assess the impact of comedication, comorbidity and initial fluindione dose on International Normalized Ratio (INR) values obtained one week (D8) after starting anticoagulation. **Methods and Materials:** A multicentric prospective observational study was conducted in six care units (geriatrics, internal medicine, cardiology, and cardiac surgery) in two French university hospitals. 80 years who needed VKA≥Participants were

recruited among inpatients for the first time or after a 15-day wash out. The optimal target range for the INR was 2.0 to 3.0 for all participants. Initial and subsequent doses were chosen by physicians without restriction. Comorbidities (especially malnutrition), comedication, initial and subsequent doses of fluindione were recorded until discharge. **Results:** 140 patients were included (mean age 85 years, 66% of female, mean of 8 drugs per day, mean Charlson index 7 (4-14) ), 52 of whom underwent a recent cardiac surgery. The median of first prescribed fluindione doses was 10 mg (min 5 mg-max 20 mg). At D8, only 38% of INR were between 2 and 3, whereas 38% were <2.0 and 24% were >3.0 There was no difference between the initial dose for patients with INR over or under 3 (9.6 mg versus 9.0 mg respectively, NS). Conclusion: Results of the PREPA study in octogenarians with comorbidities and comedication should help clinicians to better manage VKA.

#### PB7 176 AORTA MYCOTIC ANEURYSM DUE TO STREPTOCOCCUS PNEUMONIA : A DIFFICULT DIAGNOSIS WITH AN UNUSUAL PATHOGEN.

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**Introduction:** Infections of major vessels leading to mycotic aneurysms can be a diagnostic dilemma for clinicians and require prompt medical and surgical treatments. **Methods and Materials:** We reported a case of an infrarenal aorta mycotic aneurysm in a 78 years old man due to streptococcus pneumoniae with a review of the literature. **Results :** an elderly man was admitted for falls and weakness. He developed fever during the course of his hospital stay. Blood cultures grew streptococcus pneumoniae. Multiple investigations were performed. The abdomen computed tomography scan revealed finally a large saccular infrarenal aortic aneurysm with an infiltrate of mesenteric fat around the aneurysm. A diagnostic of probable mycotic aneurysm was made and the patient was taken to the operating room for radical resection and reconstruction in one stage. During the surgery, the patient had a hemorrhagic shock, which was treated successfully. The patient was treated for 6 weeks with high-dose penicillin and was discharged to a rehabilitation unit. Streptococcus pneumoniae was reported as a rare causative pathogen. Since 1945, only 58 cases have been documented in literature. In less than half of the cases, the patient's medical history revealed a previous lower respiratory tract infection **Conclusion :** Mycotic aortic aneurysm is a rare and grave infectious disease. Streptococcus pneumoniae was reported as a rare causative pathogen. Mycotic aortic aneurysm may potentially progress to rupture and death unless early diagnosis and appropriate treatment is instituted.

#### PB7 177 IMPLEMENTING GUIDELINES FOR THE USE OF LOW MOLECULAR WEIGHT HEPARIN (LMWH) IMPROVES MEDICAL PRACTICES IN GERIATRICS

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**Background.** Prevalence of venous thromboembolic diseases increases with age. A safe prescription of LMWH is necessary because side effects increase with age and inappropriate use. **Methods and materials.** This is an interventional monocentric study conducted on a given day in a Parisian geriatric university hospital. We have constructed guidelines based on selected references in the literature identifying indications, against indications, dosages, duration of treatment and monitoring biological optimal. They were distributed to all physicians in the hospital. Two months after the implementation, we selected patients on a given day receiving LMWH. Using a scale of assessment, we analysed the adequacy requirements of the guidelines. Finally, we compared these data with those from a descriptive study conducted in 2006 in the same center. **Results.** The study population had an average age of 85+- 7 years with 74% women. LMWH prescriptions concern 54 patients (10% of patients in the hospital) for 26% in acute care, for 23% in rehabilitation and for 4% in long term care. Indications were preventive in 80% of cases with 39% medical situations. Dosages were adjusted in 91% of cases (against 55.5% in 2006 - p <0.0001). Biological monitoring was optimal in 54% of cases (against 30.5% in 2006 - p <0.02). Indications were relevant in 85% of cases (against 76% in 2006 - ns). The period of prescription was appropriate in 59% of cases (against 51% in 2006 - ns). Conclusion. The implementation of guidelines for LMWH use by physicians in a geriatric hospital improves quality of care especially for doses and biological monitoring.

#### PB7 178 SPLENIC INFARCT: DIFFERENCES IN PRESENTATIONS IN YOUNG AND ELDERLY PATIENTS.

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**Spenic infarct** is an infrequent disease whose presentation may vary in younger and older patients. **Methods and materials:** In an internal medicine unit, a retrospective analysis

found 6 files of patients hospitalized between 1996 and 2008 after diagnosis of splenic infarct. Results: Three patients (group A) were 70 years old or less (47, 53 and 69 years old) and three patients (group B) were over 70 years old (74, 86 and 87 years old) at the time of the diagnosis. The younger patients (group A) suffered mainly of abdominal pain, while the older patients were hospitalized for fever (1 case), weight loss (1 case) or abdominal pain (1 case). Etiology was embolic disease for all the patients in group B, one of them had a history of a heart rhythm disorder (atrial fibrillation) treated by aspirin. In group A, 2 patients had a hematologic disease (thrombocythemia, Evans's syndrome), and no cause was found for the third patient. The CT-scan showed that the three patients of group B had other abdominal embolic infarcts (kidney and liver), while no supplementary infarct was found for patients in group A. Chronic anticoagulation therapy was prescribed for 2 patients in group A and group B, and antithrombotic therapy with aspirin was prescribed for the patient of group A having no identified cause of splenic infarct and for a patient in group B diagnosed with dementia. Conclusion: Splenic infarct may have different presentations in young and older adults, but other studies are required to clarify this.

#### **PB7 179 IMPACT OF TROPONIN I ON LONG TERM MORTALITY AFTER EMERGENCY ORTHOPAEDIC SURGERY IN OLDER PATIENTS**

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Objectives: To determine the association between post-operative troponin rises and longer term (2 year) mortality after emergency orthopaedic surgery in patients over 60. It has previously been found that troponin I is a prognostic marker for mortality and cardiac events at 1 year in this patient population. Methods: In 2006, 102 patients were recruited prospectively and had troponin I measurements during their in-patient stay (one pre-operative sample and three post-operative days) for emergency orthopaedic surgery. These patients were followed up by telephone call annually to determine if they had survived and whether there were any cardiac events sustained. Cardiac event was defined as myocardial infarction, congestive cardiac failure, atrial fibrillation or major arrhythmia. Results: At two years, 29.4% (30/102) of patients had died. Twenty-five patients (25/54 or 49.3%) with a troponin rise were dead at two years, compared with five patients without a troponin rise (5/48 or 10.4%) which was significantly different  $p<0.0001$ . Patients with a higher troponin level ( $>0.1\text{mcg/L}$ ) were more likely to be dead at 2 years compared with those with lower level troponins or no troponin rise. However, when adjusted for other comorbidities the association between troponin elevation and death at 2 years did not persist. Using multivariate analysis, only one factor, sustaining an in-hospital cardiac event, was associated with 2 year all-cause mortality OR 6.4 (95% CI 1.8-22.2,  $p=0.003$ ). Furthermore, patients who sustained a symptomatic troponin rise ( $p<0.0001$ ) or asymptomatic troponin rise ( $p=0.004$ ) were more likely to have died at 2 years compared with those with no rise. Three factors were significantly associated with a cardiac event during the second year: post-operative troponin rise OR 2.7 (95% CI 1.0-6.8,  $p=0.043$ ), pre-morbid atrial fibrillation OR 5.6 (95% CI 1.5-21.0,  $p=0.011$ ) and post-operative renal failure OR 12.3 (95% CI 3.1-48.6,  $p<0.001$ ). Conclusion: Elevated post-operative troponin levels are predictive of one year but not two year mortality in older patients undergoing emergency orthopaedic surgery.

#### **PB7 180 THE ELDERLY AT RISK IN HOSPITAL?**

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Introduction Hospitalisation can be associated with negative outcomes for the older person. This paper reports finding of research into development and validation of screening tools to assess for risk of two negative outcomes of hospitalisation: requiring a higher level of care at discharge and decline in ability to perform activities of daily living at discharge in patients aged  $\geq 70$  years admitted to acute general medical hospital units. Method A prospective cohort study of 413 patients, aged  $\geq 70$  years and consecutively admitted to an acute care metropolitan 700-bed teaching hospital was conducted. Assessments for presence of predictive factors in the pre-morbid period and during hospitalisation for risk of negative outcomes were conducted. Patients were randomly allocated to a development and validation cohort. Results Risk factors associated with the first outcome, identified from the development cohort were: 'use of community services prior to admission'; 'short term memory problems', 'dependence in toilet use' and 'dependence in hygiene'. A screening tool developed to assess patients at lower and higher risk had a sensitivity, specificity, positive predicted value (PPV) and negative predictive value (NPV) of 77.27%, 73.66%, 36.56% and 94.29% respectively. Validation of this tool in 91 patients found a sensitivity, specificity, PPV and NPV of 60%, 76.32%, 33.33% and 90.63% respectively. Risk factors associated with the second outcome in the development cohort included 'history of falling', 'no interest in things enjoyed normally', 'dependence in management of finances' and 'hearing problems'. The tool had sensitivity, specificity, PPV and NPV of 74.55%, 69.13%, 36.6% and 92% respectively. In the validation sample, sensitivity, specificity, PPV, NPV were 45%, 65.79%, 25.7% and 82%. Conclusion Scientifically

tested screening tools are useful for identifying older patients at risk of negative outcomes in hospital. The tools developed in this research need further validation larger diverse settings.

#### **PB7 181 ASSOCIATION OF PULSE WAVE TRAVELTIME WITH AGE AND ARTERIAL HYPERTENSION**

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Introduction It is known that arterial rigidity increases with age. Simultaneously the frequency of arterial hypertension also grows in elderly. Estimation of association of arterial rigidity with age depending on presence or absences of arterial hypertension is a study of interest. Methods and materials 56 dispensary patients (11 men and 45 women) were examined after exception of coronary heart disease, cardiac insufficiency, stroke, peripheral arteries diseases, diabetes, other diseases in severe or acute stage, serious arrhythmia, disturbances of intraventricular conduction. Dyasis Integra (NOVACOR) device used to register diurnal changes of blood pressure, Pulse rate, ECG and patient's body position with automatic calculation of QKD interval. Results 19 (min 24, max 89), $\pm$ The average age of the examined patients was 68.14, diastolic BP $\pm$ 12 kg, systolic BP 119 $\pm$ 9 cm, body weight 72 $\pm$ height 165.18 ms, $\pm$ 11 bpm, average daily interval QKD was 192 $\pm$ 10, Pulse 73 $\pm$ 77 Arterial hypertension was registered in 10 (18%) patients. Patients were divided into 2 groups by age: 1st group less than 65 years old (32 patients), 2nd group over 65 years old (24 patients). Data analyzed in multivariant general linear model (GLM) with simultaneous control of such variables as gender, height, body weight, pulse rate and a presence of arterial hypertension, revealed that the only relevant and independent of the above factors, including arterial hypertension, determinant of the QKD index was the age over 65 years ( $p=0.005$ ; adjusted means of QKD interval in the two age groups were 28 ms respectively), $\pm$ 26 and 178 $\pm$ 196 Conclusion The findings are demonstrating that age is a relevant determinant of arterial rigidity independently of arterial hypertension.

#### **PB7 182 STUDY OF THE QUALITY OF LIFE IN HYPERTENSION ADULTS AND ELTERS, WHO SUBMITTED A PHARMACOLOGICAL TREATMENT.**

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Knowing the impact of arterial hypertension (AH) in the elder's life constitutes a challenge nowadays. After the diagnosis, the elderly people experience changes in their quality of life (QoL). This study intends to evaluate the QoL of elderly with AH submitted to pharmacological treatment. It's a descriptive research with a convenience sample of elderly men and women excluding those with cognitive impairment and / or AH complications. It was used a sociodemographic questionnaire, the modified Baecke questionnaire for elders and a QoL questionnaire for patients with AH. The data was evaluated with the qui-square test and logistic regression. We evaluated 156 patients, and found 85 (54.58%) with 60 years old or more and 75.64% were female. The odds ratio showed significance for the physical activity related to the elderly group. Those with lower score in the physical activity showed 11.2% (100 – 88.8) lesser probability of being included in the better QoL group. Those with controlled AH presented 3 times more probability of being included in the better QoL group. Considering the age criteria, the adults presented 7.5 times more probability of being included inclusion in the better QoL group. Associated chronic diseases and use of medicines didn't show any significant difference. Therefore, we concluded that adults and elders with AH presented significant difference in matter of QoL requesting a specific consideration in matter of treatment.

#### **PB7 183 ACCURACY OF THE 3-OUNCE WATER SWALLOW TEST IN AN ACUTE GERIATRIC WARD TO ASSESS ASPIRATION RISK**

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Introduction: Aspiration pneumonia is a frequent and a serious problem for elderly, with high mortality. Little is known about accuracy of tests to predict aspiration episodes or aspiration pneumonia. The aim of the study was to determine accuracy of the 3-ounce water swallow test (3-oz test) in all patients of an acute geriatric ward to predict aspiration or pneumonia. Method: It was a prospective study in a French 19-bed acute geriatric ward, including 159 consecutive inpatients (mean age=87.9 $\pm$ 5.3 years, women 69%, mean length of stay 12.5 days). Prevalences of main diseases were 61% for dementia, 34% for delirium, 15% for congestive heart failure and 7% for stroke. The 3-oz test was performed on admission by trained geriatricians. Cough or postswallow wet-hoarse vocal quality defined a positive test. Aspiration episode was defined as accidental inhalation of oropharyngeal content assessed by a nurse. A total of 24 pneumonia including 10 aspiration pneumonia, were diagnosed by a geriatrician on the basis of clinical, biological and radiographical data. Results: The 3-oz test was available in nearly all patients (155/159) and was positive in 28 patients. Sensibility of the 3-oz test for predicting an aspiration episode was equal to

60%, specificity was equal to 89%. Sensibility and specificity of the 3-oz test for predicting all pneumonia, including aspiration pneumonia, were respectively 46% and 87%. Sensibility and specificity for predicting aspiration pneumonia were respectively 50% and 84%. Delirium was more prevalent in the positive 3-oz test group than in the negative group (57% vs 29%, p<0.005). Conclusion: The 3-oz test, easy to carry out in this acute geriatric ward, was useful to detect patients with high risk of aspiration, and of pneumonia, with aspiration mechanism or not. Preventive strategy should be conduct as early as possible in such patients to reduce the risk of aspiration.

**PB7 184 BENEFIT OF ORAL ANTICOAGULATION THERAPY FOR VERY ELDERLY PATIENTS WITH ATRIAL FIBRILLATION**

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**Background:** Several studies have demonstrated the benefit of oral anticoagulant therapy (OAT) in prevention of stroke, but few have included very old patients. **Methods:** We performed a retrospective study including 347 patients with atrial fibrillation (AF), aged 80 years and older, hospitalized in Geriatrics department between 2004 and 2007. The analysis compared mortality, stroke and bleeding events at discharge, according to the oral anticoagulant therapy or not. The follow up was conducted by phone interview with physicians, patients themselves or their families. The primary aim was to evaluate the benefit of OAT on mortality in very old patients with AF, after a hospitalisation in Geriatrics department. **Results:** The mean age in this population was 87±6 years, 63% of women, including 39% of patients with dementia. During index-admission, a significant increase of use of oral anticoagulants from 30% to 42% was observed. In multivariate analysis, the determinants of oral anticoagulation prescription were: younger age (p=0.006), new diagnosis of AF (p=0.003), low dependency (p=0.02), lack of fall (p=0.03), and heart failure (p=0.04). After a mean follow-up of 1.7 years, mortality was observed in 45% of cases (156/347), stroke in 6%, and bleeding events in 7%. The results indicate that oral anticoagulants were associated with significant reduction of mortality (38% with OAT vs 50% without OAT, p=0.02). Moreover a significant reduction of stroke were observed (2% vs 9%, p=0.008). Inversely, a significant increase of bleeding events was reported with anticoagulant agents (11% vs 4.5%, p=0.03). Nevertheless the severe cerebral bleeding remained low (0.6%) and similar in both groups (0.7% vs 0.5%, p=0.81). **Conclusion:** Our results emphasize that oral anticoagulants are associated with a significant decrease of mortality and stroke in AF subjects over 80 years.

**PB7 185 ASSESSMENT OF BLEEDING RISK FACTORS IN VERY ELDERLY PATIENTS USING ANTICOAGULANT THERAPY.**

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**Introduction:** Several scales evaluate bleeding risk in patients using anticoagulant therapy, but none had been validated in very old patients. Our objective was to validate the HEMORRHAGES score in patients aged ≥ 75 years hospitalized in a geriatric department. **Methods and Materials:** Retrospective study on patients aged of 75 and more years-old, hospitalized in a geriatric department (acute care, rehabilitation and long-term care) in 2007, treated with anticoagulants. Hemorrhagic events during hospitalization and their severity were listed for each patient. Clinical and biological bleeding risk determinants were searched and the HEMORRHAGES score was calculated (prior bleed, hepatic or renal disease, ethanol abuse, malignancy, age > 75 years, thrombocytopenia, uncontrolled hypertension, anemia, genetic factors, excessive fall risk and history of stroke). **Results:** In this population of 251 patients aged of 86 years-old on average (75 to 103 years), including 76% of women, 40 hemorrhagic events occurred (prevalence: 16%). Sixteen were considered as severe (death, cerebral haemorrhage or blood transfusion) (prevalence: 6%), one of them was fatal (0.4%). The HEMORRHAGES score was significantly associated with bleeding (5.8 vs 4.7, p<0.0001) and severe bleeding (6.1 vs 4.8, p<0.001). A score ≥ 5 is associated with an increased bleeding risk of, OR : 3.42, IC 1.53-7.64. In multivariate analysis, thrombocytopenia (OR=8.84, IC=2.62-19.8) and prior bleed (OR=1.99 ; IC=1.34-2.95) appeared to be the two main determinants of the bleeding risk. On the contrary, factors usually mentioned by practitioners not to anticoagulate the old patients such as advanced age, cognitive disorders, prior falls or comorbidities (Charlson score), were not significantly associated with bleeding. **Conclusion:** The results suggest that the HEMORRHAGES score can be used in patients ≥ 75 years hospitalized in geriatric department for screening bleeding risk. Thrombocytopenia and prior bleed are the two main independent determinants of the bleeding risk.

**PB7 186 HOME SELF BLOOD PRESSURE MEASUREMENT IN A SAMPLE OF ELDERLY PARTICIPANTS OF A POPULATION-BASED COHORT**

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**Introduction :** There has been to date few studies on the comparison between BP office measurement and home self blood pressure measurement in elderly individuals from the general population. **Design and population :** Sample of a population-based cohort study, the 3C study in Dijon. Recruitment was based on electoral rolls in 1999-2000 and participants were then followed-up every two years. Participation rate to the study on self blood pressure measurement was 87.5%. Blood pressure was measured at the study centre by investigators who also trained participants on how to use the device (OMRON M6) and to make the reports. Participants were then asked to measure their BP at home during the next couple of weeks after their visit to the study centre. They were instructed to have 3 measures in the morning and 3 in the evening during 3 days. **Results :** Overall, 1746 patients participated in the study. They were 72 yrs of age and older, 21% being older than 82, and about 40% were men. Mean SBP was 147 mmHg and mean DBP was 77 mmHg. Prevalence of hypertension (SBP≥140 or DBP≥90) was 66%. Prevalence of masked hypertension was estimated to be about 10% and associated with age, and white coat hypertension was about 19% and higher in women. During the presentation details on the comparison between office measurement and home measurement will be given. **Conclusion :** In this large sample of elderly people drawn from the general population, we found that acceptability and feasibility of home self blood pressure measurement was high after a minimal training and that the prevalence of white coat hypertension was 19% and the prevalence of masked hypertension was 10%.

**PB7 187 THROMBOPHILIC DEFECTS FACTOR V LEIDEN AND PROTHROMBIN GENE VARIANT IN PATIENTS OVER 75 YEARS WITH VENOUS THROMBOSIS**

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**Introduction:** The importance of acquired thrombophilic conditions in the elderly is well known. However, few data are available regarding genetic risk factors for venous thrombosis in this setting. In the present study, we assessed the prevalence of Factor V Leiden 1691G>A and 20210G>A prothrombin (FII) gene variant in patients over 75 years who presented with unprovoked recurrent venous thromboembolic disease or venous thrombosis at unusual site. **Methods and materials:** over a 8-year period, we retrospectively analysed data from patients who were referred to us for laboratory diagnosis of Factor V Leiden and 20210G>A FII gene variant. The physicians fulfilled a questionnaire evaluating the risk factors for venous thrombosis. Patients were eligible i/ if they were Caucasians older than 75 years; ii/ if they have had two or more episodes of unprovoked confirmed venous thromboembolic disease or if they have presented with venous thrombosis at an unusual site. Patients were excluded if one or more clinical acquired risk factors for thrombosis were present. Results 107 patients, mean aged 87 ± 6 years were included: 14 patients (13%) and 9 patients (8.4%) were heterozygous carriers of the factor V Leiden and of the 20210G>A FII mutation, respectively. One patient was a double heterozygote. None was homozygous. Overall, 22 patients (20.5%) were carriers of at least one genetic thrombophilic defect. **Conclusion:** even though patients were highly selected in the present study, the prevalence of hereditary thrombophilic defects was much lower than in younger cohorts with recurrent unprovoked venous thrombosis or thrombosis at unusual site. These results confirm the relative high importance of environmental risk factors for venous thrombosis compared to the minor role of genetic ones in the elderly as compared to younger patients.

**PB7 188 ELASTIC AGEING IN THE CARDIOVASCULAR SYSTEM**

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**Introduction:** Ageing is accompanied by a variety of cardiovascular diseases. Most involve tissue disorganization associated with loss of tissue elasticity resulting in decreased vascular function. Objective of this study is to gain further insights into the pathology of cardiovascular diseases by understanding the complex mechanism of elastic tissue production and turn over in human aortic blood vessels. **Material and Methods:** 180 human aortic punches from 118 adult patients (88 male) undergoing coronary artery bypass grafting (40 to 86 years) were measured. Overall extracellular matrix (ECM) architecture was examined by multiphoton laser scanning microscopy (LSM) and histology. The content of desmosine, a cross-link specific to elastin was measured radiometrically. mRNA levels of tropoelastin were determined by quantitative reverse transcriptase real-time PCR (qRT-PCR). The remodelling of extracellular matrix (ECM) was quantified by ELISA for matrix metalloproteinases 2 and 9 (MMPs) and tissue inhibitors of MMPs (TIMPs) 1 and 2. Samples were classified by age as well as diabetic and non-diabetic co-morbidity. **Results:** Age related destruction of the vascular elastic laminae as well as a loss of interlamina cross links was observed by multiphoton LSM. These results were confirmed by

histology where age related formations of inter-lamina gaps were observed as well as pathological alterations in the vessel structure. There were neither significant differences in terms of desmosine content nor in matrix turnover components. A decrease of elastin mRNA of approximately 50 % every 10 years of ageing (A: 100%, B: 45%, C: 26%) was observed. Diabetes had no impact on elastogenesis. Conclusion: These findings indicate that ageing is accompanied by a destruction of the elastic vascular structure. As a compensation tropoelastin is expressed throughout the life. However expression levels decrease constantly. Further studies using younger tissue samples will help to elude elastic tissue maturation and earlier ECM ageing.

**PB7 189 CARDIOVASCULAR RISK FACTORS AND COMPREHENSIVE GERIATRIC ASSESSMENT: INFLUENCE ON MORTALITY IN NONAGENARIAN PATIENTS**

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Objective: To assess the relationship between cardiovascular risk factors, the parameters of comprehensive geriatric assessment and mortality in nonagenarian patients admitted to an intermediate care unit from an acute care hospital. Patients and methods: A two years retrospective study of all patients aged over 90 years was performed. Cardiovascular risk factors such as high blood pressure, diabetes and dyslipemia were registered from all patients' charts history. Previous functional status (Lawton Index), functional status at the moment of hospital admission (Barthel index), cognitive function (Mini-Mental State Examination of Folstein (MMSE)) and nutritional status (serum albumin levels) were also registered. Results: The sample is composed by 81 nonagenarian patients (62 women); mean age  $92.1 \pm 2.1$  years. The nine patients who have died during hospitalization (11.1%) had  $0.6 \pm 1.6$  in Lawton Index;  $19.0 \pm 18.6$  in Barthel index at admission;  $2.7 \pm 5.5$  in MMSE and  $2.6 \pm 0.5$  in serum albumin levels. The rest of the sample had  $2.6 \pm 2.8$  ( $p=0.04$ );  $27.8 \pm 17.9$  ( $p=0.16$ );  $19.5 \pm 6.1$  ( $p<0.001$ ) and  $3.0 \pm 0.4$  ( $p=0.019$ ), respectively. Hypertension was present in 5 of the 9 patients who died (55.6%) and in 42 of the 72 patients who were also alive (58.3%) ( $\chi^2=0.0253$ ;  $p=0.87$ ). Diabetes was present in 1 (11.1%) and in 13 (18.1%) ( $\chi^2=0.2699$ ;  $p=0.60$ ), and dyslipemia in 2 (22.2 %) and in 15 (20.8 %) respectively ( $\chi^2=0.0093$ ;  $p=0.92$ ). Conclusions: Functional, cognitive and nutritional status had been significantly related to mortality in the present study, but not cardiovascular risk factors. Barthel index at admission was not related to mortality, probably because of the recent acute illness.

**PB7 190 DELIRIUM IN ELDERLY PATIENTS TREATED AT HOME: A PROSPECTIVE STUDY**

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Introduction: Delirium usually occurs during hospitalization. Aims of this study are to evaluate the incidence of delirium in hospital at home compared to traditional hospital ward and to assess mortality, hospital readmissions and institutional rates at 6-month follow-up in elderly patients with intermediate/high risk for delirium at baseline according to the criteria of Inouye. Methods and materials: We performed a prospective, non randomized, observational study with 6-month follow-up on 144 subjects aged 75 and older consecutively admitted to the hospital for an acute illness and followed in a Geriatric Hospital Ward (GHW) or in a Geriatric Home Hospitalization Service (GHHS). Baseline socio-demographic information, clinical data, functional, cognitive, nutritional status, mood, quality of life, caregiver's stress scores were collected. Results: Of 144 participants, 14 (9.7%) had delirium during hospitalization: 4 were treated by the GHHS and 10 by a GHW. Incidence of delirium was 16.6% in GHW and 4.7% in GHHS. All delirious patients were very old, with a high risk for delirium at baseline in 60%, according to the criteria of Inouye. In GHW the onset of delirium occurred significantly earlier and the mean duration of the episode was significantly longer. The severity of delirium tended to be higher in GHW compared to GHHS. At 6-month follow-up mortality was significantly higher among patients who suffered from an episode of delirium (42.9% versus 9.6%,  $p<.001$ ). Moreover, they showed a trend to a greater institutionalization rate. Conclusion: GHHS may represent a protective environment for delirium onset in acutely ill elderly patients.

**PB7 191 LONG-TERM USE OF PSYCHOTROPIC DRUGS IN COMMUNITY-DWELLING ELDERLY PERSONS – PREVALENCE AND PREDICTORS**

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**Background** In the elderly, use of psychotropic drugs is associated with serious adverse events, and therefore long-term use should generally be avoided. The present study aimed at assessing the prevalence and predictors of long-term psychotropic drug use in community-dwelling persons aged 75+. **Material and methods** The study is based on data from the GeMS study of a random sample of 1000 persons aged 75+ and living in Kuopio, Finland. The baseline interview was conducted in 2004, and follow-up interviews in 2005, 2006, and 2007. Baseline characteristics predicting long-term psychotropic use among 700 home-dwelling participants were identified using Cox proportional hazards regression. **Results** At baseline, 38 % (n=268) of the participants used at least one psychotropic drug. Of them, 60% (n=162) reported use at all follow-up interviews, while every fifth (22%, n=59) discontinued use during the study period. Multivariable analysis revealed that advanced age (HR for withdrawal 0.93 95% CI 0.86-0.99), use of at least two psychotropic drugs (HR 0.28 95% CI 0.11-0.75) and regular pattern of use (HR 0.49 95% CI 0.28-0.88) were predictors of long-term psychotropic use. On the other hand, living alone (HR 1.89 95% CI 1.01-3.60), and limitation in independent mobility (HR 2.12 95% CI 1.08-4.16) were associated with doubling of the likelihood of withdrawing from use. **Conclusions** The long-term use of psychotropics is common in community-dwelling elderly persons. However, patient characteristics seem to be only weakly associated with the long-term use; therefore, future studies need to include additional factors such as physician and health system characteristics.

**PB7 192 HOSPITAL CARE COSTS IN A CHILEAN ELDERLY DELIRIUM COHORT.**

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**Introduction:** delirium is one of the most common complications of ill older people, and considered a major burden to health care services. The objective of this study was to assess if delirium is associated to higher care costs during hospital stay in elderly medical patients. **Methods:** Data was obtained from a previous cohort study of consecutive patients 65 years and older admitted to a medical ward of a university affiliated hospital during 2006. A psychogeriatric team assessed patients during the first 48 hrs of admission, using Confusion Assessment Method (CAM), Barthel index, Charlson Comorbidity index and Acute Physiology and Chronic Health Evaluation II (APACHE II). Medical revaluation with CAM was performed every 48 hrs until discharge. Patients were included in delirium cohort if any CAM was positive during evaluation. Demographic data, length of stay (LOS), LOS in ICU or intermediate care units was recorded. Total cost of hospitalization was calculated including all laboratory and exams, pharmacy and medical care. **Results:** 542 inpatients were enrolled, data for cost analysis was obtained from 457 patients, and 34.4% of them developed delirium during hospitalization. The delirium cohort had a significantly longer LOS compared with non delirium cohort (mean (SD) 8.5 days (7.0) versus 5.4 (3.8)  $p<0.001$ ) and longer days in ICU or intermediate care units (mean (SD) 1.6 days (3.1) versus 0.6 (1.4)  $p<0.001$ ). Delirium cohort also had a higher total cost per day of hospitalization (mean (SD) US dollars 558.1 (513.1) versus 495.7 (555.5)  $p<0.001$ ). **Conclusions:** This study revealed a significant association between delirium and higher LOS, higher utilization of ICU/intermediate care units and higher total daily costs. These results emphasize the need to address this prevalent and costly problem.

**PB7 193 SOCIOECONOMIC PROFILE AND DEPRESSIVE SYMPTOMS AMONG OLDER ADULTS LIVING IN THE COMMUNITY**

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**INTRODUCTION:** the fast increase of the elderly population is worldly known, especially in developing countries, and it has consequences for society and individuals. Depression is considered the most frequent mental problem and it significantly affects negatively quality of life of elderly people. **OBJECTIVE:** to identify and relate demographic and socioeconomic profile and health problems to depressive symptoms in older adults. **METHODOLOGY:** cross-sectional, epidemiological study. Interviews were held with elderly people aged 65 years or older, living in the urban area in Ribeirão Preto, SP. The addresses were enrolled from a random draw of the census sectors and its squares. Data were collected using a questionnaire containing: identification; socioeconomic profile and Geriatric Scale Depression (GDS), shorter version, validated in Brazil. Double entry of data was performed using EXCEL and the analyses were carried out in SPSS (Statistical Package for the Social Sciences) for windows. **RESULTS:** In total, 515 older adults were interviewed, and prevalence of depression was 21,2% for the total sample. The variables that contributed the most for depression were: female sex, living alone, low educational level, low income, being older-elderly and having disabling morbidities. **CONCLUSION:** The prevalence of depression in elderly people in the studied sample was higher than many

national and international studies. Primary care health professionals should use assessment protocols in treatment.

**PB7 194 LEISURE TIME PHYSICAL ACTIVITY AND DEPRESSIVE SYMPTOMS**

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**Introduction:** The beneficial effects of physical activity on psychological well-being have been shown in earlier studies. However, the association between physical activity and mental health could also be explained by a third underlying variable, such as common genetic or environmental factors that predispose to a sedentary lifestyle as well as poor mental health. The purpose of this study was to examine if leisure time physical activity and depressive symptoms share a common genetic or common environmental factors. **Methods and materials:** This study is a part of the Finnish Twin Cohort. Data were available from two occasions: years 1981 (leisure time physical activity) and 1990 (depressive symptoms). We analyzed the leisure time physical activity in metabolic equivalent units (MET index) and depressive symptoms using the Beck Depression Inventory. The total numbers of twins analyzed were 1579 monozygotic (MZ) and 3515 dizygotic (DZ) males, 2081 MZ and 4046 DZ females. The mean (SD, range) age of this sample in the year 1990 was 43.9 (7.7, range 33-60) years. Quantitative genetic modeling was used for data analyses, with age as a covariate. **Results:** The phenotypic correlation between leisure time physical activity and depressive symptoms was small, but significant ( $r=-0.1$ ,  $p<.01$ ). In the leisure time physical activity additive genetic effects accounted for 35 % and in the depressive symptoms for 37 % of the total variance. The remaining variance was due to non-shared environmental effects. In the bivariate Cholesky decomposition model common genetic or environmental factors between these two traits were not found. **Conclusions:** Leisure time physical activity and depressive symptoms are both modestly heritable traits. However, in this study population, they don't share genetic or environmental factors. Further analysis is required to study potential mediating factors between physical activity and depressive symptoms.

**PB7 195 UNTERTREATMENT OF DEPRESSIVE SYMPTOMATOLOGY IN THE ELDERLY LIVING IN LONG STAY INSTITUTIONS AND IN THE COMMUNITY**

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The aim of the present study was to assess the presence of depressive symptomatology among elderly residents in long-stay institutions (LSI) and in the community of Recife, Brazil. In total, 81 long-stay elderly patients (mean age of  $75.55 \pm 9.18$  years) and 132 elderly (mean age of  $73.14 \pm 8.27$  years) individuals from the community were evaluated. Depressive symptomatology was assessed by the Geriatric Depression Scale (GDS-15), cognitive status by the Mini Mental State Examination (MMSE) and capacity to perform the activities of daily living (ADL) by the Katz Index. Comorbidities and the use of medication were recorded. The LSI elderly exhibited more depressive symptoms ( $p < 0.001$ ) and more dependency ( $p < 0.001$ ). We observed no differences in MMSE ( $p = 0.058$ ). The elderly in the community displayed more comorbidities and the LSI elderly consumed more medication ( $p < 0.001$  and  $p < 0.001$ , respectively). According to multivariate analysis (logistic regression), being male, having no spouse and having a low schooling level are risk factors for depressive symptoms. In conclusion, most elderly with depressive symptoms received no medication for depression.

**PB7 196 DESCRIPTIVE STUDY ON PSYCHIATRIC PATHOLOGY IN ELDERLY MEDICAL PATIENTS ADMITTED IN A GENERAL HOSPITAL**

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**INTRODUCTION** More than 60% of the beds of a general hospital are occupied by elderly people. It is known that psychiatric pathology has a negative impact on the prognosis of medical illnesses. However, we are lacking studies describing psychiatric pathology in elderly patients admitted in a general hospital due to complex medical pathology. **METHODS** The sample included 1119 patients aged over 65 years, referred to the Consultation-Liaison Psychiatry Unit of the Hospital Clinic of Barcelona from January 2005 to December 2008. A structured clinical interview was performed for DSM-IV Axis I diagnoses. Sociodemographic and clinical data were also collected. Data was loaded into a Microsoft Access Database and analysed using SPSS. **RESULTS** The characteristics of the 1119 patients were: mean age 75.7 years (ranging from 66 to 98); 50.5% were women; 47.1% had psychiatric history; 44.1% had physical disability. Main reason for referral (diagnosis established by physicians before psychiatric assessment) was depression (31.4%) followed by delirium (22.9%). Main diagnosis established by psychiatric assessment was delirium (30.9 %) followed by depressive adjustment disorder (10.9%) and depressive disorder (10.1%); 3.2% attempted suicide, and 4.7% had no psychiatric pathology. Drug treatment was prescribed in 76.5% of the patients: neuroleptics in 38.7%; antidepressants in 26.9%; and benzodiazepines in 6.1%. **CONCLUSIONS** Elderly patients referred to our Unit are a particularly complex group with severe medical pathology, high rates of psychiatric pathology and physical disability. In concordance with previous studies, delirium is often misdiagnosed as depression. Neuroleptics are the most frequently used drug treatments, followed by antidepressants. Benzodiazepines are hardly prescribed.

**PB7 197 IMPACT OF DEPRESSION AND COGNITIVE DEFICIT ON QUALITY OF LIFE OF ELDERLY PEOPLE WHO LIVE IN THE COMMUNITY**

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**Introduction:** In a comprehensive assessment of elderly people, depression and cognitive deficit can strongly affect quality of life of this population. The present study aims to identify and relate demographic and socioeconomic profiles, depressive symptoms and cognitive deficit to quality of life of elderly people who live in the community. **Methods and Material:** A cross-sectional study was carried out, with sample of 515 older adults resident in Ribeirão Preto, São Paulo, Brazil. Data were collected through interviews held at their homes, using a questionnaire with demographic data, cognitive deficit according to the Mini Mental State Examination (MMSE), depression according to the Geriatric Scale Depression (GDS) and the WHOQOL-OLD. The last instrument was divided in six facets: sensory abilities; autonomy; past, current and future activities; social participation; death and dying; intimacy. Statistical analysis involved comparison of averages between groups and correlation measures among the variables of interest. **Results:** Most participants were women (66.6%) and widows (86.3 %), 55.5% had studied from one to four years; from those, 25% lived with partner and 19.2% in two or three-generation households. The increase in age imperils quality of life, and the sensory abilities ( $r=-0.127$ ;  $p=0.004$ ) facet was the most endangered. WHOQOL-OLD scores were higher for all facets when living with partner, the only facet which was not statistically significant was autonomy ( $p=0.69$ ). Presenting cognitive deficit implies in reduction of quality of life, and the facets social participation and autonomy presented statistically significant differences ( $p<0.001$ ). Older adults considered depressed, according to GDS, presented lower scores of quality of life in all facets of WHOQOL-OLD ( $p<0.001$ ). **Conclusion:** the presence of cognitive deficit, depression and lack of a partner affected the quality of life of older adults.

**PB7 198 PREVALENCE OF DEPRESSIVE SYMPTOMS AND ASSOCIATED FACTORS IN ELDERLY INSTITUTIONALIZED INDIVIDUALS**

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**INTRODUCTION/OBJETIVE:** to determine the prevalence of depressive symptoms among elderly individuals living in philanthropic nursing-homes of long stay (NHLS), in Belo Horizonte City, Brazil. **STUDY DESIGN:** no-experimental, descriptive and transversal study. **METHODS AND MATERIALS:** nine NHLS were randomly selected and a sample of 83 elderly individuals fulfilled the inclusion and exclusion criteria of the study. Demographics, clinical data and activity level were obtained by questionnaires. Cognitive integrity was evaluated by the MiniMental State Examination (MEEM). Presence of depressive symptoms was identified by the Geriatric Depression Scale (GDS) and by the Cornell Scale for depression in dementia. Functional capacity was assessed by incapacity dimension of Health Assessment Questionnaire (HAQ). **RESULTS:** the prevalence of depressive symptoms was 69.6%. The univariate analysis demonstrated that feminine gender and lack of participation in physical activity were independently associated to the presence of depressive symptoms ( $p\leq 0.05$ ). **CONCLUSION:** depressive symptoms are

highly prevalent among elderly individuals living in NHLS, and lack of physical activity is strongly associated with these symptoms. The results of this study grant the fostering of physical activity to elderly individuals living in NHLS.

**PB7 199 USE OF TISSUE PULSATILITY IMAGING (TPI) FOR CHARACTERIZING LATE LIFE DEPRESSION: A PILOT STUDY**

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Rational: Late Life depression (LLD) is a very common geriatric condition. There are growing evidences that depression in the elderly is associated with cerebrovascular abnormalities. Recent advances in dynamic elastography techniques allowing characterizing the visco-elasticity of biological tissues have now made possible new developments in ultrasound techniques such as the Tissue Pulsatility Imaging (TPI). The main physical principle of TPI is to mechanically stimulate the tissue or use its natural movement while realizing an echographic sequence, and by correlation techniques of signal treatment, to estimate the displacement, velocity, strain or strain velocity of the biological tissue. In this pilot study, we used TPI to compare the Brain Tissue Pulsatility (BTP) of depressed and non depressed diabetic patients. Methods: 17 diabetics, non-cognitively impaired (MMSE > 25) and elderly subjects (50 years and older) were recruited and diagnosed as depressed (n=9) or non-depressed (n=8) according to the DSM-IV criteria for major depressive disorder and to a MADRS score higher than 15. Each subject underwent a clinical examination, cardiovascular risk factors assessment, neuropsychological testing (including executive functions), ultrasound protocol with measurement of Intima-media thickness (IMT) and TPI. Results: BTP was significantly decreased ( $p<0.015$ ) in depressed diabetic subjects (57,32 $\mu$ m ; SD=14.47) compared to non-depressed diabetic subjects (82,69 $\mu$ m ; SD=23.63). BTP was strongly correlated to the statin intake ( $p<0.000$ ). No significant difference was found concerning IMT. Discussion: this pilot study is the first to test TPI in clinical conditions including depressive patients older than fifty. Decreased BTP in depressive patients supports the involvement of specific cerebrovascular disorders in the pathophysiology of depression. We argue specific brain endothelial dysfunction caused by high blood level of cortisol is a key biological mechanism to explain reduced brain pulsatility in depression. Further and larger clinical and biological studies are needed to complete this hypothesis.

**PB7 200 INCIDENCE OF PSYCHIATRIC MORBIDITY IN SPOUSES OF DEMENTED PATIENTS, A NATURALISTIC COHORT STUDY WITH 6 YEARS FOLLOW-UP**

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Introduction: Family caregiving for dementia persons has been associated with increased levels of depressive symptoms and a higher prevalence of clinical depression and anxiety. However, only very few studies reported on the incidence of depression in caregivers. In this study we examined the incidence of depression and anxiety between spouses of dementia patients and matched controls. Methods: In a prospective cohort study during 2001 and 2007 data from 218 spouses of demented patients and 353 matched controls were analyzed. Data were extracted from 71 general practices in the Netherlands. Main outcome measures were incidence rates (per 1000 person years) of depression, anxiety, and psychosocial problems, prescription rates of antidepressants. Results: the incidence rate of depression was 17.0 for spouses of dementia patients and 4.2 for matched controls. The hazard ratio showed that spouses were 4 times more likely to get a depressive episode than controls. Incidence rates per 1000 person-years for anxiety were respectively 12.3 and 8.9 for spouses and controls. We did not find a higher risk for spouses to develop anxiety feelings or disorders than for matched controls. Conclusion: persons caring for their demented spouse have a higher risk to develop depression compared with persons who do not take care of a demented spouse. This higher risk was not found for anxiety. The absolute risk of depression and anxiety among caregivers was lower than expected.

**PB7 201 THE INFLUENCE OF ADMINISTERING METHOD ON DEPRESSION SCORES OF THE 15-ITEM GERIATRIC DEPRESSION SCALE IN OLD AGE.**

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Introduction. The Geriatric Depression rating Scale (GDS-15) is used frequently to screen for depressive symptoms among elderly. However, various studies used different administering methods and influence of the chosen method on depression scores is unclear. We studied the influence of administering method on the depression scores of the GDS-15 among persons aged 75 years and older in general practice. Methods. In two general

practices 276 elderly were asked to participate. Exclusion criteria were dementia and current treatment for depression. The GDS-15 was administered twice within one month: self-administered by mail, and interviewer-administered during home visits. The order of administering methods was different for both practices. Differences in item scores and total depression scores were analysed. Missing items were interpreted as 'not depressed'. Additionally, elderly (n=93) were asked to comment on changes in GDS-scores to get some understanding of discrepancies. Results. A total of 155 elderly participated (response rate 56%). Low cognitive functioning (MMSE < 25 points) was found in 12%. Many elderly (22.6%) left items unanswered when GDS-15 was self-administered: 2.5% left five or more items unanswered. There were no items unanswered when GDS-15 was interviewer-administered. Total depression scores were 0.74 points higher (CI 95% = 0.45-1.02) when self-administered than interviewer-administered. This difference was independent of order of administration. Some items were far more often scored positive when self-administered than interviewer-administered. Item-item comparison showed fair agreement (kappa range 0.21-0.53). Four items even showed poor agreement (kappa's < 0.21). Elderly mentioned different interpretation of questions (e.g. time frame), situation improvement, mood swings, inability to score nuances and rating by proxy as reasons for discrepancies. Conclusion. Total depression scores were higher when self-administered than interview-administered. This was independent of the order of administration. The method of administration should be taken into account when comparing studies or choosing a cut-off point.

**PB7 202 PREVALENCE AND CORRELATES OF DEPRESSIVE SYMPTOMS AMONG THE ELDERLY IN BRAZIL: THE SABE COMMUNITY STUDY**

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INTRODUCTION: Depression is the most frequent mental disorder among the elderly worldwide; it is frequently associated with physical diseases and brings considerable burden to family members. This study aimed to estimate the current prevalence of depressive symptoms and associated factors among the elderly living in São Paulo city, the biggest Brazilian city, with approximately 10% of its 11 million inhabitants aged 60 years or more. METHODS AND MATERIALS: In 2006, 930 elderly were evaluated using the Geriatric Depression Scale-15, the Family APgar, and the same research protocol used in 2000 (first phase of the SABE Study, a population based survey to evaluate the determinants of health and well-being among the elderly). The results were analyzed by means of Relative Risk Ratios (RRR), obtained by fitting a multinomial logistic regression of depressive symptoms to independent variables: sex, age, ethnicity, educational level, income, satisfaction with income, family functioning and self-reported chronic diseases. RESULTS: The prevalence of depressive symptoms was 11.8% (mild: 8.9%; severe: 2.9%). The multivariate analysis indicated independent higher risk of mild depression for females (RRR= 2.5;  $p<0.001$ ), for those who considered their income insufficient (RRR=1.8;  $p< 0.02$ ) and for those living in highly dysfunctional families (RRR=2.93;  $p<0.02$ ). The risk was lower for those in the second quartile of income when compared to those in the first (RRR=0.49;  $p<0.03$ ) and for those not reporting chronic obstructive pulmonary disease (RRR=0.48;  $p<0.05$ ). Individuals living in highly dysfunctional families had an eight times higher risk of severe depression (RRR=8.11;  $p<0.001$ ). CONCLUSION: Depressive symptoms were frequent and independently associated with female gender, lower income, chronic pulmonary illness and dysfunctional families. Considering that these conditions are quite common in Brazil, social and public health policies must be promoted in order to minimize their negative effects on the rapid growing elderly population and on their families.

**PB7 203 THE USE OF PALLIATIVE SEDATION FOR ELDERLY PATIENTS NEARING DEATH**

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Introduction: Palliative sedation concerns the use of sedating medications to relieve severe suffering of terminally ill patients. Its use is often heavily debated, due to its potential life-shortening effect when it is used without the administration of artificial nutrition/hydration. Little is known about whether it is used in similar frequencies and characteristics for elderly compared to younger patients. Methods: In the Netherlands in 2005, we mailed questionnaires to physicians attending deaths identified from death certificates. We studied non-sudden deaths in adult patients (n=3783). Response rate: 78%. Results: With increasing age, palliative sedation was less often used: in 18% of all deaths of patients aged 17-64 yrs, 14% for 65-79 yrs, and 9% for 80+;  $p=0.00$ . In 80% of the patients aged 80 or older, sedation was used without the administration of artificial nutrition/hydration, compared to 60% in younger patients. The proportion of the use of palliative sedation for

cancer patients decreased with increasing age: 19% of all patients with cancer aged 17-64 yrs, down to 14% for patients older than 80 years. When controlling for sex, cause and place of death, a significant effect of age on the use of palliative sedation remained: compared to the age-group 17-64 yrs, patients aged 65-79 yrs had an odds of 0.83 (0.66-1.04) to receive palliative sedation prior to death and patients aged 80 or older an odds of 0.62 (0.47-0.82). Conclusions: Physicians less often use palliative sedation for elderly patients, especially for those aged 80 years or older. It deserves further study whether elderly patients have less suffering that may necessitate palliative sedation, or whether there is a poorer recognition of suffering at the end of life of very old patients.

**PB7 204 THE COMMITTEE FOR PATIENTS UNDER TREATMENT FOR SEVERE BRAIN DAMAGE: ETHICAL SUPPORT IN THE MANAGEMENT OF THESE PATIENTS.**

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Management of victims of severe brain damage is delicate, particularly in determining the programming of care. The choice must be made between high intensity technical care, and care tailored to the wills of the patient, or according to common sense, following recognized ethical rules. In 2006, we created a commission for reflection and support in decision making. We now report the results of the first 2 years of its activity. Method: the committee is composed of permanent members, physicians of various specialties (internal medicine, geriatrics, neurology, gastroenterology, palliative care) and with part-time members, who may be doctors or not (part of the medical team in charge of the patient), physicians in units of geriatric care and social workers. It intervenes at the request of a medical team. Its proposals are always written in the medical file of the patient in a document which indicates the history, the various options of care and the elements in the choice made. Results: 34 files were discussed: 16 women, 18 men, average age  $65 \pm 20$  years, resulting from 12 units (mainly intensive care 14, geriatric medicine-neurology 9, other geriatric services 4). The committee usually sits 3 days after the seizure. The average numbers of participation are: physicians  $5.1 \pm 1.2$ ; nurses  $2.5 \pm 1.1$ ; and social workers  $1.5 \pm 1$ . The pathologies were varied, mainly stroke (16 cases) and brain traumatism (4 cases). We never find living will or confidential persons appointment. The committee postponed its decision 5 times. It validated advice for end of life care 10 times, an invasive act (percutaneous endoscopic gastrostomy, tracheotomy) 9 times and rejected an invasive act in 8 cases. Conclusion: the committees support for patients diagnosed with severe brain damage seems valuable for the medical teams and the families.

**PB7 205 SPECIFIC ETHICAL ISSUES IN GERIATRIC PALLIATIVE CARE : STUDY OF INTERNATIONAL LITERATURE**

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Geriatric palliative care represents a challenge – an organizational, ethical, demographic and economic challenge - for years to come. The objective of the present study was to isolate the presence of specific ethical issues in gerontological palliative care. Methods and Materials The study consisted in examining international scientific literature devoted to this theme for the past twenty years. General works and articles (La Revue du Praticien, Site de la SFAP, La Revue du Généraliste et de la Gérontologie, Le Quotidien du Médecin, Gérontologie et Société, The New England Journal of Medicine) as well as articles from international and national specialized magazines (InfoKara, La Revue de Gériatrie, Jalmav, Médecine Palliative, La Revue Francophone de Gériatrie et de Gérontologie, American Geriatrics Society, Journal of Palliative Care, Palliative Medicine, European Journal of Palliative Care) went through critical reading. Results Common agreement in this literature indicates that the predominance of communication cognitive disorders - insanity in particular -, the presence of a polypharmacy and the strong dependency of older people, delay the decision for palliative care and worsen the risk of negligence or treatment abandonment. Absence of care demand, disability to express an opinion, restricted mobility to get to doctors' offices, mostly elderly family or friend circles as well as the aphorism of closeness to death among elderly subjects are all aggravating risk factors. Conclusion Those specificities and increased risks account for the palliative practices with older patients to imply an ethical attention based on a precise methodology. Nonetheless, this ethics requires first of all to ask about the place of old age in societies and the cares we intend to allow as far as it is concerned. The geriatric ethics also implies the training of medical workers practising in this particular field and in any unit

**PB7 206 DISCLOSING BAD NEWS TO PATIENTS WITH SEVERE / LIFE-THREATENING ILLNESSES – DIFFERENCES IN THE ATTITUDE BETWEEN PHYSICIANS AND NURSES IN ISRAEL**

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Scant attention has been paid to the decision making process of caregivers in disclosing bad news to patients. The purpose of this study was to describe factors influencing this process and to understand whether physicians and nurses behave differently, based on Ajzen and Fishbein's Theory of Reasoned Action. In this correlational quantitative research, using a convenience sample, a validated anonymous questionnaire was administered to 100 physicians and 200 nurses employed in several Israeli hospitals. The results indicate that only around 30% of physicians always disclosed bad news in the past, and that future decisions would be made on an individual basis. In contrast, a much greater proportion (over 76%) of nurses said that they would disclose bad news to their patients. Caregivers find it difficult to disclose terminal status information to all types of patients, although mostly find it relatively easier in the case of the elderly. The Theory of Reasoned Action may help predict disclosure of bad news by physicians and nurses. Behavioral beliefs, subjective attitudes and prior clinical experience with disclosure of bad news, represent the main factors influencing caregivers' disclosure. The main predictors among nurses are behavioral beliefs and prior experience, and among physicians - subjective norms and prior experience.

**PB7 207 GERIATRIC HOME HOSPICE: THE NEED OF OUR TIMES**

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The majority of medical centers still lack the recognition of specificity of needs and ailments of senior citizens. In the last 10 years Geriatric Hospice in Poznań has taken care of ..... patients aged 65 and more. On the basis of our experience we have concluded that due to multitude of diseases and usually limited access to social services elderly people require specialized care. Our observations indicate that a large number of patients include individuals suffering from protracted diseases which cannot be the subject of causal treatment. Therefore, we have made an attempt to create an efficient system of palliative and hospice care. The task itself creates a huge challenge for our team since it requires knowledge and experience of such issues as occurrence of multiple illnesses, possibility of polipragnosia, high risk of drug interaction and likelihood of unpredictable side effects. Elder care requires the pragmatic treatment of many severe ailments such as pain, nausea, vomiting, urinary and fecal incontinence, dysphagia, anxiety state, dementia, bedsores. The treatment of pain is one of the most crucial issues in this context. We have noticed that in case of elderly people the pain is not soothed sufficiently in comparison with the patients of young and middle age. Our experience shows that the elder care requires caretakers not only to apply adequate procedures towards certain ailments but also to be flexible and focused on constant measuring the intensity of symptoms and effects of pharmacotherapy. Therefore, the hospice care of elderly requires specialized knowledge of geriatric medicine and psychogeriatry. Our experience indicates that offering holistic home care to our patients we provide them with professional care adequate for their needs in their private surroundings. The net result of the development of geriatric palliative care is possibility of dignified aging available for all people.

**PB7 208 AGE-BASED DISPARITIES IN MEDICAL END-OF-LIFE PRACTICES IN BELGIUM**

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Introduction Medical end-of-life practices, defined as practices with a potential or certain life-shortening effect (non-treatment decisions, intensified alleviation of symptoms, euthanasia), are an important aspect of end-of-life care. Elderly patients have a different epidemiology of diseases and may have different attitudes towards health and healthcare, potentially resulting in differences in end-of-life decision-making. This study investigates possible age-based disparities and disentangles the relationship between age and medical end-of-life practices. Methods A sample was selected from all deaths in Belgium in 2007 and a questionnaire was mailed to the certifying physicians. We focus on adults and non-sudden deaths ( $N=2703$ ). Results The response rate was 58%. With increasing age, patients received less often euthanasia (8.2% for 18-64 yrs; 6.5% 65-84 yrs; 2.8% 85+;  $p=.0007$ ) and less often intensified alleviation of symptoms (46.3% for 18-64 yrs; 39.0% 65-84 yrs; 36.3% 85+;  $p =.0000$ ). There was a slight increase in the frequency of non-treatment decisions with increasing age. The effect of age on the incidence of intensified alleviation of symptoms ( $OR=0.985$ ,  $CI=.976-.995$ ) and non-treatment decisions ( $OR=1.018$ ,  $CI=1.004-1.032$ ) remained after controlling for confounding variables such as gender, education, marital status, place and cause of death. The covariance between age and the incidence of euthanasia could be explained by other confounders ( $OR=.998$ ,  $CI=.982-1.015$ ). Conclusion The observed differences in the incidences of end-of-life practices between younger and elderly patients in Belgium can only partly be explained by different

patterns in their cause of death. The potential risk of suboptimal end-of-life care for the elderly remains a concern for the medical practice and policymakers.

**PB7 209 END OF LIFE FOR INSTITUTIONALIZED ELDERLY PERSONS : EVALUATION OF THE TERMINAL PHASE CARE IN LONG-TERM CARE UNITS**  
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Y. GAUDIN(1), L. KEROMNES(1), C. PETIT(1), P. GAUTHIER(1), A. AZEMARD(1),  
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Introduction : As part of our ongoing evaluation of our professional practice, we have conducted an audit of terminal phase care in the long-term care units of our hospital. Methods and resources : We set up a multidisciplinary workgroup that reviewed the recommendations on palliative care published by ANAES in 2002. We reviewed patient records in order to identify those who died in 2008 and who were known to be in the terminal phase of their illness before death and requiring palliative care. From this group, 30 were randomly selected. Each set of records (both paper based and computerized records) was then reviewed in comparison with the audit criteria by one of the 6 teams each team was made up of a paramedic and a doctor. This was done in the presence of the project manager. Results : The multidisciplinary meeting decisions have been recorded in 50% of the files. In a large number of cases (19/28), the records reflected a specific mention that the patient was approaching the end of their life. In 7/30 cases, our Palliative Care Mobile Team provided assistance to the usual medical and nursing team in the care of the patients involved. The administration of analgesics of the 3rd category was frequent (21/30). Supporting close relatives of the dying patient was usually not discussed in the record only (6/28). The therapeutic or diagnostic interruption aimed at avoiding an unreasonable curative care was referred to in 17/30 of the cases. The medical and nursing teams tended to be poor at completing entire pain evaluation scores (11/30), in some cases did not consider pain management at all (9/21), and delivered poor mouth care (11/30). In addition, the respiratory symptoms of the agonizing phase are seldom anticipated (4/30 for polypnea, 13/

**PB7 210 CPR IN ELDERLY HOSPITALISED PATIENTS; ARE WE ACTING IN THEIR BEST INTERESTS?**  
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Introduction: Delivering cardiopulmonary resuscitation (CPR) services places enormous pressure on hospital staff and their resources. Many healthcare systems will automatically provide this treatment for all inpatients unless senior medical staff have documented an advance directive stating that CPR is inappropriate. The recently updated UK Resuscitation Council guidelines (2007) advised healthcare staff to consider the burden of CPR as well as the benefits whilst acting in the patients best interests and recent published data have shown that certain comorbidities are associated with poor outcome. Materials and Methods: We reviewed the casenotes of 55 inpatients in a University hospital for whom the CPR team was called during two separate intervals in 2008 and 2009 respectively. Our objectives were to assess the survival rate and to document the clinical features and comorbidity of these patients in order to ascertain their prior likelihood of survival after CPR. Results; CPR was performed in 49 patients, 61% male. Overall survival, 2%. 90% >65yrs and 40% >80 yrs. Documented cardiac rhythms; pulseless electrical activity 53%, asystole 33% and ventricular fibrillation 12%. Monitored beds were used in 20%. Listed disabilities and comorbidities included prior dependency on carer support in 71%, chronic kidney disease level ≥3 in 38%, COPD 26%, cancer diagnosis 24% and left ventricular moderate/severe impairment in 18% respectively. Conclusions; Survival rate was extremely low. The majority of patients were elderly and a significant proportion had comorbidities which have previously been shown to be associated with poor outcome. In order to act in the patients best interests we need to consider a more rigorous approach in deciding which patients are suitable for CPR so as to permit improved care planning for those in the final stages of life.

**PB7 211 WHICH PALLIATIVE CARE OUTCOME MEASURES ARE SUITABLE FOR USE IN RESIDENTIAL AGED CARE FACILITIES?**  
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This poster will report on the results of a Joanna Briggs Institute systematic review conducted to assess the psychometric properties (reliability/validity) and feasibility of palliative outcome measures used to assess the quality of palliative care provided in residential aged care facilities. Articles were obtained from searching Medline, Cinahl, EMBASE, Psych Info, Psych Articles, DARE, Cochrane Reviews, TRIP and hand searching key palliative and aged journals published between 1/1/2000 and 1/9/2008. A total of 424 articles were identified of which 14 were included in the final review. These 14 articles discussed the psychometric properties of ten outcome measures. This poster

compares these ten outcome measures and provides recommendation for use of these in measures for clinical practice and research.

**PB7 212 ARTIFICIAL NUTRITION OR HYDRATION FOR ADVANCED DEMENTIA PATIENTS. PERSPECTIVES FROM DUTCH AND AUSTRALIAN DOCTORS**  
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Background It is sometimes difficult to decide about the use of artificial nutrition or hydration (ANH) for patients suffering from advanced dementia. A study in 6 European countries showed that forgoing ANH in patients nearing death is a substantial practice that, however, significantly varies between countries. Medical practitioners may thus have different ideas about the appropriateness of making decisions about ANH. We explored how Dutch and Australian doctors decide about the use of ANH for advanced dementia patients. Methods and materials We performed semi-structured interviews with 15 Dutch and 15 Australian doctors. Interviews were transcribed, coded and analysed using constant comparative analysis. Results Both Dutch and Australian doctors are hesitant to provide ANH for patients with advanced dementia, which is a progressive deteriorating disease. However, they are willing to provide ANH for a short period of time as (1) temporary treatment to overcome an acute illness, as (2) a trial of recovery potential and / or (3) to keep other persons, such as the patient's relatives, comfortable. Most Dutch doctors speak openly about withholding and withdrawing ANH as an end-of-life decision; withdrawing ANH seems harder for them than withholding it. For Australian doctors, the difference between the two seems less relevant: they frequently do not recognize forgoing ANH as explicitly refraining from potentially life-prolonging treatment. Conclusion Dutch and Australian doctors to a great extent use similar considerations when administering ANH to patients with advanced dementia. Their decisions are largely based on medical grounds, but other factors, such as the comfort of relatives, play a role as well. Discussions about forgoing ANH seem to be more culturally determined. Open discussion may contribute to transparent and rational decision making.

**PB7 213 A PILOT STUDY OF A COMMUNITY BASED YOGA INTERVENTION AMONG THE ELDERLY AND ITS EFFECTS – A QUALITATIVE STUDY**  
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Scientific evidence indicates that physical activity can extend years of active independent life, reduce disability, and improve the quality of life for older persons. Yoga is an alternative to high impact aerobic exercises that can be strenuous on the body and discouraging to the elderly. Yoga may benefit the elderly by increasing longevity; increasing cognitive and perceptual flexibility; increasing behavioral flexibility; improving mental health and sense of well-being; prevention of osteoporosis; increasing strength and improving balance and gait; and reducing falls. Also, yoga activities can be varied to suit individual needs, and the benefits of yoga may be derived from even brief periods of activity. Therefore, any elder could participate and each would benefit. Although many benefits are described, research and scientific evidence of yoga are lacking. Objectives: To identify and explore the short- and long-term outcomes of a yoga intervention Methods: Cross sectional study - yoga intervention in a senior retirement community. Pre-post intervention qualitative assessment by focus groups and key informant interviews. Group classes conducted weekly. Residents of the community, both male and female age 65 – 89 years voluntarily participated. Intervention tailored to individual functional level. 60 minutes sessions included stretching, flexibility, endurance and balance, and relaxation. Effects were evaluated at, baseline, 3 months, and 1 year. Results: Demographic measures. Other outcomes measured based on themes identified by focus group discussions and key informant interviews. Participants reported improvements in gait and stability, decreased pain, decreased falls, improved self esteem, decreased medications, improved sleep, at one year participants felt peaceful and "connected with self." Conclusion: - Intervention appealing and available to the elderly. Can be tailored to suit individual needs, may serve as a viable alternative to more strenuous physical activities. This study formed the basis for designing intervention with objective measures and stronger study design

**PB7 214 CARDIAC AUTONOMIC MODULATION DURING ISOMETRIC EXERCISE DOES NOT CHANGE AFTER ECCENTRIC STRENGTH TRAINING.**  
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Introduction: Isometric exercise is an autonomic test that allows studying interactions between the musculoskeletal and cardiovascular systems and can be useful to evaluate strength training. The effect of eccentric strength training (ET) on the cardiac autonomic

modulation is not clear. Methods and materials: Training group (TG) (9 men, 62±2 years) was submitted to ET (12 weeks, 2 days/week, 2-4 sets of 8-12 repetitions at 75-80% peak torque (PT) involving knee flexion and extension). Control group (CG) (8 men, 64±4 years) did not perform the ET. The cardiac autonomic modulation was evaluated by two symbolic indexes. The 0V% and 2UV% reflect changes in sympathetic and vagal modulations, respectively. Symbolic analysis was carried out over heart period variability series (around 200 cardiac beats) derived from ECG recordings during isometric contraction of knee extension muscle (15% of maximal voluntary contraction). The unpaired and paired t-test was used in the statistical analysis. Results: ET caused an increase on the eccentric PT only for TG (TG: 210±38 to 253±61 N.m and 118±25 to 133±27; CG: 203±33 to 215±40 N.m and 126±20 to 135±26 extensor and flexor, respectively). Isometric torque did not change for both groups (TG: 178±25 to 195±32 N.m; CG 172±27 to 176±26 N.m). The 0V% and 2UV% did not change in both groups (TG: 20±15 to 24±12 and 18±10 to 17±7, 0V% and 2V% respectively; CG: 23±10 to 17±9 and 15±5 to 19±7, 0V% and 2V% respectively). Conclusions: ET has improved only the eccentric force which can be explained by the specificity of training. The symbolic analysis has indicated that ET does not modify the cardiac autonomic control during the isometric exercise.

**PB7 215 CAN MEDICATION REVIEW USING THE DRUG BURDEN INDEX IMPROVE FUNCTION IN OLDER AUSTRALIANS LIVING IN RETIREMENT VILLAGES?**

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Introduction: The Drug Burden Index (DBI) uses the principles of dose-response and maximal effect to estimate an individual's exposure to anticholinergic and sedative medications. The association between higher DBI and impaired function has been validated in two populations of older people in the USA, and in a population of older Australian men. This study aims to assess the impact of information about DBI on prescribing in older people, and the association between change in DBI and function over 3 months. Methods: Study population includes older people living in self-care retirement villages, Sydney, Australia. Participants are randomised into intervention and control groups. The intervention involves a letter and phone call to General Practitioners, using DBI to prompt them to consider cessation or dose reduction of anticholinergic and sedative medications. Objective functional outcomes include the Short Physical Performance Battery (SPPB), maximum score 12. Results: To date, 91 (of 150) participants have been enrolled in the study (46 intervention, 45 control group). The mean age is 82.7 years. Approximately 23% are exposed to anticholinergic drugs and 22% to sedative drugs, with a mean DBI of 0.23±0.37. At baseline, after adjusting for confounders (sociodemographics, comorbidities, cognitive impairment), for every unit increase in DBI, the SPPB score decreased by 1.00 ( $p=0.16$ ). The average DBI at 3 months in the 71 participants who have been followed up is 0.23±0.40. At follow up, no change in DBI was observed in 63 participants. DBI decreased in 6 (2 intervention, 4 control group), and it increased in 2 (intervention) subjects. Conclusions: On preliminary analysis, there is a non significant trend between higher DBI and poorer physical function in older Australians living in retirement villages. The intervention has not resulted in decreased DBI at 3 months.

**PB7 216 A SUITABLE MODE OF RESISTANCE EXERCISE FOR COMMUNITY-DWELLING OLDER ADULTS WITH LOW MUSCULAR PERFORMANCE**

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Community-dwelling older adults with low muscular performance often avoid machine-based resistance exercises from fear of their inability to do that. In this study, we evaluated the influence of pre-intervention muscular performance score (PMPS) on the outcome of a community- and home-based resistance exercise (CHRE) program among older adults. Methods: 108 older adults (46 men and 62 women, 72 +/- 5 years) participated in a 10-wk CHRE program where they performed exercises at least twice a week at home. Simultaneously, they participated a weekly exercise session (warm-up, elastic band-based resistance and cool-down exercises) at a local community center provided by instructors. Muscular performance was assessed by 30-sec arm curl test (AC) and 30-sec chair stand test (CS) before and after intervention in all participants. Participants were divided into three groups [low-score group (LS), middle-score group (MS) and high-score group (HS)] based on their PMPS. One-way ANOVA with post hoc was done to examine the differences of pre-post intervention % changes among three groups. Results: In AC, 40 participants belonged to LS (<21 reps), 30 to MS (22-23 reps) and 38 to HS (>24 reps). After CHRE program, significant differences in changes among groups were only found when LS (34 +/- 22%) was compared with MS (13 +/- 11%) and HS (16 +/- 11%). In CS, 34 participants belonged to LS (<19 reps), 35 to MS (20-21 reps) and 39 to HS (>22 reps). After CHRE program, significant differences in changes among groups were only found when LS (31 +/- 23%) was compared with MS (16 +/- 16%) and HS (16 +/- 17%).

Conclusion: These results suggest that CHRE program is more effective for older adults with low muscular performance, and it could be a suitable mode of resistance exercises for these people.

**PB7 217 EXERCISE AND RISK OF INJURIOUS FALL IN HOME-DWELLING ELDERLY**

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Objectives. To examine the relationship between different types of physical exercise and the risk of subsequent fall-related injury. Study Design. A prospective study of the home-dwelling elderly. Methods. A population sample of home-dwelling subjects aged 85 years or older (n=512) in northern Finland participated in the study. Baseline data were collected by home-nursing staff through postal questionnaires and clinical tests. Frequency and times of physical exercise – that is, walking exercise and other exercise (home exercise, group exercise, gardening, cross-country skiing, dancing, swimming, bicycling) – and falls were recorded by a nurse examiner, who telephoned the participants 8 times during a 2-year follow-up period. Statistical analyses were based on Cox regressions and pooled logistic regressions. Results. The risk of injury-causing falls was reduced by other exercise taken at least 1 hour per week compared with corresponding non-exercise; adjusted odds ratio 0.37 (0.19–0.72) but not by walking exercise. The risk of injury-causing falls was not increased by any kind or amount of exercise taken. Female sex, a history of recent fall-related injury and poor baseline near-vision acuity were the other significant predictors of injury-causing falls. Conclusions. Habitual physical exercise proved to be safe and some of the exercises were associated with reduced risk of subsequent fall-related injury. Female sex, an injury-causing fall in the recent past and problems with near vision increased the risk.

**PB7 218 FRACTURES AFTER NURSING HOME ADMISSION: INCIDENCE AND POTENTIAL CONSEQUENCES**

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Introduction: Residents of nursing homes are a high risk group for fractures. The aim of the study was to analyse fracture rates as a function of time from admission to nursing home, across a range of fracture sites, gender and functional abilities. Methods: Fractures of the upper limb, femur, pelvis and lower leg, time to first and subsequent fractures, age, gender and functional ability at admission were measured in 93,424 women and men aged 65 years and older and newly admitted to nursing homes in Bavaria between 2001 and 2006. Results: Fracture incidence was highest during the first months after admission to nursing homes and declined thereafter. This pattern was observed for all fracture sites, in women and men and in residents with different degrees of functional abilities. For example, fracture rates of the upper limb declined from 30.0 to 13.5/1000 person years in the first nine months after admission, and for all fracture sites from 135.3 to 69.4/1000 person-years in a corresponding time period. Conclusion: Newly admitted residents have the highest fracture risk. The pattern of risk is similar across all fractures suggesting a generic causal pathway. Implementation of effective fracture and fall prevention efforts should be a priority at the time of admission to nursing homes.

**PB7 219 FALL PREVENTION PROGRAM, FOR ELDERLY IN A PORTUGUESE HOSPITAL SETTING**

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Preventing falls in hospitals or nursing homes, is today an important quality goal in health care. In Portugal is not nursing practice the use of falls assessments tools for elderly. So, a nurse lead fall prevention program was developed in a Portuguese hospital. The fall prevention program, purposes were: Nursing education; Fall team formation; And fall prevention protocols. With organizational support, nursing staff and a nursing school the "Falls Prevention Program" started in 2008, May. With this initiative, it was possible to involve more than 60% of the nurses into formation and practical orientation. A fall team nurse (FTN) approach was created. Team members included nurses and a nurse teacher. The FTN developed the "Falls Prevention Program", which includes: - Fall risk assessment of older inpatients. For this we chose de Hendrich II fall risk model; - Fall definition; - Availability of supplies and equipments such a bed alarms, low beds, fall prevention kit (red stickers, red socks, red arm bands and bed sign) and leaflet informative about falls education for patient and family; - Falls reports, which includes, time, date and history of falls. Location, injury results and fall witnessed. Hendrich II fall risk model score, fall cause, fall prevention kit in use and medical notice. Our fall prevention program, use

similar strategies as others studies. However the inexistent fall data publish in our country become this investigation important for findings. The innovation in a Portuguese hospital setting will prove that we must improve elderly care security and the results during the following months will support that.

**PB7 220** EFFECT OF PHYSICAL ACTIVITY ON COGNITIVE PERFORMANCE IN SENIOR PRACTICING INTERMITTENT WORK EXERCISE TRAINING.

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Introduction: Aging leads to a multiple of functional and intellectual disability, thus the concept of successful aging is the priority of senior citizens. In this aim a primary prevention approach have been developed especially for the promotion of regular physical activity among elderly. We evaluate the effect of Intermittent Work Exercise Training (IWET) program on cognitive functions. Methods and Materials: 23 healthy volunteers (13 males, mean age 71.5 years) performed a "tailor-made" IWET program during 1 year, 2 sessions per week. Each 30 min bicycling session consisted of 6 stages of 5 minutes, with 4 minutes, at a power output corresponding to the first ventilatory threshold (VT1), alternated with 1 minute of cycling at a power corresponding to a submaximal intensity. All subjects performed before and after 9-week of the IWET program an incremental exercise test which define their VT1, Peak Oxygen Uptake (VO2 peak) and Maximal Tolerated Power (MTP). At inclusion (T0) and after the 1-year IWET (T1), a cognitive evaluation was performed using the Rey auditory-verbal learning test (RAVLT) and verbal span, testing the working memory. Results: Training results in a significant increase of the MTP (+10.2%), the VO2 peak (+10.3%) and the VT1 (+33%). Compared with T0, the cognitive evaluation at T1 showed an improvement of short memory, with an average gain of 2 points on RAVLT ( $p=0.03$ ) and an increase of 3 points on the verbal span ( $p=0.001$ ). Conclusions: Regular physical exercise with IWET was significantly related to cognitive gain in the short memory especially in working memory. Thus, the promotion of physical activity may improve cognitive functions in senior and thus may enhance their life style. Further large-scale study should be plan to evaluate the effect of physical exercise on the other memories.

**PB7 221** UNDERTREATMENT OF OSTEOPOROSIS IN THE OLDEST OLD? A NATIONWIDE STUDY OF OVER 700 000 OLDER PEOPLE

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Introduction: The aim of this study was to investigate whether age is associated with use of osteoporosis drugs in a large population of older people. Methods: We analysed data on age, sex, type of residential area (urban/rural), and dispensed drugs for people aged >75 years registered in the Swedish Prescribed Drug Register from October to December 2005 (n=731 105). Multivariate logistic regression was used to analyse whether age was associated with use of osteoporosis drugs, after adjustment for type of residential area and number of other drugs (a proxy for comorbidity). Results: Osteoporosis drugs were used by 16.1% of the women and 3.4% of the men. The probability of use of bisphosphonates declined with increasing age [ORwomen=0.36 (95% CI 0.34-0.38) and ORmen=0.46 (95% CI 0.37-0.56) for age >90 years vs. 75-79 years]. Raloxifene was also negatively associated with age. Calcium + vitamin D supplements, however, showed a divergent pattern regarding age. In women, the lowest likelihood of use of calcium + vitamin D supplements occurred in the oldest old (>90 years). Conclusions: Our results indicate an undertreatment of osteoporosis, particularly with bisphosphonates, in the oldest old in Sweden. Future research is needed for understanding the mechanisms behind this age effect.

**PB7 222** THE CHAOS CLINIC - A RANDOMIZED CONTROLLED TRIAL OF A FALLS CLINIC FOR PREVENTION OF FALLS AND RELATED FRACTURES

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The purpose of this preliminary report of a falls clinic is to determine the number of falls and fall-related injuries (fractures) among Finnish Chaos Clinic participants. The Chaos Clinic is a falls clinic for prevention of falls and related injuries among elderly people. All persons aged 70 years or more with high-risk for falling and fractures are first interviewed and examined carefully at the Chaos Clinic to evaluate all individual intrinsic and extrinsic risk factors for falls and fall-induced injuries such as fractures. After the comprehensive and individual assessment of the risk factors for falling, the participants are randomized to the intervention or control group. Thereafter, the personnel of the Chaos Clinic decide, on individual basis, the falls prevention measures needed and supervise their execution in the intervention group (a multifactorial preventive approach). All the participants are followed-up for 12 months for falls and related injuries. Our hypothesis is that persons in the intervention group will have 30% less falls and related injuries. The trial started in January 2005 and is still in process. So far, 770 participants have been followed for 12 months. At the one-year follow-up, 392/770 (51%) of the participants had fallen at least once having

altogether 926 falls. These falls caused 489 injuries, 37 of them (8%) being fractures. The mean age of the participants was 77 years at baseline and 88% of them were women. The number of falls and related injuries have been at expected level. The coming years will show the true efficacy of the falls prevention intervention of the Clinic. (The contents of the abstract were submitted and accepted for WCO in Thailand 2008 but the congress was cancelled. This is an updated abstract.)

**PB7 223** RESPONSE OF TISSUE ON INTERMITTENT PRESSURE: INVESTIGATION USING AN IN VIVO RAT MODEL

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Introduction: Pressure ulcers are common and serious complications of tissue damage affecting many elderly with diminished pain sensation and/or diminished mobility. Although the cause of pressure ulcer remains to be unclear, it is generally believed that intermittent pressure relief can serve as a protective regime. In this work, we aim to examine the effects of intermittent pressure relief on tissue damage. Method: Sixteen adult Sprague-Dawley rats were randomly and equally assigned to static compression (SC,) or repetitive loading (RL) groups. Tissue compression (100mmHg) was performed over an area in the tibialis region of the right limb of the rats. For SC, the loading duration is 6 hours each day on two consecutive days. For RL, a 30 seconds release was given after each hour of loading. The left unloaded limb served as intra-animal control. All rats were sacrificed 20 hours after the last session of loading. Tissues directly underneath the loading region were collected and quickly frozen. Hematoxylin and eosin staining was used to demonstrate the histological changes. Result: Muscle tissue under went the compression procedure were characterized by rounding shape myofibers, increased number of nuclei in the interstitial space, and centralized nuclei were found at locations within the muscle overlying the tibia bony surface. When intermittent pressure relief regime was introduced, such damages were observed to be lessened. Moreover, muscle damages in those rats with intermittent pressure relief were not confined to the areas near the tibia bony surface, but also developed at localized area near the skin surface. Conclusion: These results demonstrated compression-release of only 30 seconds per hour can lessen cell damages to the muscle tissue overlying bony area. However, it is intriguing to observe that there were localized muscle cell damages initiated near the skin-muscle interface resulting from intermittent pressure relief.

**PB7 224** SELF-CARE FOR MEDICATION USE IN OLDER THAI PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Introduction & Objective To promote quality of life in patients with chronic obstructive pulmonary disease (COPD), medications play an important role to relieve distressing symptoms. However, older persons tend to have limited abilities to use medications appropriately. The purpose of this descriptive study was to describe self-care for medication use and basic conditioning factors for medication use (physical status, family support, and healthcare professionals' support) in older patients with COPD. Methods & Materials Purposive sampling was used to recruit 70 older patients with COPD at the Out-Patient Department at a general hospital in Thailand from February to April 2007. Results The majority of the sample took the right dose and time of oral medications, according to the physician's prescription. However, for inhaled bronchodilators, they used a higher number of puffs than the prescription, particularly, when acute exacerbation occurred. Analysis revealed that the number of incisors was positively related to the ability to cover the mouthpiece of the metered dose inhaler. A tremor hand was related to the low ability to press the canister, and the capacity of pulmonary function was positively related to the ability to breathe and hold their breath. Additionally, the family provided assistance for oral medication use of older patients including preparing the medications, reminding them to take the medications, and inquiring healthcare professionals about medication use. Regarding the inhaled bronchodilator, family members provided assistance when requested or when acute exacerbation occurred. Healthcare providers advised all older patients about the time and dose of oral medications and steps of using the inhaled bronchodilator, but they rarely explained the importance of each step. Conclusion To promote appropriate self-care for medication use in older patients with COPD, assistance from the family and healthcare professionals is needed. Physical function related to medication use should be assessed.

**PB7 225** NON INFERIORITY ANALYSIS OF A RANDOMISED TRIAL (RCT) OF HOME VERSUS DAY HOSPITAL REHABILITATION

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**Introduction** The literature suggests that Day Hospitals are an effective setting for comprehensive services for older people. Previous trials have examined the Day Hospital as a setting for rehabilitation for stroke, inpatient, outpatient and nursing home care. Most previous RCTs have not compared Day Hospital Rehabilitation(DHR) to Home Based Rehabilitation(HBR). Methods We have conducted a four centre, two-arm randomised controlled trial which randomised patients to HBR or DHR. The primary outcome was change on the Nottingham Extended Activities of Daily Living Scale(NEADL) at six months. Secondary outcome measures included EQ-5D, Hospital Anxiety and Depression Scale (HADS), Therapy Outcome Measures(TOMs), hospital admissions and the General Health Questionnaire(GHQ-30) for carers. A 10% non-inferiority limit was applied to the confidence interval estimates for the outcome measures at the six-month follow-up. Results Estimated sample size of 460 was not achieved, 42 subjects received HBR and 42 DHR. The groups were well matched at baseline. At 6 months there was no significant difference in the primary outcome measure NEADL Total (DHR: mean=30.78, SD=15.01; HBR: mean=32.11, SD=16.89; P=0.37). EQ-5D, TOMs and GHQ for carers showed no significant differences between settings. Non-inferiority was demonstrated for the NEADL, EQ-5D, and HADS anxiety scale. The HADS depression scale suggested borderline advantage for HBR in some of the analyses. A similar pattern was seen at three and 12-months although a statistically significant difference in the mean EQ-5D index score was seen in favour of DHR at three months (P=0.047). Conclusion The trial was underpowered. Overall HBR does not appear to disadvantage older people or their carers compared to DHR. Patients receiving HBR may experience less psychological distress than those receiving DHR.

**PB7 226 UTILIZATION OF INPATIENT CARE BEFORE AND AFTER HIP FRACTURE: A POPULATION-BASED STUDY**

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**Introduction** Aim of this study was to evaluate effect of hip fracture (HF) on the inpatient care utilization by assessing use of hospital days in HF patients and general population. Number of and causes for hospital days were determined for the prefracture and two postfracture years. Methods The study covered 70-year-old and older HF patients and general population (26 000) living in Central Finland in 2002-03. Hospital registers and medical records were used to identify HF cases. Hospitalization data were obtained from the nationwide discharge register. Results 498 HF cases (age 82 SD 7 years, 75% women) were identified. Among them, there were 23, 107, and 52 hospital days per person-year in the prefracture, first and second postfracture year, respectively. In general population, the yearly number of hospital days was constantly 11. The age- and gender-adjusted rate ratio of hospital days between HF group and general population was 1.30 (95% CI: 1.27 to 1.32) in the prefracture year, 6.91 (95% CI: 6.85 to 7.00) in the first postfracture year, and 3.61 (95% CI: 3.55 to 3.67) in the second postfracture year. Before and after HF, hospital days due to injuries were more prevalent in HF group. In addition to injuries, excess hospital days were seen in six other ICD-10 classes in the first postfracture year and in four classes in the second year. Conclusions Evaluation of hospitalizations in 70+ population showed that HFs were associated with a substantial increase in the inpatient care utilization. Hospital days in several diagnostic classes increased and still exceeded both the prefracture and population levels in the second postfracture year. HF can far exceed older person's restricted reserve capacity and predispose to worsening of comorbidities and outbreak of new diseases.

**PB7 227 THE EFFECTS OF ANABOLIC AND CATABOLIC BIOMARKERS ON MUSCLE STRENGTH DECLINE: THE INCHIANTI STUDY**

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**Introduction:** Decreased muscle strength is a major public health concern in older persons predisposing to functional limitations, increased fall risk and higher mortality. Therefore, it is important to examine the related risk factors. The aim of this study was to examine whether high levels of multiple catabolic and low levels of multiple anabolic biomarkers predict accelerated decline of muscle strength over six year follow-up. Methods and

materials: In a representative sample of 312 men aged ≥ 65 years in the InCHIANTI study we measured interleukin-6 (IL-6), C-reactive protein, tumor necrosis factor alpha receptor 1 and resistin as well as bioavailable testosterone, insulin-like growth factor-1 and dehydroepiandrosterone sulphate (DHEA-S). Biomarker values were divided into tertiles and the numbers of catabolic / anabolic biomarkers in the highest / lowest tertile were calculated. Main outcome measure hand grip strength was measured at baseline, 3- and 6-year follow-up. Results: In adjusted linear mixed models higher concentration of IL-6 ( $p = 0.01$ ) and lower levels of DHEA-S ( $p = 0.01$ ) predicted muscle strength decline. Cumulated number of dysregulated catabolic and anabolic biomarkers showed greater decline in muscle strength. Subject who had increased values in more than 3 catabolic biomarkers had borderline significantly greater strength decline compared to those without any increased value ( $p = 0.07$ ). Having 1 or more decreased value in anabolic hormones was associated with greater strength decline ( $p < 0.05$ ). Increasing number of combined dysregulated catabolic and anabolic biomarkers was step-wisely associated with accelerated muscle strength decline ( $p < 0.05$ ). Conclusions: Having multiple dysregulated catabolic or anabolic biomarkers is a better predictor of muscle strength decline than single biomarker alone suggesting that a multisystem dysregulation is at the core of the mechanism leading to muscle strength decline with aging.

**PB7 228 A POPULATION-BASED STUDY ON FACTORS ASSOCIATED WITH FUNCTIONAL DISABILITY AMONG OLDER ADULTS IN THE GREAT METROPOLITAN BELO HORIZONTE, MINAS GERAIS STATE, BRAZIL**

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**Introduction** - Preventing disability in a context of population ageing is one of the important roles of public health. The main objective of this study was to investigate disability among aged individuals living in community and to determine the prevalence and the associated factors to disability among elderly in the Metropolitan Area of Belo Horizonte, Minas Gerais, Brazil. Methods and materials - The theoretical model was based on predisposing (socio-demographic), extra-individual (social support, use of health services), and intraindividual factors (health conditions). The study was conducted in a probabilistic sample of 1,786 aged individuals (≥ 60 years). The dependent variable was disability, defined as mild (some difficulty) or severe (total dependence) in performing at least one basic activity of daily living. Results & conclusions - Prevalence of disability was 16% (8% mild; 8% severe). Age and worse self-rated health were independently and positively associated with mild and severe disability. Self-reported hypertension and arthritis were associated with mild disability, while diabetes and stroke were associated with severe disability. Severe disability was independently and negatively associated with number of visits by friends in the previous 30 days. According to the results, chronic conditions associated with disability in the study population are preventable, and severely disabled elderly had less extra-family social support.

**PB7 229 COMPREHENSIVE GERIATRIC ASSESSMENTS IN EMERGENCY DEPARTMENTS: REVIEW OF 3-YEAR-DATA FROM THE INPATIENT GERIATRIC TEAM OF GRENOBLE UNIVERSITY HOSPITAL**

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**Introduction:** Geriatric assessment intervention in emergency units is expected to target frail elderly and to reinforce medical and social management. Methods and materials: Comprehensive geriatric assessments were conducted by a geriatric team in the emergency units during opening days from January 2005 to December 2007 among elderly patients targeted on medical and/or social frailty criteria. This study aimed to describe their socio-demographic and geriatric profile and their health outcomes, with a special focus on frail elderly. Results: 786 assessments were analyzed. Patients mean age was 85 years. 63% of patients were women, 85% lived at home and 56% lived alone. Acute functional decline was present among 83% of patients with a mean score in Katz's ADL scale falling from 3,5 points at home to 1,6 at admission. 67% of patients were frail, 23% had dementia, 8% had a mono-pathology and 2% were independent or in end of life. Main identified geriatric syndromes were: loss of autonomy (76%), dementia (44%), poor overall condition (40%), falls (39%). Mean prevalence of pressure sores was 33%, with a significant 3-year decrease as memory foam mattress became available. The median hospital stay duration was 14 days with a significant 3-year decrease of 5 days. It was significantly higher among frail patients (16 days versus 11 days). Global mortality was 13% and was more important among frail elderly (16% versus 5%). Following index admission, 68% of patients went back home, 14% to medical institutions, 13% deceased and 5% moved to another hospital. Conclusion: These results confirmed the efficiency in screening elderly with frailty or cognitive impairment early at admission, the complexity of frail elderly management and

the positive improvements in care management at the emergency unit level. Frail patients remain at higher risk for prolonged hospital stay and death.

**PB7 230 ABILITY TO RISE FROM THE FLOOR : PREDICTIVE VALUE OF FALL IN THE ELDERLY**

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Introduction: Falls are common events with serious consequences on quality of life for elderly people. Ability to get up alone after a fall is considered as a factor of better prognosis. We were wondering whether the inability to rise from the floor shows a predictive value of a subsequent fall. Methods: 128 patients aged 75 and older were tested by a physiotherapist about their ability to get up during a day hospitalization for geriatric evaluation. All the patients were followed-up during one year and falls were notified at 3, 6, 9 and 12 months. Results: Mean age was 82.7 years. 48.5% of the patients had a previous history of fall. After evaluation, 60.6% of the patients were able to rise from the floor alone; 11.8% needed help; 27.6% showed a complete inability to get up. The inability to rise from the floor was associated with falling at 3 (28.6% versus 9.9% in patients able to get up,  $p < 0.05$ ), at 6 (38.8% versus 14.5%,  $p < 0.01$ ), at 9 (47.9% versus 23.3%,  $p < 0.01$ ) and at 12 months (57.4% versus 34.7%,  $p < 0.05$ ). Conclusion: Our results showed that 39.4% of the frail population followed in geriatric day's hospital were exposed to a high risk of lying on the floor after falling. We can think that the inability to get up is linked to motor alterations which participate to postural abnormalities and to the risk of falling. In this way, it is very interesting to consider that risk of falling is increased in subjects who are unable to get up.

**PB7 231 COST OF SERIOUS INJURIOUS IN-HOSPITAL FALLS – A CANADIAN EXAMPLE**

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Introduction: Falls represent 40% of all in-hospital accidents and the majority occurs among patients over 60 years of age. In-hospital falls rates vary from 2.9-13 falls/1000 patient days, and consequences range from no injury to serious injuries including fractures and head trauma. Although least common, multiple injuries are the most expensive at an average cost of US \$22,368 (\$9,969-\$64,382) per event, and length of stay (LOS) is 1-5 weeks longer. The purpose of this project was to estimate the cost and LOS related to serious injurious falls in a Canadian acute care hospital. Methods: This historical cohort study utilized data from Risk Management and Case Costing databases at an acute care teaching hospital and medical chart reviews of patients who sustained a fall-related serious injury during hospital stay. Between April 2004 and October 2007, 37 patients sustained a serious injury after an in-hospital fall. Their hospital cost was compared with 2,330 control subjects, non-fallers, who were matched by medical diagnosis, age and gender. Chart reviews identified services attributable to each fall. Total cost of inpatient stay and LOS were calculated for fallers and controls and compared using T-test and multivariate linear regression. Results: The average cost of hospital stay for seriously injured fallers and non-faller controls were CAD \$44,203 and \$13,507, while LOS was 45 and 11 days respectively. Surgery, surgery-related treatment, rehabilitation and radiology were the most frequent fall-related services provided. The cost to the health care system is underestimated as data did not include physician billings or care post-discharge. Conclusions: Prevention of serious injurious falls that occur during hospital stays have potential to reduce hospital costs by up to half a million dollars per year.

**PB7 232 PROMOTING ACTIVE LIVING (PAL): BEST PRACTICE GUIDELINES FOR FALL PREVENTION IN ASSISTED LIVING RESIDENCES**

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Introduction Assisted Living Residences (ALRs) are a priority setting for fall prevention due to the rapid growth among older persons that are at high risk and are choosing to remain living in the community. An action research methodology was employed to determine the feasibility of implementing evidence-based falls prevention strategies that are sustainable in the routine delivery of care. The one-year project consisted of a consultative planning process, six-month intervention study, and a collaborative process for the development of the Best Practice Guidelines. Methods The 6-month prospective, feasibility study was conducted at two ALR sites, where 161 of 188 residents consented to

participate. Measures included focus groups, surveys, and pre/post test measures of balance and gait assessments, and 6-month fall and fall-related injury surveillance. Interventions included staff and resident training on fall tracking, fall prevention education for staff and residents, and physical activity interventions. Results Over 6 months, 155 falls were recorded, with 38% (N=73) of residents identified as having at least one fall and 43% (N=72) of falls resulting in injury. There was a statistically significant reduction in the rate of falls per 1,000 resident days between the first and second three-month periods ( $X^2=11.98$ ;  $p=0.001$ ). A significant difference ( $t=3.16$ ,  $p=.002$ ) was noted in the Timed-Up-and-Go test findings pre and post PAL study, with fewer residents with scores above the high-risk cut-off for falling. Focus group findings revealed the need to tailor prevention to 'joiners' and 'non-joiners' of group intervention activities. Conclusion The PAL study demonstrated that fall prevention guidelines can be implemented within routine service delivery in ALRs. Further testing of these guidelines on a larger scale is planned for greater generalizability.

**PB7 233 ENABLING THE OLDEST OLD AGED 80 AND OVER TO REMAIN IN THEIR OWN HOMES**

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Introduction. Many older adults live independently, adapting successfully to changing circumstances. However, when difficulties arise some have limited access to interventions that do not create health and social service dependency. This qualitative three-year multi-stage research, conducted in Canada, identified a breadth of factors concerning seniors (80+) ability to continue living in their own homes and ameliorating rehabilitation strategies. Method. (a) environmental service audit; (b) 30 interviews with community and facility-dwelling seniors from small, medium and large regions; (c) two 'consensus groups' of service providers and users for prioritization; (d) 10 validation interviews with facility dwelling seniors; (e) 10 interviews with rehabilitation staff to name essential interventions; (f) five public presentations to check credibility of findings. Results. Findings are presented using a Force Field Analysis. Facilitators to seniors remaining in their own homes were: the support of family/friends; access to health and social services; adequate finance; and personal motivation. Impediments included: poor/deteriorating health; lack of social contacts; safety concerns and the insidious erosion of independence that contributed to senior's belief that s/he was a burden. When impediments outweighed facilitators, seniors experienced Decreased Engagement in Roles. Unable to participate in the breadth of personally meaningful roles and/or to a satisfying degree, seniors relocated to supported environments. Conclusion. Some findings support results from other studies. New insights indicate the importance of interventions that promote or sustain continuing engagement in everyday roles and consequent positive mental and physical health. Engagement in everyday activities sometimes called 'occupations' and directed, not only towards self-care but targeted at individually preferred productivity and leisure roles, should be a central focus for those working with seniors wanting to remain in their own homes. This focus points to the congruence of health promotion and community-based rehabilitation strategies, delivered through the combined efforts of health professionals and communities for sustainability.

**PB7 234 HOME ACTIVITY MONITORING PROJECT (HAMP) FOR IMPROVING FUNCTIONAL PERFORMANCE AND REDUCING FALLS IN OLDER ADULTS**

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Introduction: Home-based activity allows individuals to participate in physical activity when limited options may be available. HAMP aimed to improve balance and coordination, build confidence and promote independence through information and education of participants. Methods and Materials: A HAMP project manager supervised other staff and volunteers. Program elements were development of resources, establishment of processes, widespread city and rural marketing, deployment of telephone coaching (the novel approach) and training of facilitators. Of 1,230 referrals, 412 completed the medical clearance, 169 remained active, while 98 had graduated. Activities focused on the individual being encouraged to undertake at least 150 minutes of physical activity per week, supported by an information booklet supplied by Active Ageing Australia. Support was regular telephone communication to encourage HAMP activity three times and walking at least twice a week. Participants kept records which were monitored. Results: From 122 participants surveyed, satisfaction was high - rated 9.1/10. Physical activity increased based on the change in number of days active - comparing the cumulative change from Week 1 at Week 8 and Week 32: participants with decreased physical activity 17% v 16%, retained activity 42% v 30%, increased activity 40% v 54%. In the previous six months, 108 of 384 participants fell (28%) having 319 falls, producing 0.83 falls per person - that number declined with participation: Week 1 0.26 to Week 40 0.07. Physical wellbeing assessed by six indicators had improved in at least three by 8 weeks; the greatest improvement in five occurred at 16 weeks. Greatest benefits in emotional wellbeing (2 indicators) were at 8 and 16 weeks. Conclusions: An enabling individual action plan with realistic achievable goals supported by a telephone coach had

tangible benefits with increased activity, less falls, and improved physical and emotional well-being with excellent client satisfaction.

**PB7 235 PREDICTORS OF RECURRENT FALLING IN HEALTHY OLDER ADULTS: THE IMPORTANCE OF BOTH EXECUTIVE FUNCTION AND GAIT**

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**INTRODUCTION:** Cognitive domains, especially executive function (EF), may influence gait and fall risk, however, questions persist about the nature of this association. **METHODS:** From a cohort of 264 healthy elderly, 203 (76.0±4.7 yrs) who reported no falls during the year prior to the study were investigated. Subjects were evaluated at baseline and one-year-later. Participants reported falls using monthly calendars. At baseline, subjects were free of pathologies that affect gait. Subjects completed a computerized-cognitive-battery that generated age-and-education-normalized index of EF. Based on this index, subjects with the upper (better) and lower (worse) quartiles were compared (n=103). Clinical measures included the Timed-Up-and-Go (TUG), Dynamic-Gait-Index (DGI), Berg-Balance-Scale (BBS) and gait under single and dual task conditions. **RESULTS:** At baseline, subjects had normal MMSE with no group differences ( $p=0.15$ ). 26% had index EF in the upper-quartile (111.8±4.9) and 24% were in the lower-quartile (85±5.1). Significant differences between the groups were observed at baseline in DGI ( $p=0.002$ ), BBS ( $p<0.0001$ ), and in comfortable-gait-speed and speed during dual task. Gait variability (CV) was higher (worse) in the lower-quartile-group during gait under single task condition. In addition, 12% of subjects with lower EF had multiple-falls during follow-up, compared to none in the upper-quartile-group ( $p<0.0001$ ). Discriminant analysis demonstrated that TUG, gait speed and DGI explained 60.4% of the variance between the two EF groups. **CONCLUSIONS:** Challenging gait-assessment-tools such as DGI and TUG may predict future falls. Furthermore, these findings suggest that even in healthy elderly, EF plays an important role in the etiology and risk for multiple falls.

**PB7 236 THE EFFECTIVENESS OF INPATIENT GERIATRIC EVALUATION AND MANAGEMENT UNITS: REVIEW AND META-ANALYSIS**

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Introduction Comprehensive geriatric assessment (CGA) embedded within a geriatric evaluation and management unit (GEMU) may be one of the answers to achieve excellent care for frail older persons admitted to hospital. The objectives of this review are (1) to examine how GEMU's are organized, and (2) to examine the effectiveness of admission on a GEMU. Methods and materials Literature was searched by using different databases (Pubmed, Cinahl, Cochrane Library, Invert and Embase), references lists of included articles, and contacting authors. Thirteen RCT's met the inclusion criteria, describing the effectiveness of seven individual GEMU's. The outcome parameters are mortality, institutionalization, functional decline, readmission and length of stay at different follow-up points. Results The GEMU's are organized in a heterogeneous way and gave no thorough description about CGA. The involvement of a multidisciplinary team was a key element in all GEMU's. The individual trials showed that admission on a GEMU has one or more favorable effects on the outcomes of interest, with two significant effects in the meta-analysis: less functional decline at discharge from the GEMU (RR 0.87, CI 0.77-0.99;  $p=0.04$ ) and a lower rate of institutionalization one year after discharge (RR 0.78, CI 0.66-0.92;  $p=0.003$ ). For the three other outcomes in the meta-analysis, a GEMU did not induce significantly different outcomes compared to usual care. Conclusion There is heterogeneity between the studies, poor quality of some RCT's and shortage of information about CGA. Multidisciplinary CGA offered in a GEMU may be a surplus value in the care for frail older persons admitted to hospital. However, the limitations confirm the need for well designed studies using explicit CGA.

**PB7 237 A HIGH INCREASE IN THE CARE FOR OSTEOARTHRITIS IN THE NEAR FUTURE?**

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Introduction Osteoarthritis of hip and knee is one of the most important old age diseases because its impact on pain and mobility. Joint replacement is the only treatment for severe affected hip or knee joints, which can improve function and mobility. In this study we quantify the expected increase in the need for osteoarthritis-related health care due to (1) the ageing of the population, (2) the epidemics of overweight and obesity, and (3) the changes in health care expectations among the elderly. Methods and materials We combine sex-age

specific data of the Netherlands on the prevalence of osteoarthritis, demographical trends, trends of overweight and obesity, trends in hospital admission on osteoarthritis, trends in hip and knee replacements due to osteoarthritis and opinions of experts in the osteoarthritis health care on the changing profile of patients, to quantify the need for hip and knee replacements in the coming one or two decades. Results Preliminary analyses show that: Between the years 1980 and 2000 the number of hospital admission due to osteoarthritis (mainly knee or hip replacements) doubled to a number of 28,838 (ICD 9-code 715) and increased to 50,123 in the year 2005, which is an increase of more than 70% in those last five years. Only demographical changes are expected to increase the prevalence of osteoarthritis between 2000 en 2020 with 38%. The prevalence of self-reported obesity (BMI>30) increase from 5.1% to 11.2% in the period 1981-2007. Conclusions The current trends will inevitable increase the need for health care for osteoarthritis and this should be taken into account for the planning of health services preventive interventions. In the presentation we will present the final expected numbers based on the combination of historical trends, forecasts and the opinions of medical experts.

**PB7 238 GERIATRICS SYNDROMES IN SPANISH NURSING HOMES. THE RESYDEM STUDY**

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**INTRODUCTION** Geriatric syndromes reach high prevalence in elderly and cause functional disability. RESYDEM study analyzes these syndromes. **OBJECTIVES** To determine prevalence of GS (cognitive impairment, falls, immobility, incontinence, malnutrition, sensory disturbances, pressure ulcers, sleep disorders and depression). **METHODS AND MATERIALS.** Trasversal multicenter, observational study conducted in 54 nursing home representing all Spanish Communities. We analyze previous diagnoses, physical examination and complementary studies. Cognitive assessment by Folstein MMSE, AMT of Hodkinson and verbal fluency test. CM98 test used to assess functional capacity. Statistical analysis of contrast hypothesis test made with t-Student test and Fisher-Pearson chi-square. **RESULTS** Population of 1020 residents (852 study of cognitive impairment). Average 83.20y. (SD=7.90), 65% women (average 84.4y, SD=7.0), 35% men (average 80.7y, SD=8.4). Prevalences: cognitive impairment, 61.7% (CI95%, 58.4-65.1), sleep disturbances 41.7%, 36.6% visual disturbances, falls 34%, 30.9% depression, impaired hearing 27.3%, 10.3% malnutrition, pressure ulcers 7.6%, problems of any degree of urinary incontinence 57.20% (24.49% relative absolute 32.71%), fecal incontinence problems of any degree 37.41%. Mobility problems were detected in any of more than 60% (41.04% relative and absolute 19.34%). To make basic activities of daily living 18% were independent, 35.8% mild dependent, 11.2% moderate, 11% severe and 24% absolute. For instrumental activities of daily living 12.2% were independent, 22% mild dependent, 18.1% moderate, 9.2% severe and 38.5% absolute. **CONCLUSIONS** In RESYDEM study more prevalent GS have been cognitive impairment, mobility/autonomy, incontinence and sleep disturbances. Compared to other studies, the rate of malnutrition is significantly higher. GS show high prevalence in NH. Geriatric assessment is useful tool to provide early detection and prevention.

**PB7 239 CARDIAC ARRHYTHMIAS SEEN IN GERIATRIC PATIENTS REFERRED TO FALL CLINIK AND EXAMINED WITH EVENT RECORDER.**

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Bispebjerg Hospital has a catchment area of 220.000 persons. Geriatric department is part of the medical field; there are 36 beds and several outpatient treatment centers where the fall clinic has approximately 350 new-referred patients pr year. The patients in the fall clinic are examined with vestibular investigations, orthostatic BT mode, Biotelemetry, para-clinical studies and, in cases of suspected cardiac syncope, with Event Recorder. We have chosen to study the amount of cardiac arrhythmias needing treatment, in patients studied with Event Recorder. Analysis of 50 patient records: The patients had all been investigated with Event Recorder for at least 72 hours in order to investigate fall-tendency. The patients were all +65yr, range 65-95yr. Of the 50 patients we studied had 23 changes in the conventional ECG, 11 patients equivalent to 48% had no arrhythmias on Event Recorder, while the other 12 had arrhythmias that lead to intervention. 5 patients, equivalent to 22% were treated with Pacemaker, 6 patients representing 26% were treated medically and 1 patient, equivalent to 4% were treated both medically and with pacemaker. In review of 50 patient records of patients referred for investigation of causes of fall. We found with Event Recorder cardiac arrhythmias in 24% (12 patients) who needed treatment and 50% of these needed Pacemakers. These findings indicate that Event Recorder is a valuable test applied to geriatric fall-patients. It could be of interest to examine a larger number of patients in order to validate the findings. It also would be interesting to review the indications for Event Recorder because there was a large proportion that had normal conventional ECG nor had arrhythmias at Event Recorder. One could compare changes in

the conventional ECG with arrhythmias on Event Recorder and thus using the Event Recorder survey more rationally.

**PB7 240 AN ATTEMPT AT MODELLING THE RISK FACTORS FOR FALLING AMONG THE ELDERLY**

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Introduction. Falls in the elderly are a frequent event which is caused by several factors. The prevalence of the risk factors for falling has not been often and extensively evaluated in a single study. The aim of this study was 1/ to evaluate the prevalence of chronic predisposing factors and intrinsic precipitating factors; 2/ to study the relationships between chronic predisposing factors within a population of elderly fallers. Materials and methods. A prospective study was conducted from 2000 to 2005 in an acute geriatric unit of the teaching hospital of Angers (France). Four hundred and seventy-one patients hospitalised for fall (mean age: 84±7) were included among 2299 patients. Results. The most frequent chronic predisposing factors were: intake of benzodiazepines or hypnotics (45.2%), cerebral and vascular diseases and Alzheimer disease (39.5%), hip problems (35.2%), rachis problems (32.3%), visual problems (33.1%), loss of adaptability to physical effort (29.1%) and depression (25.5%). The intrinsic precipitating factors were: orthostatic hypotension (17.2%), delirium (13.6%), atrial fibrillation (7.9%), impaired consciousness (6.8%) and stroke (6.4%). Finally, we described two profiles of fallers: depressive patients under psychotropic drugs and patients with bone or joints disorders and visual problems. Conclusion. This study highlighted risk factors for falling in elderly inpatients in accordance with previous data of the literature, evaluated the prevalence of each factor and identified two clinical profiles of fallers.

**PB7 241 STRONTIUM RANELATE REDUCES VERTEBRAL FRACTURES IN FRAIL OSTEOPOROTIC WOMEN**

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Introduction Frailty exposes older people to increased vulnerability when confronted to a stressor. Frailty is associated to a decrease in strength, a feeling of tiredness, involuntary weight loss, slowness and inactivity. Anti-osteoporotic treatment is underused in frail patients despite of a higher fracture-risk, and poorer fracture outcomes. The aim of this study was to determine whether strontium ranelate was efficient to reduce the risk of vertebral and non-vertebral fractures in frail patients. Material and Methods Data were obtained from the SOTI (Spinal Osteoporosis Therapeutic Intervention) and TROPOS (Treatment Of Peripheral Osteoporosis) studies. During 3 years, participants were randomized to strontium ranelate 2 grams per day or placebo and supplemented with calcium plus vitamin D. Frailty was defined using adapted Fried's criteria (unintentional weight loss, exhaustion, weakness, slow walking speed and low physical activity). By intention-to-treat, and after 3 years of follow-up, the rate of vertebral and non-vertebral fractures of frail postmenopausal osteoporotic women was compared. Results 264 frail older women (125 patients from the strontium ranelate group, 139 patients from the placebo group) were identified. The risk for vertebral fractures was reduced by 58% (Relative Risk, RR = 0.41; 95% confidence interval, CI 0.23-0.73; p=0.002) and risk for all osteoporotic fractures (vertebral or non-vertebral) was reduced by 28% (RR, 0.72; 95%CI 0.49-1.04; p=0.08). Conclusion Strontium ranelate reduced significantly the risk of vertebral fracture over 3 years in postmenopausal frail women. Further studies involving a higher number of patients are necessary to assess the non-vertebral risk reduction in this population.

**PB7 242 PREVALENCE OF SARCOPENIA IN ELDERLY PEOPLE WITH HIP FRACTURE**

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INTRODUCTION: To analize the prevalence of sarcopenia in a group of elderly patients with hip fracture (HF). METHODS: We evaluated 102 older patients (28m/74w) (HFG) with HF. We analyzed (<48 h admission): nutritional status (Mini Nutritional Assessment MNA), anthropometrical data, body mass index (BMI), functional capacity (Barthel index-IB) pre admission, comorbidity (Charlson index-Ch I), muscular mass (MM) and muscular mass index (MM/height<sup>2</sup>) (IMM). MM was determinate by electrical bioimpedance (RJL Systems). We compare the obtained results with 170 healthy old people (78m/92w) (HG). Sarcopenia was defined as a MMI < 2 SD under the mean for a young population (180 persons 20-40 y). RESULTS: men/women: HG: age 74,1/75,2 y, BMI 26,3/27,2 kg/m<sup>2</sup>, BI 99/99, ChI 0,6/0,4, MNA 28,7/28,4, MMI 9,9/7,1. HFG: age 82,8/82,9 y, BMI 24,9/25,7 kg/m<sup>2</sup>, BI 86,7/83,2, ChI 2,2/1,4, MNA 24,5/24,3, MMI 8,6/6,5. We

found that BMI was lower in men than women in both groups. The prevalence of sarcopenia was higher in HFG (43/60% vs 9/34%). Sarcopenia was related with BMI in HFG and HG p< 0,05. In the HFG sarcopenia was related with the age in both sexes and with BI in the men p< 0,05. CONCLUSIONS: 1. Patients with HF presents a high prevalence of sarcopenia. 2. Sarcopenia was related with age and BMI . 3. Presence of sarcopenia possibly increases the risk of HF. 4. The presence of sarcopenia evaluated by a non invasive and cheap method is a good frailty marker that keep us to do early preventive actions to improve the rehabilitation. Supported by grant FIS05/0098

**PB7 243 DIFFERENCES ON IN-HOSPITAL AND ONE-YEAR OUTCOME BETWEEN INTRA AND EXTRACAPSULAR HIP FRACTURES IN THE ELDERLY**

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Introduction: It would be of interest to discover differences on in-hospital and one year outcome of elderly patients with intra and extracapsular hip fractures. Methods and materials: prospective longitudinal study including 1638 consecutive patients older than 64 years with a hip fracture, from 2004 to 2008. We compared Intracapsular Group (IG, N=722) and Extracapsular Group (EG, N=916). Variables analyzed were: social-demographic, functional status (Katz), ambulation (FAC) and complications. We analyzed mortality and functional recovery after in-hospital rehab and 3,6 and 12 months after discharge. Results: mean age: 83.5±7.2 years. 82% female. 20% living in nursing facilities. 33% independent on all B-ADL. 81% walking independently. 31% demented. Patients with extracapsular fractures (EG) were older (41vs29% of patients older than 80 years) but there were no differences on basal functional scores or number of comorbid conditions. EG developed more medical complications (77vs68%, p<0.001). A non-weight-bearing period of time was needed more frequently on EG. More patients in IG were eligible for in-hospital rehab (71vs63%, p=0.003). Patients of EG needed more public or private aids and new institutionalization at discharge. There were no differences neither in-hospital mortality nor at 3,6 or 12 months. Patients of IG recovered their previous independence for walking in more percent after in-hospital rehab than EG (45vs32%, p<0.001) and also after 3 months (61vs47%, p=0.003). There were differences of IG on functional recovery only at discharge of in-hospital rehab (49vs40%, p=0.008). Conclusions: Patients with extracapsular hip fractures are older, develop more medical complications and need more new nursing home placement. They recover later their walking ability and functional status but there is no difference on independence or mortality after one year.

**PB7 244 ELDERLY PATIENTS WITH A HIP FRACTURE AND A NON-WEIGHT-BEARING PERIOD OF TIME: DIFFERENCES ON IN-HOSPITAL AND ONE YEAR OUTCOME**

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Introduction: Little is known about the outcome of patients with hip fracture who need a non-weight-bearing period of time after surgery. Methods and materials: prospective longitudinal study including 812 consecutive patients older than 64 years with a hip fracture, for 18 months. We analyzed: social-demographics, functional status (Katz), ambulation (FAC), comorbidities, type of fracture, complications, length of stay, mortality and placement after discharge. We compared 2 groups: non-weight-bearing group (NWBG, N=89) and patients with weight-bearing authorized (Control Group, CG, N=723). Results: mean age: 83.7±7.3 years. 83% female. 22% living in nursing facilities. 31% independent on all B-ADL. 81% walking independently. 11% needed a six-weeks non-weight-bearing time. On NWBG, 88% of patients had extracapsular fractures (34% perisubtrochanteric and 54% pecten trochanteric). NWBG had similar age, characteristics and functional status as CG. There were no differences between groups on medical complications or mortality but NWBG had more wound infections and blood transfusion requirements, as well as longer length of stay (12vs9 days). NWBG needed more social intervention (21vs11%, p=0.009) and different placement after discharge (to rehab-unit: 4.5vs75%, to their home: 67vs22%, new institutionalization needed: 28.4vs2.5%). There were differences on ambulation status only at 3 months (NWBGvsCG: independence on ambulation: 53vs65%). There were no differences on mortality, functional status, ambulation or placement after 6 and 12 months. Conclusions: 11% of patients with a hip fracture, the more frequent extracapsular fractures, need a period of non-weight-bearing. They don't have more complications or mortality but have longer length of stay and 28% need new nursing home placement after discharge. Although at 3 months they are more dependent on ambulation, after 1 year there are no differences on functional status, mortality or placement.

**PB7 245 ARE ELDERLY VOLUNTEER PARTICIPANTS IN EXERCISE TRIALS FITTER THAN NON-VOLUNTEERS?**

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**Introduction.** Studies on exercise and functional fitness in the elderly are often subject to biases in selecting the study population: volunteers participants are thought to be in better physical shape than their same-age peers in the general population. The aim of this study was to look into whether volunteers to participate in an exercise trial are fitter than non-volunteers. **Methods and Materials.** A questionnaire about physical activity, functional limitations, state of health, bodily satisfaction, height, weight, and socio-demographic information was sent to 1000 individuals age 60 or over. Subjects were also asked whether or not they would be interested in participating in an exercise trial. Results. The questionnaire was answered by 535 individuals. Among them, 233 agreed to participate in the exercise trial and 270 did not. The volunteers were younger than the non-volunteers, but they did not differ in sex. Compared to non-volunteers, volunteers were more educated and more satisfied with their body, had higher health ratings and fewer chronic diseases, and took less medication. There was no difference between the levels of physical activity of the two groups. However, volunteers presented fewer functional limitations and higher weekly energy expenditure related to physical activity than non-volunteers did. **Conclusion.** Based on their functional abilities and physical-activity behavior, the volunteer participants in our study can be considered fitter than the non-volunteers. However, further analyses are needed to found out to what extent this bias can be interpreted in terms of the age difference between the two groups.

**PB7 246 PERSISTENT VERTIGO IN A PATIENT AT THE FALL CLINIC: KEEP BPPV IN MIND!**

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**INTRODUCTION:** Vertigo is a common problem in elderly patients presenting at a fall clinic. Diagnostics may be difficult, because of multiple potential causes of vertigo. We describe the case of a man with recurrent falling because of syncope and vertigo starting after a head trauma. **METHODS AND MATERIALS:** Case report: 78-year old man who fell more than 30 times in the previous year because of syncope and vertigo. Head rotation (particularly to the left), hyperextension of the neck, turning to the left side when lying in bed, bending over and coming upright provoked short attacks of vertigo. Attacks started a few seconds after moving the head, continued for less than 1 minute and were most prominent in the morning. No explanation for this vertigo was found during neurological examination. Orthostatic hypotension and possible hypersensitivity of the carotid sinus were determined. After discontinuing solifenacain, chlortalidone and non-pharmacological measures to prevent disorders in blood pressure regulation, syncope disappeared but vertigo with incidental falling continued. Therefore, additional diagnostic tests were performed. **RESULTS:** A holter registration occasionally showed bradycardia during daytime, however no association with vertigo could be demonstrated. Massage of the carotid sinus caused a significant fall in blood pressure confirming hypersensitivity of the carotid sinus, however asymptomatic. Finally, a Dix-Hallpike manoeuvre provoked symptomatic vertigo with nystagmus, suggesting benign paroxysmal positional vertigo (BPPV). An Epley manoeuvre was performed after which vertigo improved and no more falls occurred. **CONCLUSION:** In this patient, disorders in blood pressure regulation and BPPV both contributed to vertigo. BPPV should be considered when key symptoms and signs are present (short attacks, latency time, diurnal variation, nystagmus), particularly when there is a history of head trauma. The Epley manoeuvre is an easy and effective method to treat patients with BPPV.

**PB7 247 PREDICTIVE ABILITY OF COMMONLY IMPLEMENTED NUTRITION SCREENING INSTRUMENTS: WHAT DOES DATA FROM THE AUSTRALIAN LONGITUDINAL STUDY OF AGEING TELL US?**

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**Introduction:** A variety of nutrition screening instruments have been developed for identifying risk of under-nutrition among community-dwelling older adults. These instruments vary in methodological quality creating confusion about which instrument to implement in practice. **Methods:** This study examines data from the Australian Longitudinal Study of Ageing to compare a range of nutrition screening instruments (Australian Nutrition Screening Initiative, Rapid Screen, Mini Nutritional Assessment – Short Form (MNA-SF), Malnutrition Universal Screening Tool, Malnutrition Screening Tool) for predictive ability in terms of outcomes including mortality and disability. **Results:** Preliminary analyses suggest that the Australian Nutrition Screening Initiative, Rapid Screen and MNA-SF were all significant risk factors for mortality (moderate to high nutritional risk resulting in 40 to 90% increased hazard of mortality) but none of the selected instruments were associated with an increased risk of disability. **Conclusion:** This work will be expanded upon to examine predictive ability of the range of nutrition screening instruments and outcomes including self rated health, positive affect, hospitalisations and change in accommodation. It is envisaged that this work will assist

health professionals to choose an evidence-based nutrition screening instrument for implementation in their setting.

**PB7 248 HIGHER C-REACTIVE PROTEIN AND SOLUBLE TUMOR NECROSIS FACTOR RECEPTOR LEVELS ARE ASSOCIATED WITH POOR PHYSICAL FUNCTION AND DISABILITY: A CROSS-SECTIONAL ANALYSIS OF A COHORT OF LATE MIDDLE-AGED AFRICAN AMERICANS**

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**Introduction:** This cohort of “late middle-age” African Americans has an excess of disability. We aimed to determine associations of circulating cytokine receptors (sTNFR1, sTNFR2, sIL-6R) and CRP with disability, physical function and body composition. **Methods:** Stratified sampling of two socio-economically diverse strata of Saint Louis, MO occurred in 2000-2001. Inclusion criteria were self-reported Black or African American race; born 1936 to 1950 inclusive and MMSE score ≥16. In-home evaluations of hand-grip strength, LBM%, physical performance, upper and lower body functional limitations (UBFLs and LBFLs) and basic and instrumental activities of daily living (BADLs and IADLs) were collected. Of the 998 participants, 368 had blood sampled at baseline. Serum was stored and assayed in 2006. **Results:** Absolute risks were: LBFLs ≥2, 46%; UBFLs ≥1, 23.5%; BADLs ≥2, 20.6% and IADLs ≥2, 22.5%. Independent of age, sex and underlying co-morbid conditions, higher CRP and sTNFR associated with poorer physical performance ( $\beta$  -1.462,  $P<0.001$  &  $\beta$  -0.618,  $P = 0.003$ ), UBFLs (OR 2.26 [95% CI 1.1 – 4.64] & OR 1.39 [0.96 – 2.02]), LBFLs (OR 2.30 [1.19 – 4.45] & OR 1.91 [1.26 – 2.91]), BADLs (OR 2.79 [1.03 – 5.96] & OR 1.66 [1.11 – 2.46]) and IADLs (OR 2.13 [1.03 – 4.41] & OR 1.43 [0.99 – 2.08]). Higher CRP ( $\beta$  -3.251,  $P<0.001$ ), sIL-6R ( $\beta$  -6.152,  $P = 0.013$ ) and lower adiponectin ( $\beta$  2.947,  $P = 0.052$ ) associated with lower LBM%. **Conclusions:** Higher CRP and sTNFR are independently associated with disability and physical dysfunction. Higher sIL-6R, CRP and lower adiponectin associate with lower LBM%.

**PB7 249 CHARACTERISTICS OF HEALTH PROBLEMS AMONG THE FRAIL HIGH-RISK ELDERLY IN A RURAL COMMUNITY IN JAPAN**

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**Purpose** Individuals who may imminently become frail elderly people are called “Tokutei-Koreisha” in Japan. “Tokutei-Koreisha” are assessed using a check sheet consisting of 25 items, established by the Ministry of Health, Labour and Welfare. The present study was therefore conducted to clarify “Tokutei-Koreisha” characteristics among the elderly dwelling in a rural community in Japan. **Methods** The participants analyzed in the present study were 1,507 men and 2,341 women aged 65 to 104 years living in a rural community in Japan. Their health problems were (1) Motor function, (2) Malnutrition, (3) Oral cavity function, (4) Housebound, (5) Dementia, (6) Depression. **Results** Overall, 32.1 % of men and 38.9 % of women were classified as “Tokutei-Koreisha”. The rates of each health problem among “Tokutei-Koreisha” were 52.7 % dementia, 39.0 % depression, 32.6 % motor function, 27.3 % housebound, 24.5 % oral cavity function, and 1.5 % malnutrition, respectively. The results of multivariate logistic regression analysis to explore correlates showed that motor functions, malnutrition, oral cavity function, and depression in men, and motor function, malnutrition, oral cavity function in women, were significantly and independently related to functional decline. **Conclusion** These results suggest that support by a comprehensive program, considering the improvement of motor function, malnutrition, oral cavity function, and prevention of depression, is required to maintain the independent living of the frail high-risk elderly, so-called “Tokutei-Koreisha”, in a rural community in Japan.

**PB7 250 EFFECTS OF LOWER BODY RESISTANCE AND BALANCE EXERCISES IN HOME DWELLING JAPANESE OLDER WOMEN**

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About 30% of Japanese over 65 years of age fall at least once per year, and 10% of falls result in fractures. Previous research indicates that there is strong association between leg muscle weakness and falls. In addition, decreased balance ability has been shown to increase falls in older adults. Balance ability is affected by vision, vestibular sensation, somatosensory function and muscular system. The purpose of this study was to determine the effect of lower body resistance exercises (RE) and balance exercises focusing on somatosensory function (BE) in home dwelling older women. Subjects were divided into a exercise group (EG, n = 14, mean age 71 ± 3 yr) and a control group (CG, n = 15, mean age 72 ± 5 yr). EG performed 10 weeks of supervised (1 d /wk, 60 - 90min/day) center-

based exercise (10min of warm-up, 30-40min of BE, 10-20min of RE and 10min of cool down). Elastic bands were used during RE, and unstable base of support (foam pads) was used during BE. Strength was evaluated using 30-sec chair stand (CS) tests and balance was measured using eye-closed one leg stance (EC), Functional Reach Test (FRT), Four Square Step Test (FSST), and Timed Up and Go test (TUG) in all participants before and after the intervention. EG showed significant improvements in CS (19 %) and TUG (- 8 %). No significant changes were noted in EC, FRT, and FSST. These results suggest that elastic band-based resistance exercises have beneficial effects on strength training, however, further study is needed to find out a suitable mode of balance exercises for home dwelling older women.

#### **PB7 251 LONG TERM BENEFITS OF EXERCISE ON BALANCE IN OLDER ADULTS**

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Aim: This study records ongoing participation in resistance training over a year after a formal exercise intervention ceased, and meets two aims: to report on the long term (12 months) benefits of participating in a resistance and flexibility training program compared to a non exercising control group; and to describe differences in balance and mobility between those participants who continue to exercise and those who do not. Results: Significant improvements in sit to stand, timed up and go and sway velocity were seen at one-year follow up with the exercising group, but not in the control group. Improvements in strength at the end of the intervention were not present a year later. Significant differences in the perception of benefits were seen between the control participants and exercisers. The only significant difference between the continuing exercisers and the ceased exercisers was a perception in the benefit of the program to participation in physical activity. Conclusion: Long-term benefits to some measures of balance and mobility persist one year after participation in a program that includes resistance and flexibility training. Motivation to continue resistance training may be supported by perceived benefits in physical activity.

#### **PB7 252 TRAINING FOR DYNAMIC BALANCE FUNCTION: IS IT POSSIBLE TO IMPROVE SENSE OF BALANCE IN THE ELDERLY?**

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For the elderly, the experience of falling down not only leads to decreasing the amount of physical exercise that is engaged in, such as walking outside, but also induces a fear of falling and causes deterioration of mental QOL. Physiological factors considered to induce falling in the elderly are a decline in leg strength, aging of the semicircular canal, failure of the sense of balance and aging of brain function. We report herewith the training effects such as improvement in balance function discovered using the new experience of riding a specially developed automated and controlled unicycle and by aerobic and anaerobic exercise. Method: Elderly case subjects aged 64- to 69-years old participated in either an exercise program involving the experience of riding the automated unicycle or a regular exercise plan (control group; n = 34) and the performance of each participant was compared before and 3 months after the start of training. Tests of physical strength such as standing on one leg with closed eyes (balance function), grip (strength), and running for 3 minutes (staying power) as well as blood tests for HDL-cholesterol and HbA1c and blood pressure measurements were conducted and training effects were observed. Statistical evaluation was carried out using matched pair t-test and stepwise multiple regression analysis. Results and discussion: Statistically significant differences between before and after exercise program were observed in grip, staying power and in HDL-cholesterol. All cases were able to ride the unicycle. Conclusions: From these findings it was understood that training by automated unicycle has a positive effect on the improvement of dynamic balance function in the elderly. We discussed that these training effects are due to get learning effect, formation of spinal reflex pathways, and ability to maintain posture through improvement in physical strength.

#### **PB7 253 FACTORS ASSOCIATED WITH CERTIFICATION FOR LONG-TERM CARE NEED IN COMMUNITY-DWELLING OLDER ADULTS: COMPARISON OF PARTICIPANTS WHO UNDERGO HEALTH CHECK-UPS AT A HEALTH CENTER WITH THOSE WHO UNDERGO CHECK-UPS AT HOME VISITS OVER A 3-YEAR FOLLOW-UP**

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We evaluated risk factors associated with long-term care certification among community-dwelling older adults aged 70 years and older over a 3-year period. Methods: Among 1,523 subjects in a village in Japan, 1,347 were eligible to participate; inpatients and

current recipients of long-term care were excluded. Interviews were conducted during a health check-up in a community health center in July 2004. Home visits were conducted for those who did not go to the health center. Results: Of the 838 subjects assessed, 443 underwent check-ups at a health center and 395 were seen during home visits. During the 3-year follow-up, 94 subjects (11.2%) were certified for long-term care, 48 (5.7%) died, and 3 (0.4%) were lost to follow-up. Significantly more subjects who underwent a home visit were certified for long-term care compared with subjects seen at the health center (16.0% vs 7.0%, respectively). Cox proportional hazards regression analysis showed that advancing age and standing time from a long sitting position on the 4sec/>floor (11/

#### **PB7 254 ASSOCIATION BETWEEN A HISTORY OF FALLS AND THE ABILITY TO MULTI-TASK IN COMMUNITY-DWELLING OLDER PEOPLE**

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Introduction: Many older people experience falls when they perform tasks that require increased attention. The purpose of this study was to determine differences in reaction time during single-, dual- and triple-task conditions that required different levels of motor coordination, balance control and cognitive attention between a group of fallers and non-fallers in community-dwelling older individuals. Methods and materials: Eighty seven elderly individuals were recruited to participate in the study including 57 women and 30 men; aged 75 to 91 years (mean age 80.3 years). Reaction time, measured by pushing a handheld button as quickly as possible in response to a visual stimulus, was measured under four different conditions; 1) quiet standing (single-task); 2) counting backward during quiet standing (dual-task with cognitive demand); 3) stepping in place (dual-task with balance demand); 4) counting backward while stepping in place (triple-task). Results: Twenty nine (33.3%) participants experienced at least one fall during the past year. There were no statistically significant differences in reaction times between non-fallers and fallers during any of the tasks. Reaction times were significantly longer during dual- and triple-tasks as compared to single-task conditions in both groups. The ratio between reaction time during dual-task with balance demand (stepping in place) and reaction time in the single-task condition related significantly to a history of falls and showed the highest odds ratio (OR 3.16, 95% CI 1.06 - 9.45, P = 0.04). Conclusion: Relative changes in reaction time during a dual-task with balance demand related to a history of falls in community-dwelling Japanese older people. Reaction time under dual-task conditions with a balance demand was more sensitive to past falls than reaction time during a dual-task with cognitive demand.

#### **PB7 255 PREVENTION OF FALLS IN PERSONS WITH OSTEOPOROSIS: RESULTS OF A RANDOMIZED CLINICAL TRIAL**

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Introduction: Persons with osteoporosis are particularly at risk for fall-related fractures, because of decreased bone strength. Exercise programs can prevent falls and fall-related injuries in the elderly. The 'Nijmegen Falls Prevention Program' ('NFPP') has shown to be successful with a 46% reduction of the number of falls in community-dwelling elderly. However, patients with osteoporosis were excluded from this program, because of safety reasons. The benefits of a falls prevention program for patients with osteoporosis, however, are expected to be large. Therefore, the NFPP was adjusted for patients with osteoporosis and evaluated for its efficacy in a randomized clinical trial. Methods: A total of 92 persons with osteoporosis (mean age (SD): 71.0 (4.7), 86 female, 6 male; T-score < -2.5) participated. After a baseline measurement (M1), participants were randomly allocated to an exercise (n=47) and control group (n=45). Subsequently, the exercise group participated in the NFPP for persons with osteoporosis (5.5 weeks) whereas the control group received usual care. After the program had ended the second measurement took place (M2) followed by the third (M3) after one year. Primary outcome measure was fall incidence, measured for one year with monthly fall registration cards. At M1, M2 and M3 balance confidence (ABC-scale), quality of life (qualeffo-41) and activity level (pedometer) were assessed. Results: Fall incidence rates decreased by 35% in the exercise group compared to the control group (0.75 vs 1.16 falls/year). Balance confidence, QoL and activity levels remained the same in both groups for all three measurements. Conclusion: Since the results show that the program was effective in reducing the number of fall incidents it is

concluded that it is a valuable new alternative tool for the prevention of falls and fractures in elderly subjects with osteoporosis.

**PB7 256 THE SHORT PHYSICAL PERFORMANCE BATTERY (SPPB): CORRELATION WITH OTHER AREAS OF COMPREHENSIVE GERIATRIC ASSESSMENT**

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**Introduction:** The Short Physical Performance Battery (SPPB) has been recommended as a standard measure of performance in older subjects. However, the correlations of the results of the SPPB with other measures obtained within a comprehensive geriatric assessment (CGA) have not been fully assessed. **Method:** The SPPB was performed in consecutive older subjects (>70 years) submitted by their primary care physicians to a hospital outpatient clinic for a CGA. All assessments were performed by the same geriatrician to reduce bias. Spearman correlation coefficients between the results of SPPB and other measures obtained with the CGA were calculated. **Results:** 51 subjects were included (mean age 80.4 years, 84.3% females). Mean SPPB was 5 (range 3 to 8). SPSS had a high correlation with Katz's ADL index ( $r=0.80$ ,  $p<0.001$ ) and a moderate correlation with Lawton's instrumental ADL ( $r=0.64$ ,  $p<0.001$ ) and age ( $r=0.59$ ,  $p<0.001$ ). A weaker correlation was found between SPPB and MMSE ( $r=0.42$ ,  $p=0.002$ ), and the number of drugs ( $r=0.42$ ,  $p=0.002$ ). No correlation was found with gender, BMI, number of falls, results of the Geriatric Depression Scale-15, and visual or hearing deficits. When the three components of the SPPB were studied separate, age, basic ADLs and MMSE had their strongest correlation with walking speed, instrumental ADLs with balance, and use of drugs with the chair stand test. **Conclusions:** The SPPB, a performance measure related with frailty and sarcopenia, was related, in this outpatient population, with age, ADL, cognitive function and number of drugs, but not with other areas of the CGA.

**PB7 257 INCIDENCE OF FALLS AMONG OLD PEOPLE RECEIVING HOME-HELP SERVICES IN A SWEDISH MUNICIPALITY**

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Falls among old people are a well-mapped phenomenon, however, falls among people living in the community and receiving home-help services have been scarcely studied. Therefore, we investigated falls among community living home-help receivers in a Swedish municipality. This prospective cohort study included all 614 persons aged 65 and over, receiving municipality home help during one year from October 2005 in a particular community. Data on age, sex, and home help service use were collected from home-help services records, and falls were reported by staff on report forms specifically designed for the study. The overall fall incidence was 626 per 1000 PY, and incidence rate ratios were significantly correlated to total amount of services ( $p<0.001$ ), as well as to the amounts of help for I-ADL needs ( $p<0.001$ ), P-ADL needs ( $p<0.001$ ), meal distribution ( $p<0.001$ ) and escort service ( $p=0.004$ ). The proportion of falls reported as resulting in injury was 33 %. In conclusion, the fall incidence rate among home-help receivers aged 65 and over seems strongly correlated to the amount of services. This implies that fall prevention should be considered when planning the care for old people with ADL and mobility needs.

**PB7 258 CAN AN ACCELEROMETER ENHANCE TIMED-UP&GO TEST SENSITIVITY AMONG PATIENTS WITH PARKINSON DISEASE?**

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**Introduction:** Timed Up and Go (TUG) is a widely used mobility and fall-risk measure in older adults and Parkinsons disease (PD). We hypothesized that body-fixed-sensors can gain insight on TUG performance of PD patients. **Methods:** 17 PD patients (ON state) and 15 healthy controls (CO), (mean age  $66.8\pm5.9$ y;  $67.6\pm9.6$ y, respectively) wore a 3D Mobi8 (TMSI-International) trunk accelerometer while performing TUG. The sit-to-stand (Si-St) and stand-to-sit (St-Si) times were extracted from the 3-D signals. Measures included Si-St and St-Si durations, amplitude range and slopes (dt1, dt2, RNG1, RNG2, Slope1, Slope2, respectively), and were divided to 2 halves: a&b. Median (md) acceleration amplitude and the frequency-content of the signal in the 0.5-3hz low-locomotion-band (LFap) and 3-8hz high-FOG-band(HFap) were calculated.. **Results:** TUG duration was significantly ( $p<0.02$ ) higher in PD versus CO ( $10.2\pm2.85$ s,  $8.2\pm1.62$  s, respectively). AP RNG1, RNG2a, Slope1b, Slope2a and LFap were significantly lower in PD versus CO ( $p<0.02$ ). MDap was significantly higher ( $p=0.02$ ) in PD versus CO. A significant difference within the PD group (not found in CO) was found between RNG1a and RNG2b ( $p<0.004$ ). **Conclusions:** Accelerometer-derived-measures, especially AP, were more sensitive than duration to group differences, indicating that PD subjects have slower and decreased locomotion during Si-St and St-Si. These measures may potentially detect subtle mobility changes and

identify early markers of PD along with the documentation of disease progression and response to therapeutic interventions

**PB7 259 THE ASSOCIATION BETWEEN BIRTH WEIGHT AND GRIP STRENGTH: A REVIEW OF THE EVIDENCE FOR DEVELOPMENTAL INFLUENCES ON SARCOPENIA.**

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**Introduction** Sarcopenia, the loss of muscle mass and strength with age, has serious health consequences. Its adult determinants are well known but developmental influences may also contribute. We reviewed the evidence for an association between lower birth weight and reduced hand grip strength in later life. **Methods** Relevant articles were identified using Pubmed, OVID Medline and ISI Web of Knowledge. Study details were collated in tabular form. Stata 10 was used to produce a forest plot and to estimate the pooled coefficient for the relationship between birth weight and grip strength. The relative effect sizes of birth weight, age and height on grip strength were identified using the Hertfordshire Cohort Study (HCS). Results Ten studies of men and women considered the full range of birth weight; these varied from 316 to 1,562 participants, with follow-up ages 18 to 67 years. A forest plot showed homogeneity of association between birth weight and grip strength (Q-statistic 7.36,  $p=0.60$ ) with a pooled estimate of a 2.06kg decrease in grip strength per kilogram decrease in birth weight (95%CI 1.77, 2.35). Birth weight, age and adult height accounted for 2.2%, 3.6% and 16.2% of variance in grip strength in HCS. **Conclusions** The association between lower birth weight and reduced grip strength in later life is consistent across studies. Future studies need to elucidate the underlying molecular and cellular mechanisms of developmental influences on sarcopenia.

**PB7 260 UPPER EXTREMITY MUSCLE STRENGTH IN AN ELDERLY POPULATION - RELATION TO FUNCTIONING.**

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**Introduction.** Physical and mental impairments in old age have a considerable impact in daily life, but the needs for impaired elders are not well understood and measured. The aim of this study was to examine the upper extremity muscle strength (hand-grip) in an elderly population, and its relation to functioning. **Methods and materials.** Data derived from a population-based study ongoing in Sweden: The Swedish National study on Aging and Care. The study population was a random sample of 60+ year-old individuals living in the municipality of Nordanstig (SNAC-N). During 2001-2003 all participants were clinically examined, cognitively assessed, and socially interviewed. Hand-grip strength was measured with an electronic dynamometer, Grippit. Age- and gender-specific prevalence figures, and regression analyses adjusted for gender and education were calculated. **Results.** Of the 1016 subjects in the study population, 2 % died and 23 % denied participation. The majority of the 766 participants were living at home (89%), and 71% had less than 8 years education. Grip strength was higher in men at all ages ( $p<0.001$ ), and decreased dramatically with age for both genders. Before age 70, median strength for men was 432 Newton (range 132-629) and for women 231 (46-381). At age 80 this figure had decreased to 270 (72-537) and 148 (34-263), and at age 90 to 158 (94-358) and 126 (20-192) respectively. An association with lower grip strength and cognitive impairment (MMSE<24) was found in the younger elderly (60 to 77 years), and with lower grip strength and disability (assistance in 2+ ADL-activities) in the older elderly (81+). **Conclusion.** Our findings support the hypothesis that upper extremity muscle strength is associated with mental and physical functioning. Furthermore, differences in grip strength vary with gender and age.

**PB7 261 EXAMINATION FROM THE ACTUAL CONDITION AND THE ENVIRONMENTAL AGENT OF THE FALL ACCIDENT IN A CERTAIN HOSPITAL**

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**Introduction:** In recent years, in the medical spot, safe environment was taken up more often. When the hospital and sickroom as space where a patient lives are considered, it is necessary to offer safe environment. One of the main causes of a medical accident has a fall, and it has been a pressing subject to take fall prevention and preventive measures. The present age serves as an aging society and is also carrying out the increase in the rate that elderly people occupy to an inpatient. A fall is one of the everyday occurrences which often encounter, and the many happen as a result of a fall person's active act. An environmental agent becomes entangled with a fall person's intentional act intricately, and a fall occurs. It is performing the survey of a fall accident for an inpatient and clarifying about the relation between a fall accident and environment in this research. **Methods and materials:** In the hospital of about 500 floors in the northern part in Fukuoka, investigation during nine months in April, Heisei 16 to December was conducted. There were 254 fall accidents in a consultation period. The protocol of this study was approved by the Ethics Review

Committee of this hospital. Results and conclusion? The number of fall accident occurrences in a consultation period was 254 affairs. Candidates were 167 men and 87 women and the average age was 74.8 years old. May was 35 fall accidents. Correlation was between the number of fall accident occurrences and average temperature in May. June was 35 fall accidents. Correlation was between the number of fall accident occurrences and the maximum temperature in June. When outside temperature falls, the influence on a body activity arises and a possibility that the fall has occurred cannot be denied.

**PB7 262 AN EXPLORATORY ANALYSIS OF VARIABLES ASSOCIATED WITH IMPAIRED PHYSICAL PERFORMANCE AMONG ELDERLY PEOPLE THROUGH DATA MINING OF INCHIANTI DATA BASE**

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Introduction We applied a novel non linear data mining technique named Auto Contractive Map (Auto-CM), based on artificial neural networks, to explore the natural associations among 48 clinical and biological variables of elderly subjects randomly extracted from general population. Subjects and Methods Data come from InChianti, a longitudinal study of community-living persons >65years who were randomly selected from a population registry in two town of Tuscany, Italy. The main outcome measure was impaired physical performance, defined as Short Physical Performance Battery (SPPB) score between 0 and 9. Those subjects who had a SPPB score between 10 and 12 were considered to have unpaired lower extremity performance. The philosophy behind Auto-CM is to pick up affinities among variables related to their dynamical interaction rather than to their simple contingent spatial position. This approach seems to be more suitable to describe living systems context in which there is a continuous complex change in the variables values among time. Results SPPB 0'9 resulted to be a major hub in the semantic map, linked to knee arthrosis, CHF, age>75 years and >85years, female gender and fragility as nodes of first degree of separation. PCR and serum IL6 resulted to be linked to fragility together with Parkinson and femoral fracture. Other cytokines like TGFB1 and TNFA'E resulted confined far away from SPS 0'9 and fragility in the map. SPPB 10'12 was linked with male gender and high MMSE values through age 65-75. Low schooling linked with MMSE 20-25 while >10yrs schooling linked with MMSE>26. MMSE<20 linked with age>85years. Conclusions Auto-CM extends previous observations and confirms that physical performance impairment decline is an age associated complex phenomenon in which cognitive function, some immune factors and chronic inflammatory triggers play a major role.

**PB7 263 ROLLATOR USE AND FUNCTIONAL OUTCOME OF GERIATRIC REHABILITATION**

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Introduction: Ambulation assistive devices are frequently prescribed to increase stability, enhance mobility and independence or cope with fear of falling. Nevertheless, the regular use of walking aids may also predict decline in ADL function and could be associated with hospitalization. In a matched samples design the present study examined the effect of rollator use on functional rehabilitation outcome in geriatric patients. Methods: At the time of admission to a geriatric rehabilitation clinic 40 patients who agreed to receive a rollator (age 74–93 yrs) were classified into an experimental group and compared with a historic control group (n=40, no device) (age 67–91 yrs) matched for the admission functional status. Timed Up and Go test was used to characterize basic functional mobility. The time required to complete 5 repeated chair stands (5-chair Sit to Stand) was calculated as a measure of lower limb strength. Balance capacity in parallel stance (Romberg test) was rated on a 4-point ordinal scale. Measurements were repeated after the inpatient rehabilitation regimen (length of stay 20.6 ± 7.3 days). Performance-Oriented Mobility Assessment was used for predicting the admission risk of falling (cut-off <20). Results: Non-parametric testing did not reveal significant group differences between admission and discharge motor performance scores. Device users and controls demonstrated nearly comparable mobility (36 vs. 35), strength (29 vs. 37) and balance (7 vs. 10) improvements. Almost 20% of all patients showed functional gains in all three tests. Subgroup analysis with respect to the admission risk of falling indicated significant ( $p<.05$ ) performance differences between potential fallers and non-fallers independently of the rollator use. Conclusion: The study evidenced that rollator assistance does not interfere with functional rehabilitation outcome. Future studies should systematically evaluate the impact of wheeled walkers on fall prevention during geriatric rehabilitation.

**PB7 264 BIOLOGICAL DETERMINANTS OF OSTEOPOROSIS AND FRACTURE HISTORY IN AMBULATORY PATIENTS HOSPITALIZED FOR INTERCURRENT DISEASES IN AN ACUTE GERIATRICS DEPARTMENT**

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Introduction Osteoporosis prevalence is high in elderly patients. In order to implement preventive measures, we took the opportunity of hospitalisation for intercurrent disease of 55 ambulatory patients (27 men and 28 women, age 82 years) to measure bone mineral density (BMD), serum mineral, renal and nutritional parameters. Methods BMD, lean and fat body mass were measured by absorptiometry (DEXA). Results Densitometry osteoporosis (Tscore<-2.5) was more frequent in women than men (92 vs 76% at radius third; 62 vs 52% at ultradistal radius, 75 vs 33% at femoral neck). Nutritional parameters pointed out endogenous denutrition with albuminemia at 33 g/l, high CRP (36mg/dl), IGF 1=87ng/ml (NR 76-160), GFR (ml/min) by Cockcroft was moderately decreased (61 in men and 43 in women). Thyroid function was normal. 25OHvitD (ng/ml) was very low, both in men (6.6) and women (9). Intact PTH was normal at 47 and 63 pg/ml (normal<65pg/ml) as well as bone alkaline phosphatase (14 and 18 $\mu$ g/l; NR 4-21), in spite of renal insufficiency and D-depletion, presumably because of normal serum phosphate and corrected calcium. In contrast, crosslaps CTX were at twice the upper limit of normal (778pmol/l). BMD was positively correlated with height, weight, lean (but not fatty) body mass and IGF1, and negatively with CTX; no correlation of BMD with 25OH or PTH was observed because of the narrow ranges of low 25OHD and normal PTH. Conclusion 1-In our very elderly population with severe vit D deficiency, low BMD appears related more to increased resorption than to decreased bone formation. 2-Fracture risk is related directly to age and inversely to BMD, prealbumin and triglycerides ie to malnutrition. This stress the importance of preventing malnutrition in addition to vitamin D repletion.

**PB7 265 IDENTIFYING EARLY BALANCE DYSFUNCTION IN OLDER PEOPLE, AND EFFECTIVENESS OF A HOME EXERCISE BALANCE TRAINING PROGRAM.**

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Aim: To evaluate a suite of force platform and clinical balance related measures in identifying early balance dysfunction, and to determine the effectiveness of a home based balance training program. Method: 225 community-dwelling older people (>65 years) were recruited, who remained community-ambulant but reported concerns about balance, loss of confidence, or near falls. A predetermined algorithm of performance comprising a suite of force platform (Neurocom Balance Master) and clinical balance related measures were used to identify participants with performance outside of normal performance range. Participants with identified balance dysfunction were randomised to an intervention group (6-month physiotherapist prescribed balance-training home exercise program, based on the Otago exercise program and the HPR Balance/Vestibular Exercise Set) or a control group. Participants in the control group continued with their usual activities. All participants were reassessed after 6 months by researchers blind to group assignment. Results: 165 participants (73%) had balance performance outside of normal range. 59 of the 83 participants in the intervention group (71.1%), and 62 of 82 in the control group (75.6%) returned for reassessment. Comparison of laboratory and clinical measures of balance, gait and strength between groups pre and post followup revealed significant improvement ( $p<.05$ ) in standing stability (mCTSIB composite score,  $p=.037$ ), Functional Reach ( $p<.000$ ), Step Test ( $p<.000$ ) and several other balance related measures for the intervention group relative to the control group. Fourteen (23.7%) of the intervention group improved to within normal limits at the end of the exercise program. Conclusion: Mild balance dysfunction is common and able to be identified using laboratory and clinical balance and related measures. An individualized physiotherapist prescribed home exercise program targeting balance performance is feasible and effective in improving balance in this group. Funding: Australian Government Department of Veterans' Affairs.

**PB7 266 DERIVATION AND VALIDATION OF A MORTALITY-RISK INDEX FROM A COHORT ELDERLY PATIENTS HOSPITALISED IN MEDICAL WARDS VIA EMERGENCY UNITS**

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Objectives: To identify predictive factors for 2-year mortality from a cohort of elderly patients after acute hospitalisation, and from these to derive and validate a Mortality Risk Index (MRI). Methods: A prospective cohort of elderly patients was set up in nine teaching hospitals. This cohort was randomly split up into a derivation cohort (DC) of 870 subjects

and a validation cohort (VC) of 436 subjects. Data obtained from Comprehensive Geriatric Assessment were used in a Cox model to predict 2-year mortality and to identify risk groups for mortality. A ROC analysis was performed to explore the validity of the MRI. Results: Five factors were identified and weighted using hazard ratios to construct the MRI: age 85 or over (1 point), dependence for the ADL (1 point), delirium (2 points), malnutrition risk (2 points), and co-morbidity level (2 points for medium level, 3 points for high level). Three risk groups were identified according to the MRI. Mortality rates increased significantly across risk groups in both cohorts. In the DC, mortality rates were: 20.8% in the low-risk group, 49.6% in the medium-risk group, and 62.1% in the high-risk group. In the VC, mortality rates were respectively 21.7, 48.5, and 65.4%. The area under the ROC curve for overall score was statistically the same in the DC (0.72) as in the VC (0.71). Conclusion: The proposed MRI appears as a simple and easy-to-use tool developed from relevant geriatric variables. Its accuracy is good and the validation procedure gives a good stability of results.

**PB7 267 DIETARY CALCIUM INTAKE HAS NEGATIVE EFFECTS ON BONE TURNOVER INDEPENDENT OF PARATHYROID HORMONE IN ELDERLY WOMEN**

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Introduction: The calcium (Ca) intake of the elderly has been a fundamental and crucial issue for the prevention of osteoporosis. Ca supplements have a positive effect on bone mineral density (BMD). The aim of this study is to further clarify the effect of Ca intake on bone turnover, and whether the effect is influenced by PTH or BMD. Subjects and Methods: We enrolled 205 postmenopausal women who had examination of osteoporosis. We measured serum levels of N-terminal propeptide of type I collagen (PINP), C-terminal cross-linked telopeptide of type I collagen (CTX) and intact PTH, as well as BMD at femoral neck by dual-energy X-ray absorptiometry. Nutrient intakes (protein, fat, Ca, magnesium, phosphorus, sodium, vitamin D and vitamin K) were calculated using dietary records and a food frequency questionnaire. Results: Mean values of age and BMI were 63 years and 22.9kg/m<sup>2</sup>, respectively. Mean daily Ca intake was 655mg. Mean BMD value was 0.619g/cm<sup>2</sup>. Mean serum levels of PINP, CTX and PTH were 54.6ng/ml, 0.404ng/ml and 45.6ng/ml, respectively. Simple regression analysis showed that Ca intake was negatively correlated with PINP and CTX. PTH had positive correlation with PINP and CTX, but not with Ca intake. Ca intake had a positive association with BMD. Multiple regression analysis adjusted for age, BMI, years after menopause, and all nutrient intakes showed that Ca intake was negatively correlated with PINP and CTX, but not BMD. Moreover, Ca intake was still significantly correlated with PINP and CTX after additionally adjusted for PTH and BMD as independent variables. Conclusion: These findings suggest that low Ca intake is the major nutrient factor that could suppress bone turnover independent of PTH and BMD. Increasing Ca intake is important for the prevention of osteoporosis.

**PB7 268 INCIDENCE, MAIN DETERMINANTS AND PREDICTION OF THE RISK OF EARLY UNPLANNED READMISSION AMONG MEDICAL INPATIENTS AGED 75 AND OVER ADMITTED THROUGH EMERGENCY UNITS. THE FRENCH SAFES STUDY.**

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Introduction Among elderly patients, readmission in the month following hospital discharge is a frequent occurrence which involves a risk of functional decline, particularly among frail subjects. While previous studies have identified risk factors of early readmission, geriatric syndromes, as markers of frailty have not been assessed as potential predictors. Methods and materials This prospective multi-center cohort study, belonging to the SAFES multicentre research programme conducted in nine French hospitals among medical inpatients aged 75 and older admitted through emergency departments, aimed to evaluate the risk of early unplanned readmission, and to identify predictors and risk groups. Data were collected through a comprehensive geriatric assessment conducted during the first week of hospital index stay. They were used in logistic regression to identify determinants of early unplanned re-hospitalization (defined as first unplanned readmission in the thirty days after discharge). A score constructed from the odd-ratios of these determinants identified three risk profiles. Results Data from a thousand out of 1,306 inpatients were analyzed. Early unplanned readmission occurred in 14.2% of inpatients and had no link with sociodemographic characteristics, comorbidity burden or cognitive impairment. Pressure sores (OR = 2.05, 95% CI = 1.0-3.9), poor overall condition (OR =

2.01, 95% CI = 1.3-3.0), recent loss of ability for self-feeding (OR = 1.9, 95% CI = 1.2-2.9), prior hospitalization during the last 3 months (OR = 1.6, 95% CI = 1.1-2.5) were found to be risk factors, while sight disorders appeared as negatively linked (OR = 0.5, 95% CI = 0.3-0.8). Three risk profiles significantly associated with increased readmission rates (6.5%, 12.6% and 23.2% respectively) were identified. Conclusion Markers of frailty (poor overall condition, pressure sores, prior hospitalization) or severe disability (for self-feeding) were the most important predictors of early readmission among elderly medical inpatients. Early screening could facilitate preventive strategies in risk groups.

**PB7 269 EFFECTS OF NUTRITIONAL STATUS IN FUNCTIONAL RECOVERY IN GERIATRIC PATIENTS AFTER HIP FRACTURE SURGERY**

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BACKGROUND: Malnutrition is common in elderly hip fracture patients and has been linked to poorer functional recovery. OBJECTIVE: This study investigates the relationships between nutritional status and functional recovery in patients with hip fracture admitted in rehabilitation unit of a geriatric nursing home. METHODS: This is a prospective study of 28 elderly hip fractured patients (22% of total unit patients) admitted in our unit since august 07 to December 08 to gait rehabilitation. We measured the nutritional status by Mini Nutritional Assessment (MNA) and functional recovery by the Barthel index, Heinemann index, Tinetti scale and the Functional Ambulation Classification of Holden (FAC). RESULTS: Mean of age was 83.2 y (71-100) and 93% women. Data we collected at admission were MNA mean: 18.66 (3.5% well-nourished, 14.2% malnourished, 82.3% at risk of malnutrition), Barthel index mean: 26.6 (0-65), Tinetti scale mean: 5.8 (0-21) and FAC mean: 0.5 (0-3). Outcome assessment: MNA mean: 21.5 (46.4% well-nourished, 14.2% malnourished, 34.2 % at risk of malnutrition), Barthel index mean: 55.71 (0-100), Heinemann index mean: 48.7 (0-100), Tinetti scale mean: 14.5 (0-26) and FAC mean: 2.82 (0-5). MNA scores at admission were significantly correlated to Heinemann index (p: 0.5665), to Barthel index (p: 0.5899), to FAC (p: 0.5731) and Tinetti (p: 0.533) at outcome. CONCLUSIONS 1) Nutritional assessment measured with standardized tools such as MNA has to be included in comprehensive geriatric assessment at admission in rehabilitations units to elderly patients. 2) In our unit the MNA total score is able to predict of functional and gait recovery in patients after hip fracture. 3) Moreover, additional studies are necessary to examine the nutritional status influence in functional

**PB7 270 MISMATCH OF PHYSICAL AND CLINICAL MEASUREMENTS OF DEDECUBITUS RISK**

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Introduction: Aging and poor nutrition lead to increased risk of decubitus ulcers(DU). With age, skin elasticity decreases, skin hydration increases and skin friction properties remain unchanged. We investigated whether skin elasticity at different body sites, nutrition or measures of body composition (BC) can reliably predict a clinical score for DU risk (Braden Scale,BS). Methods and Materials: 32 patients(18f 14m)age 82±5.9 (±SD)y,without skin disease and measurements of skin elasticity(E)and hydration(H)at the forearm (VF), trochanter (TR) and sacrum (SA). We assessed nutrition(MNA), proteins (TP), creatinine (Crea), body water (TBW), lean body mass (LBM), %body fat (%F) by BIA, a blinded nurse applied the BS. Results: BMI (27±4.2 kg/m<sup>2</sup>), MNA (22.5±2.9), Crea (92.1±35.3 umol/l), TP (61.7.5±6.6g/l), BS (20±2.5), overall skin elasticity E (0.68±0.06) and VH (38.2±6.7) at any site did not significantly differ by sex. Men had more TBW (+12±1.5l), LBM (+9±2 kg) and less %F (-8.8±2.1), as well as increased HTR (+7.11±2.8) and HSA (+5.68±2.5). By simple regression, EVF correlated significantly with ETR ( $r^2=0.40$ , p<0.0001) and ESA ( $r^2=0.40$ , p<0.0001). In contrast, HVF did not correlate with HTR or HSA. None of the measures of BC, laboratory measures, MNA, skin elasticity or hydration at any site predicted BS scores. Conclusions: We found no correlation between objective biophysical/laboratory parameters and the subjective clinical BS assessment of DU risk. The predictive value of the BS in such patients seems low. If other measures or tools better predict DU risk is unclear.

**PB7 271 IMPACT OF DIFFERENT PARAMETERS IN LENGTH OF STAY AND FUNCTIONAL RECOVERY IN AN ELDERLY HIP FRACTURE PROGRAM**

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Introduction: Hip fracture is an important cause of mortality and disability in older people, with increasing frequency in the last years. We analyzed the impact of different parameters in length of stay and in functional recovery of patients included in an Elderly Hip Fracture Program (EHFP) in a recently opened hospital in Madrid (Spain). Material and Methods:

Participants were included in the EHFP (n=103) during hospitalization in the acute phase of hip fracture and were followed up during the next three months. Barthel Index (BI) and Functional Ambulation Classification (FAC) basal, at discharge, 1 and 3 months after discharge, time to surgery (TS) and social frailty were analyzed. Results: Age, mean 81.3 years. Female (%) 80.6. Median length of stay was 16.7+ 12.1 days. Basal BI 74.6 + 29.5. At discharge BI 29.9 + 21.6. One month BI 47.9 + 31.4. Three months BI 62.8 + 35.7. Basal FAC 4.2 + 1.2. At discharge FAC 1.9 + 1.3. One month FAC 2.9 + 1.4. Three months FAC 3.62 + 1.6. Medium TS 4.58 days. Social frailty was detected in 37% of patients. Parameters with influence in length of stay were TS (5,14 days of difference, p 0.031, if the patients were not operated in the first four days) and social frailty (4,94 days of difference, p 0.046). Prognostic factors in the functional recovery after the hip fracture were age and Basal IB (at discharge and follow up, p<0.001) and TS at three months follow up (p 0.044). Conclusion: Time to surgery is associated with a longer length of stay and a poorer functional recovery three months after surgical intervention. Social frailty is also associated with a longer length of stay.

#### **PB7 272 DOSE-RESPONSE RELATIONSHIP IN POST-ACUTE REHABILITATION CARE: MEASUREMENT OF ACTIVE TIME WITH 3D ACCELEROMETERS**

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Introduction. The presence of a dose-response relationship between the volume of therapy in rehabilitation and functional outcomes has been suggested. Methodological and measurement challenges have limited the study of the determinants of this relationship to temporal aspect such as the total time of therapy received. However, other determinants such as "active time" (i.e. time when a patient is mobilized and engaged physically in therapeutic activities) may be even more important. In this study, an approach based on wearable sensors is used to estimate active time in real-life therapy sessions. Methods and materials. 21 patients (81.8±5.6 years) with four different admission diagnoses (stroke, lower limb fracture, amputation and immobilization syndrome) participated in this study. During their therapy sessions, they wore three 3D accelerometer modules positioned at the hip, wrist and ankle. Estimates of active time were computed based on the temporal density of a vector combining acceleration signals from the three modules. Concurrently, trained observers measured active time using a time motion approach. Measures from the time motion approach served as the gold standard to establish the measurement error of the accelerometers data. Results. A total of 141 therapy sessions and 755 therapeutic activities were observed. Strong associations were found between estimates of active time from both measurement approaches ( $r=0.95$ ,  $p<0.01$ ). The absolute error of WBAN estimates, for total active time during each patient's stay, was averaged to  $13.7\%\pm7.8\%$  (range= 5-30%). As for individual activities, important variations were observed. However, a low error of estimates ( $11.9\%\pm10.5\%$ ) was observed for "gait", which was also the most recurrent activity (28% of activities). Conclusion. Estimation of active time in therapy using 3D accelerometers is a good alternative to observation based time motion analysis. Longitudinal studies

#### **PB7 273 INTERVENTIONS TO IMPROVE OSTEOPOROSIS CARE AFTER FRAGILITY FRACTURE**

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Objectives: The risk of future fracture increased 1.5- to 9.5-fold following a fragility fracture. Diagnosis and treatment of osteoporosis after fragility fractures may prevent future fractures. We tried to identify effective interventions improving osteoporosis care after fragility fracture. Methods: We searched the Pubmed, Psychoinfo and EMBase database before 2008 June with the MeSH terms: "fracture" and "osteoporosis/diagnosis or drug therapy or economics or mortality or prevention and control or therapy", and the limitations of humans, English, clinical trial or randomized controlled trial or controlled clinical trials. We found 924 articles. Twenty-two articles focusing on interventions to improve osteoporosis care after fragile fracture were selected for entire article review. Seven articles were excluded for no control, no patient level data, only observation study or methodology papers. Three articles were added by snow ball method. Finally, 18 articles were included. Results: The study designs and populations are so heterogeneous that meta-analysis for pooled findings are not possible. We reported the intervention effects on diagnosis rate and treatment rate. We divided intervention methods into five categories: (1) letters (2) letters + bone mineral density test offer (3) letter + face to face communication or consultation (4) coordinator (5) others. The effect of letters to primary care physicians was mixed. Letters to both primary care physicians and patients had more positive effects. Offering free bone mineral density test plus letter improved diagnoses, but had mixed results in improving treatments. Letter plus face to face communication and consultations were usually effective. Coordinator/special services were effective except the "Own the bone" project (A pilot study only). Conclusions: Many interventions were tried to improve osteoporosis care after fragile fractures but their effects were modest at best. Effective

osteoporosis care models for primary care physicians and orthopedic surgeons are urgently needed.

#### **PB7 274 LOSS OF INDEPENDENCE IN KATZ'S ADL ABILITY IN CONNECTION WITH AN ACUTE HOSPITALIZATION: EARLY CLINICAL MARKERS IN FRENCH ELDERLY PEOPLE**

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Objectives To identify early clinical markers associated with the loss of independence in elderly people in short-stay hospitals. Methods: Among the 1,306 subjects making up the prospective and multicenter SAFE cohort study, 619 medical inpatients, not disabled at baseline and hospitalized through an emergency department were considered. Data used in a multinomial logistic regression were obtained through a comprehensive geriatric assessment conducted in the first week of hospitalization. Dependency levels were assessed at baseline, at inclusion and at 30 days using Katz's ADL index. Baseline was defined as the dependence level before occurrence of the event motivating hospitalization. To limit the influence of rehabilitation on the level of dependence, only stays shorter than 30 days were considered. Results: About 514 patients were eligible, 15 died and 90 were still hospitalized at end point (n = 619). Two-thirds of subjects were women, with a mean age of 83. At day 30 162 patients (31%) were not disabled; 61 (12%) were moderately disabled and 291 severely disabled (57%). No socio-demographic variables seemed to influence the day 30 dependence level. Lack of autonomy (OR=1.9, 95% CI=1.2–3.6), walking difficulties (OR=2.7, 95% CI=1.3–5.6), fall risk (OR=2.1, 95% CI=1.3–6.8) and malnutrition risk (OR=2.2, 95% CI=1.5–7.6) were found in multifactorial analysis to be clinical markers for loss of independence. Conclusions Beyond considerations on the designing of preventive policies targeting the populations at risk that have been identified here, the identification of functional factors (lack of autonomy, walking difficulties, risk of falling) suggests above all that consideration needs to be given to the organization per se of the French geriatric hospital care system, and in particular to the relevance of maintaining sector-type segregation between wards for care of acute care and those involved in rehabilitation.

#### **PB7 275 CORRELATES OF LIFE-SPACE MOBILITY FOR MIDDLE-AGED AND OLDER POWER MOBILITY DEVICE USERS**

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Limited information is available on the impact of power mobility devices (PMDs) on the lives of older adults, namely on how these devices modify their mobility in various environments depending on duration of use or device type. Objectives: 1) To describe the mobility of power wheelchair (PWC) and scooter users in successive environments from home to outside of town, and 2) To examine correlates of powered mobility. Methods: A random sample of PMD users, aged 50 and over, was stratified according to duration of PMD use: wait-list group (n=44); new users (n=35; 1-6 months), and long-term users (n=39; 12-18 months). Life-space mobility (Life space assessment) measured the mobility range and use of technical and human assistance in 5 successive environments. The associations between life-space mobility and 3 independent variables - duration of PMD use, age (50-64 vs >65 years) and device type (scooter vs PWC) - were examined with analyses of variance. Results: Environments were reached more frequently or more independently both for new and long-term users in comparison to the wait-list group. Frequency of PMD utilization peaked in the neighbourhood (92.3%) and was least at home (57.6% PWC; 2.4% scooters). Life-space mobility was significantly different depending on duration of use ( $p<.05$ ), age ( $p<.05$ ) and device type ( $p<.001$ ). An interaction was detected between age and device type. Life-space mobility was significantly lower for the older age group of PWC users, whereas no significant difference was found among younger users of both device types. Conclusion: Distinct frequencies of device utilization and levels of independence were observed for PMD users depending on the environment. Only older adults displayed different life-space mobility scores depending on the type of device used.

#### **PB7 276 WHICH THERAPY AFTER 18 MONTHS OF TREATMENT WITH TERIPARATIDE IN SEVERE SENILE OSTEOPOROSIS?**

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Severe osteoporosis is a form of osteoporosis that seems not to be responding to antiresorptives therapy. In fact, we have 10-25% of old aged patients defined "non responders" as they don't have any increase of BMD and moreover they continue to have new fracture at both vertebral and non vertebral site. In a previous publication by our working group, we observed that teriparatide administration for 18 months in postmenopausal osteoporotic patients was efficient in either increase new bone mass (+10%) or reduce new fractures risk (-96%). Teriparatide was efficient also in improving quality of life (+50%). At the end of these 18 months, we followed up patients every 6 months, monitoring BMD, fracture risk and quality of life. About 30% of patients (n=45) remained on Calcium + Vitamin D and followed up. After 1 year over the 18 months, we observed a gradual deterioration of quality of life while BMD reached a plateau with a trend towards a decrease of bone mineral density at both sites, vertebral and hip. So we decided to divide these 45 patients into 3 groups (A,B and C) of the same numerosity. We started a therapy with alendronate ( 70 mg/weekly) for group A, with Risedronate (35 mg/weekly) for group B and Strontium Ranelate (2g/die) for group C. We analyzed the effect of therapies after 6 months and after 1 year performing 1) a lumbar BMD 2) a hip BMD 3) administration of QUALEFFO with the 41 items questionnaire to evaluate the quality of life. Results are in Tab. 1: %±% Group C Δ ±% Group B Δ ±% Group A Δ Alendronate vs T0 Risedronate vs T0 SR Ranelate vs T0 BMD T0 L1-L4 640±60 L1-L4 656±70 L1-L4 648±66 mg/cm<sup>2</sup> Hip 710±90 Hip 724±84 Hip 718±76 BMD T6 L1-L4 648±60 + 1,2% L1-L4 670± + 2,2% L1-L4 700±78 + 8% mg/cm<sup>2</sup> Hip 712±94 + 0,28% Hip 730±88 + 0,83% Hip 740±78 + 3% BMD T12 L1-L4 660±62 + 3,12% L1-L4 680±84 + 3,6% L1-L4 710±76 + 9,6% mg/cm<sup>2</sup> Hip 720±80 + 1,4% Hip 742±80 + 2,5% Hip 768±82 + 6,9% Qualeffo T0 117±42 120±50 122±50 Qualeffo T6 122±46 - 4% 116±52 - 3% 100±54 - 18% Qualeffo T12 118±54 - 1% 112±54 - 6,6% 80±52 - 34% The BMD increase at hip level with strontium ranelate is of main importance as it was demonstrated (Bruyere et al, Curr Med Res 2007) a strong correlation between BMD increase (hip) and fracture risk reduction at vertebral and hip level (for each +1% of increase at hip there is a reduction of -4% for vertebral fracture risk and -7% for hip fracture risk respectively). Conclusion: in senile severe osteoporosis, consequential treatment with strontium ranelate (2 gr/daily) after 18 month of teriparatide seems to be better than consequential treatment with antiresorptives, with a significant increase of BMD and improvement of quality of life.

**PB7 277 CROSS-CULTURAL ADAPTATION AND VALIDATION OF THE "EDMONTON FRAIL SCALE (EFS)" – ELDERLY FRAILTY ASSESSMENT SCALE.**  
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Introduction: This research aimed at the cross-cultural adaptation of the Edmonton Frail Scale (EFS) to Brazilian Portuguese, as well as the analysis of its psychometric properties in a sample of elderly persons from a community in the interior of São Paulo State, Brazil. Methods and materials: The reference framework from literature was used: translation of the EFS to Portuguese; achievement of the first consensus version in Portuguese; item assessment by an expert committee; back-translation; achievement of a consensus version in English and comparison with the original version; semantic assessment of the EFS; pretest of the Portuguese version. Results: The adapted version was applied to 137 elderly aged 65 years or older who lived in the community, between August 2007 and June 2008. As to the assessed psychometric properties, in the known-groups validation of the diagnosis of frailty between gender, age and cognitive deficit, comparative analyses were made, using Mann-Whitney's non-parametrical test. It was found that elder elderly, women and with a cognitive deficit are more prone to the frailty diagnosis. All comparisons were statistically significant. The construct validity of the EFS with the Functional Independence Measure (FIM) and the Mini-Mental State Examination (MMSE), moderate and negative correlation levels were found, which were adequate and statistically significant ( $p < 0.001$ ). In the analysis of the interobserver frailty diagnosis data (on the same day), the Kappa index was 0.81 (CI 0.61-1.00), against 0.83 (CI 0.72-0.94) for intraobserver diagnosis (maximum period of 15 days). The intraclass correlation coefficient (CCI) of the gross frailty score was 0.87 for the interobserver (CI 0.82-0.91,  $p < 0.001$ ) and 0.87 for the intraobserver diagnosis (CI 0.81-1.00,  $p < 0.001$ ). Conclusion: Hence, it can be concluded that the EFS version adapted to Portuguese was valid and reliable in the study sample.

**PB7 278 AN EVALUATION OF THE FALLS EXERCISE SERVICE FOR 65S AND OVER WHO HAVE FALLEN IN GLASGOW, SCOTLAND.**  
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Introduction: The Community Falls Prevention Programme (CFPP) is part of the referral pathway for community dwelling people aged 65 and older, living in the Greater Glasgow and Clyde, who have had a fall[1]. Referrals to the CFPP between Jan 2007-Jun 2008 averaged 177 patients/month. The CFPP runs strength and balance exercise sessions (in collaboration with Culture and Sport). All classes are evidence based[2,3] led by trained postural stability instructors[4]. There are three tiers of group class (to meet functional needs) offering between 10-28 weeks, reaching the required dose of balance exercise recently recommended[5]. During 2007, 277 patients attended classes every month.

Methods: 274 patients had baseline and follow-up functional tests following average 11.9 weeks of exercise sessions. All assessments by the same investigator. All data was normally distributed (Paired t-tests). Results: All outcome measures showed significant improvements. Tinetti balance score (TBS, n=274) improved from 23.1 to 24.8,  $p < 0.001$ ; 180 degree turn (n=112, 5.5 steps to 5 steps,  $p < 0.001$ ); functional reach (n=112, 19.2 to 20.9,  $p < 0.001$ ); timed up & go (TUAG) (n=137, 18.6 to 16.3 sec,  $p < 0.001$ ); Tinetti FES (n=43, 29.3 to 21.5,  $< 0.001$ ). Change in TBS was duration dependent, with the change in score in those attending <11 weeks (n=125, 1.2±2.7) being significantly lower than those attending for >12-16 weeks (n=91, 2.0±2.1,  $p < 0.01$ ), or those attending 16 weeks or more (n=58, 2.5±2.5,  $p < 0.01$ ). Conclusions: The TUAG post-exercise came close to the 16 second cut off for "low risk" of falls[6] and the falls efficacy scale changes suggest considerable improvements in self-efficacy to prevent falls. As duration of attendance was correlated with TBS balance outcomes, it is important to encourage long term adherence. References: [1]http://library.nhsogg.org.uk/mediaAssets/library/nhsogg/strategy/osteoporosis/falls/prevention/2006-2010.pdf [2]Skelton DA, et al. Age Ageing. 2005 [3]Robertson MC, et al. Brit Med J. 2001 [4]Skelton DA, et al. J Aging Phys Act. 2004 [5]Sherrington C, et al. J Am Geriatr Soc. 2008 [6]ABS/BGS. J Am Geriatr Soc 2001 http://sud.editme.com

#### **PB7 279 FEMORAL FRACTURES IN OLD PATIENTS WITH AND WITHOUT COGNITIVE IMPAIRMENT: EFFICIENCY OF THE REHABILITATION PROCESS**

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Introduction: Cognitive impairment may be a poor prognostic indicator for functional recovery. Geriatric Convalescence Unit is an intermediate care hospitalization facility which offers an interdisciplinary geriatric intervention program. In these units specific geriatric care in addition to convencional rehabilitation programs are performed. Objetive: To evaluate functional improvement and the efficiency of the rehabilitation process, in old patients with femoral neck fractures, with and without cognitive impairment Patients and methods : A group of 200 patients was analyzed. Cognitive function was evaluated (Mini Mental State Examination of Folstein). Patients were divided : severe cognitive impairment ( $< 10$  points), moderate (11-21 points), and normal ( $> 21$  points). Variables: age, sex, functional status (Barthel index) before admission (BBA), at admisión (BA), and at discharge (BD). Efficiency index was calculated [functional improvement (BD-BA) divided by length of stay in the unit]. The corrected Heinemann index (CHI), was used to evaluate the percentage of recovered function at discharge, in relation to the previously lost functions at admisión [ $CHI = (BD-BA)/(BBA-BA) \times 100$ ]. Results : Of the 200 patients admitted, 18 were excluded of the rehabilitation program, because of acute medical complications or dead. Finally, 182 patients were analyzed (mean age 82.6±6.7) [135 women (74.1%)]. Mean value of CHI in patients without cognitive impairment was 73.8±24.0 %, in those with moderate cognitive impairment was 62.8±30.9 %, and in those with severe 33.6±32.5 % ( $p < 0.001$ ), and mean values of the efficiency index were 0.91±0.59, 0.55±0.44, and 0.27±0.35 respectively ( $p < 0.001$ ). Conclusions : 1. In spite de presence of moderate and severe cognitive impairment, old patients with neck femoral fracture, cannot be rejected from a rehabilitation program, because a high proportion of them may improve, if appropriate treatment and specific geriatric care is given. 2. Functional improvement expresed as CHI, and the efficiency index were lower in patients with cognitive impairment.

#### **PB7 280 BIOELECTRICAL IMPEDANCE VECTOR ANALYSIS IDENTIFIES SARCOMOPENIA IN NURSING HOME RESIDENTS**

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Loss of muscle mass and water shifts between body compartments are contributing factors to frailty in the elderly. The body composition changes are especially pronounced in institutionalized elderly. We investigated the ability of single-frequency bioelectrical impedance analysis (BIA) to identify body composition deficiency in nursing home residents compared to free-living elderly Americans. Methods: Thirty-three nursing home residents (aged 72-93y) participated. Resistance (R) and reactance (Xc) values were measured at 50-kHz using the Xiton 4200 Hydra BIA instrument. Reference data for 2571 free-living adults aged 70-90 y were obtained from the NHANES III database (measured at 50-kHz using the Valhalla Scientific Body Composition Analyzer 1990B). The groups were compared using the method and bioelectrical impedance vector analysis (BIVA) software developed by Piccoli et al (Piccoli A, Pastori G: BIVA software, University of Padova, Italy, 2002). R and Xc values were standardized by the participant's height (H) in meters. The mean R/H and Xc/H values were calculated for each group by sex. The ratio of resistance to height (Ohm/m) was plotted on the major axis against the ratio of reactance to height (Ohm/m) on the minor axis. Bioelectrical impedance vector analysis software was used to plot the mean R/H and Xc/H values for each sex on a R-Xc graph with 95% confidence ellipses. Results: Comparison of the distribution of mean vectors in each

population illustrates a significant difference in the body composition of nursing home residents compared to the non-institutionalized American population. Nursing home vectors were outside the 75% tolerance ellipses of the reference population. Conclusion: Single frequency BIA successfully identifies the body composition deficiencies present in nursing home residents associated with sarcopenia and fluid redistribution. However, more detailed methods (such as stable isotopes) should be used for monitoring the status of individuals rather than groups.

**PB7 281 DEEP DISSECTING HEMATOMA IN HOSPITALIZED GERIATRIC PATIENTS: CONCEPT AND IMPORTANCE**

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Introduction: Skin aging is associated with chronic cutaneous insufficiency or fragility syndrome, recently called dermatoporosis.<sup>1-3</sup> One major complication of this skin atrophy is the occurrence of deep dissecting hematoma (DDH) sometimes associated with skin necrosis and wound, resulting from minor trauma or falls. Objectives: Prevalence and description of DDH in a geriatric hospital in order to optimize an early detection and management by health care givers. Methods and materials: Retrospective analysis of all DDH diagnosed by the dermatologists in the Geriatric Hospital of Geneva from 2006 to 2008. A specialist nurse and a plastic surgeon participated in the management. The main outcome measures were sex, age, affected area, associated cutaneous wound, presence of steroids and/or anti-aggregant and/or anti-coagulant treatment. Results: 40 patients (mean age  $88.5 \pm 4.8$ , range 80 - 99) out of 1400 dermatology consultations had the diagnosis criteria. Women outnumbered men by a ratio of 7.0. The lower extremities were the most frequent affected part of the body. Other localizations were the face and arm. Incidence rate was significantly higher in women (57.8, 95% CI 40.3-80.3 vs 18.8, 95% CI 6.1-43.8) per 10000 patients discharged ( $p = 0.0134$ ). Conclusion: Falls and trauma in the elderly have serious skin consequences. The relation with the type of trauma and skin atrophy severity has been suggested but should be confirmed prospectively. Many of these patients were under steroids and/or antiaggregants - anti coagulants and we aim to show them as associated risk factors in our geriatric population. The consecutive skin necrosis and mobility impairment prolong the hospitalization or increase the cost of ambulatory care, which encourage us to better define the diagnosis and management criteria. References: 1. Saurat JH. Med Hyg 2004;2472(23655):476. 2. Kaya G et al. Dermatology. 2007;215(4):284-294. 3.Kaya G et al. Arch Dermatol 2008;114:1303-8.

**PB7 282 EFFECTS OF A PHYSICAL ACTIVITY PROGRAM ON COGNITIVE FUNCTION AND GAIT IN ELDERLY PERSONS SUFFERING FROM DEMENTIA**

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Objectives: To study the effects of physical training based on exercises in walking, equilibrium and endurance on cognitive function and locomotion in institutionalized persons suffering from dementia. Materials et methods: A randomized prospective case control study on 31 subjects suffering from dementia with mean age of  $81.8 \pm 5.3$  (Mini Mental State Examination average  $12.44 \pm 3.8$ ). One group (GPA) benefited from a 15-week physical activity program involving three one-hour sessions a week. The other group (GC) served as the control group. Both before and after the physical activity program, all subjects took the following tests: ERFC (rapid evaluation of cognitive functions) and gait analysis through use of the Bessou locometer (SATEL®). Results: According to the ERFC, the GPA subjects improved their overall score ( $p < .001$ ), while we observed a reduction of this score in the control subjects ( $p < .001$ ). The program is thereby shown to have had a positive effect, ensuring maintenance, if not improvement, of cognitive capacities. As regards gait analysis, our study highlights the positive effects of the physical activity program on three spatio-temporal parameters: walking speed, length of stride and average double support time. Our results showcase both improvement in walking quality through heightened walking speed ( $p < .001$ ), and reduction of double support time ( $p < .001$ ). Lastly, after the 15 weeks of follow-up, the control group subjects presented a reduction in both walking speed ( $p < .001$ ) and stride length ( $p < .01$ ). Conclusion: This study shows that a physical activity program can improve the quality of walking and allow for the slowing of cognitive decline in elderly persons suffering from dementia.

**PB7 283 NEOVASCULAR AGE-RELATED MACULAR DEGENERATION (AMD) AND INJURIOUS FALLS: DOES DECREASED PHYSICAL ACTIVITY LIMIT RISK? A 12-MONTH PROSPECTIVE COHORT STUDY**

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Introduction: Impaired vision is a key risk factor for injurious falls, and neovascular age-related macular degeneration (AMD) is the leading cause of severely impaired vision among

older adults in Canada. However, clinicians observed that patients with AMD limited their physical activity and tended to remained indoors in familiar surroundings. The objective of this study was to use a robust study design to determine whether older women with AMD were at an increased risk of injurious falls compared with controls. Methods : We conducted a prospective cohort study enrolling 114 older (>70 years), community-dwelling women with AMD and 132 community-dwelling women without AMD. Subjects were recruited from a hospital-based ophthalmology clinic in Vancouver, Canada, and followed for a total of 12 months per person. The incidence of injurious falls was determined through monthly telephone follow-up. Physical activity was measured by PASE questionnaire. We compared the mean number of injurious falls per person year between groups using negative binomial regression models. Results: A mean of 0.37 injurious falls per person-year were experienced among participants from the AMD group, compared to 0.16 injurious falls per person-year among participants in the non-AMD group ( $p=0.006$ ). The AMD group reported less physical activity than their control counterparts. The relative risk of injurious falls, for an individual with AMD compared to those without AMD, adjusted for age, was 1.77 (1.07 – 3.02). Conclusions: Older women with age-related macular degeneration are at almost twice the risk of injurious falls compared to control counterparts. Clinicians caring for older adults should recognize AMD as an important risk factor for injurious falls, even though the visually impaired patients are less active.

**PB7 284 MUSCLE POWER AND FUNCTIONAL CAPACITY IN COMMUNITY-DWELLING OLDER PEOPLE WITH HIP FRACTURE HISTORY**

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Hip fracture is a trauma affecting muscle power of the fractured side potentially increasing the risk for disability. This study aims to define the associations between leg extension power of the fractured leg (LEPm) and functional capacity (FC) in older people with hip fracture history (HFH). Population-based sample of 60-85-year-old community-dwelling persons 0.5-7 year after hip fracture (n=79) attended the study. FC was assessed by a validated questionnaire including 15 questions concerning ADL and IADL. Subjects were divided into two study groups: GoodFC (difficulties in less than three activities), ReducedFC (difficulties in three or more activities). LEPm was measured with the Power Rig. Time since fracture, number of chronic diseases and pain in the lower body were determined. Body height and weight were measured and BMI was calculated. 62% of the HFH subjects had reduced FC. The LEPm was 71 (41) W among those with ReducedFC and 101 (41) W among those with GoodFC ( $p=0.006$ ). The time since fracture was 1375 (585) days in the ReducedFC and 1819 (884) days in the GoodFC group ( $p=0.019$ ). Pain was reported by 53% of those with ReducedFC and by 27% of those with GoodFC ( $p<0.001$ ). The number of chronic diseases was 4 (2) in the ReducedFC and 3 (2) in the good FC ( $p=0.042$ ). Logistic regression analysis showed that LEPm was significantly associated with FC even after adjusted for time since fracture, pain and BMI (OR 0.982, CI95% 0.968-0.997). The association was, however, slightly weaker when number of chronic diseases was included in the model (OR 0.985, CI95% 0.970-1.001). This study shows that muscle power is an important determinant of functional capacity in older persons with HFH even years after fracture. Rehabilitation strategies targeting muscle power need to be developed to prevent disability after hip fracture.

**PB7 285 EFFECTS OF A STANDARDIZED PHYSICAL TRAINING ON MOTOR PERFORMANCES IN PATIENTS WITH DEMENTIA**

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Introduction: Randomised-controlled training interventions trials in patients with dementia show methodological limitations and controversial results (Hauer 2006). Political request to exclude patients with dementia from rehabilitation are hardly based on firm evidence or established guidelines. Target of study: To study the effects of a standardized physical training on maximal strength and functional performance (primary endpoints) in patients with mild to moderate dementia. Methods: Study design: Randomised-controlled Intervention Trial (RCT) Study participants: mixed sample of geriatric patients following geriatric rehabilitations and home-dwelling, multi-morbid patients with dementia (n=120: Intervention (I) n=61; Control (C) n=59, mean age, 82.5 Yrs.) (comprehensive Dementia diagnosis according to established diagnostic criteria). Intervention: 3 months, intensive, progressive strength, function, and attention-related group training.(2-hrs; 2 Times/week vs. unspecific stretching exercise while seated.(1 hour/2 Times/Week). Measurements before (T1), and after intervention (T2) and 3-months Follow-up (T3). Results: The Intervention group showed significant improvements in all measured parameters of maximal strength and functional performance compared to the control group at the end of training including the primary study endpoints: One-Repetition Maximum (IRM): C (T1):  $141.2 \pm 40.8$  kg; (T2):  $134.8 \pm 48.5$  vs. I (T1):  $154.8 \pm 59.4$  (T2):  $225.2 \pm 79.7$ ,

p<0,001; and 5-chair stand: C: (T1): 17,5±9,6; (T2): 19,7±15,9 vs. I (T1): 16,7±6,3; T2: 11,8±3,2; p<0,001. Differences remained significant during the follow-up period without training: in the primary< study endpoints and most other motor tests. IRM : C (T3) 153,4±53,6 vs. I (T3): 208,7±79,8; p<0,001 und 5-Chair-stand :C (T3): 19,9±15,9 vs. I (T3) 13,1±4,0; p<0,001) Conclusion: Study results confirm that significant, clinically relevant improvements in strength and function are feasible by a high intensive, standardised training in patients despite mild to moderate dementia. Ref: Hauer K, Becker C, Lindemann U, Beyer N. Systematic Review: Effectiveness of physical training on motor performance in cognitively impaired persons. American Journal of Physical Medicine & Rehabilitation 2006 Oct;85(10):847-57.

**PB7 286 QTL ANALYSIS OF AGING MOUSE STRAINS TO DISCOVER GENES ASSOCIATED WITH DIFFERENCES IN LOCOMOTOR FUNCTION DURING AGING**

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Loss of locomotor function is a universal manifestation of aging across species and is an important factor in frailty in aging humans. Quantitative trait loci (QTL) analysis is an unbiased approach to identify genes associated with complex traits such as age-related decline in locomotor function. A previous study from our lab found a highly significant QTL on chromosome related to strain differences in locomotor activity in older mice. The CLOCK gene was identified as a candidate gene of interest in the region identified. Mutation of this gene has been reported to increase rearing activity and expression of the gene coding for tyrosine hydroxylase, the rate-limiting enzyme in dopamine synthesis. We hypothesized that dopamine levels and locomotor activity in aging mice would be related to the QTL on chromosome 5 where CLOCK is located. We measured total locomotor activity in 33 recombinant inbred strains of mice using a Columbus Instruments Animal Activity Meter. Dopamine and its metabolites were measured by HPLCec in the brain of the same mice at 26 months of age. QTL analysis did not reveal a significant QTL for dopamine or its metabolites on chromosome 5. The levels of dopamine and its metabolites were not correlated with activity in the same mice. However, QTL analysis of dopamine and metabolites revealed almost significant QTLs associated with chromosomes 9 and X. These data provide evidence dopamine and metabolite levels are unrelated to strain differences in locomotor activity in old mice. Moreover, they show age-differences in dopamine and metabolites are not related to CLOCK. Future studies will focus on QTLs found on chromosome 9 and X and on other candidate genes found in our previous study. Studies like these may reveal genes underlying individual differences in vulnerability to frailty and may suggest new therapeutic targets for treatment of frailty.

**PB7 287 EXERCISE PRESCRIPTION AFTER OSTEOPOROTIC VERTEBRAL FRACTURES**

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Introduction: To date no systematic reviews of the effect of exercise or physical activity for vertebral fractures have been published. Objectives: 1) to critically synthesize research on prescription of safe and effective exercises after osteoporotic vertebral fractures; 2) to identify the need for further research if insufficient evidence exists. Methods and materials: A systematic search of relevant medical and health sciences databases data bases, journals and gray literature was conducted. Only randomized controlled trials (RCTs) and controlled clinical trials (CCTs) that included adults >45 years who had sustained osteoporotic fracture(s) of vertebrae were included. Studies of post-fracture therapeutic exercise and regular physical activities in hospital or home settings were targeted. Separate analyses were undertaken for intervention against no treatment control or usual care, and against treatment control. Primary outcome measures were defined based on the International Classification of Functioning, Disability and Health. Adverse events were also analyzed. Results: Six unique studies were identified: 5 RCTs and 1 CCT. All had small sample sizes (range n=22 to n=185) and 5 targeted post-menopausal women. Interventions were home-based, community-based, or in out-patient clinics and included stretching, strength training, balance training and/or aerobics. Positive findings were reported in at least 1 study for the following outcomes: quality of life, gait speed, bed mobility, pain, balance, motor function and strength however analyses revealed that the studies were variable in terms of quality. One study reported an increased number of fractures among individuals who performed flexion (sit ups) compared to extension or combined extension/flexion exercise. Conclusion: There are few studies evaluating exercise or physical activity post vertebral fracture. The existing studies are of variable/limited quality. The results suggest that there is limited evidence to support or

refute the efficacy of exercise or physical activity intervention following spinal fracture in adults. Larger methodologically robust studies are needed.

**PB7 288 OSTEOPOROSIS IN TUBE FED (TF)BED-RIDDEN ELDERLY FEMALE PATIENTS.**

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Introduction: Elderly patients, bedridden and tube fed, despite being confined to bed, undergo fractures. These fractures occur not only due to falls, but even as a result of repositioning and transfers to and from bed. There is inadequate information about the bone density of these tube-fed patients. Methods: Twenty seven, bedridden and tube fed females patients, with a mean age of 85 (+/-7.56) years were evaluated. Bone mass density(BMD) was measured using Dexa, only for the lumbar spines due to contraction of the hip joints. The Kruskal-Wallis test or the Mantel-Haenszel chi-square test were used to compare between the osteoporotic, osteopenic and normal groups. Results: 19 subjects (70.4%) had osteoporosis, 3 (11.1%) had osteopenia, and 5 (18.5%) were normal. The nonosteoporotic subjects, had a mean age of 82.8 (+/-7.43) years, the osteopenic subjects were slightly older with mean age of 84.3(+/-4.16) years, and the osteoporotic subjects had a mean age of 86.1(+/-8.12); these differences were not statistically significant (Kruskal-Wallis test pvalue: 0.2968) The mean (+/-SD) hospitalisation time was 2.56 (+/-2.13), 1.15 (+/-1.16) and 2.31 (+/-1.37) for the osteoporotic, osteopenic and nonosteoporotic subjects respectively (Kruskal-Wallis test pvalue: 0.4573). There were no statistically significant differences found between the three groups in the functioning level as measured by Norton and Glasgow Coma scores either. No statistically significant differences in the prevalence of dementia, vegetative state, pressure ulcers and pelvic fractures were found before hospitalisation. Serum levels of calcium, phosphate, cholesterol, vitamin D and parathyroid hormone were normal, albumin and hemoglobin were low, there was no significant difference between the three groups. Conclusions: Tube feeding prepared formula containing calcium and vitamin D helps preserve bone mineral density among 30% of the subjects despite being bedridden for a long period of time.

**PB7 289 ACUTE CHANGES IN CIRCULATING BRANCHED CHAIN AMINO ACIDS, TRYPTOPHAN & PROLACTIN DURING SUSTAINED EXERCISE IN OLD MEN**

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Prolonged exercise can trigger a skeletal muscle uptake of branched-chain amino acids (BCAA) [valine, leucine, and isoleucine] that is out of proportion in comparison to other amino acids, including free tryptophan (TRPf). Since elevations in the TRPf:BCAA ratio are known to facilitate serotonin synthesis, the elderly may benefit from these exercise-related changes because previous work shows that they present a global decline in serotonergic function. OBJECTIVE: To quantify circulating levels in BCAA, TRPf and prolactin (PRL) during and after sustained exercise in older men. METHODS: Seventeen men (64±3 y) completed a maximal graded cardiopulmonary exercise test (CPET) and, at least 3 d later, a 60-min treadmill exercise bout at a heart rate representing 65-70% of VO<sub>2max</sub> measured during CPET. Mixed venous blood was collected from the antecubital vein into heparinized tubes as follows: immediately before exercise (BASELINE), after 30-min exercise (EXERC-30), after 60-min exercise (EXERC-60), and finally at 30 min post-exercise (POST-EX). Plasma was rapidly separated from red blood cells, then stored at -82°C until assayed using either LC/MS (amino acids) or immunoassay (PRL). RESULTS: Prolactinemia changed as follows: BASELINE: 6.6±1.7, EXERC-30: 7.7±3.2, EXERC-60: 10.1±6.3, and POST-EX: 8.9±4.9 mg/L (mean±SD). A repeated measure ANOVA revealed that prolactinemia increased from BASELINE to EXERC-30 (P<.05) and reached a peak at EXERC-60 (P<.01). On the other hand, baseline levels in BCAs [valine: 272±43, leucine: 147±27, isoleucine: 75±21 umol/L] and TRPf [62±14 umol/L] did not change significantly in response to exercise, leaving the TRPf:BCAA ratio unchanged at ~12%. CONCLUSION: Our results show that exercise BCAA levels and TRPf:BCAA do not change significantly despite increased prolactinemia. It is concluded that there are no acute changes in blood markers of serotonin synthesis in untrained elderly men in response to 60-min aerobic exercise, and that prolactin release by the pituitary gland is unrelated to these changes.

**PB7 290 THE RESULT OF MODERN THERAPY WITH VISCOELASTIC DEVICE IN THE ELDERLY PATIENTS WITH GONARTHROSIS**

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**Introduction:** Gonarthrosis is a very frequent disease in the elderly (almost 85% over 65 years old) which threatens the patients' quality of life (QOL), because of pain, immobility and dependence. The therapeutic options include conservatory measures to relieve the pain, to improve mobility and to delay the surgical procedures. The goal: The present paper analysed clinical and functional evolution of a group of patients with gonarthrosis submitted to an adequate rehabilitation program + NSAID + intra articular infiltrations with a sterile viscoelastic device, versus a group of patients treated only with a rehabilitation program + NSAID. **Method:** We selected 144 patients (69 males and 75 females), aged between 68-75 years old, who were admitted in a geriatric clinic for 15 days; they followed a rehabilitation treatment (electrotherapy, kinetotherapy and massage) + NSAID+ intra articular infiltration with hyaluronic acid, obtained by biofermentation, 1 dose/day in the 1st day, the 8th day, and the 15th day. For comparison we selected a control group of 160 patients (85 males and 75 females), aged between 65-74 years old, following only the rehabilitation treatment + NSAID. We noticed pain intensity, muscular force, the balance, step size, walking speed, use of cane, help need for daily activities, self-evaluation of well-being. **Results:** After 15 days of treatment we observed an obvious improvement of the followed parameters and QOL especially in the patients getting also infiltrations with viscoelastic solution compared with the control group. **Conclusion:** The modern intra articular treatment of gonarthrosis, together with the physical procedures and NSAID, determines superior benefits for patients comparative with those receiving only physiotherapy and NSAID, improving the functional performances, the subjective symptoms, and the QOL. \*The National Institute of Geriatrics and Gerontology "Ana Aslan" - Romania \*\* Fluminense University, Geriatrics, Rio de Janeiro, Brazil

**PB7 291 SNOEZELEN ROOM: A PRESCRIPTION FOR BALANCE IN INDIVIDUALS WITH DEMENTIA?**  
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**Introduction.** Few empirically tested falls prevention programs are available for individuals with dementia. Snoezelen rooms provide multisensory stimulation and are used to stimulate and to relax individuals. In this environment, touch, colour, sound, smell, and taste are used to rouse multiple sensations. This study investigated the capability of multisensory stimulation to improve balance and to reduce falling among institutionalized older adults with dementia. **Methods and Materials.** Twelve participants completed 30 minute sessions in the Snoezelen room twice a week for 6 weeks. Participants decided which senses to explore but were encouraged to engage in activities that can improve proprioception and balance such as swinging in hanging chairs, eye tracking exercises, or interacting with vibratory objects. Twelve participants comprised a control group and received volunteer visits. The Functional Reach Test, the Sharpened Romberg, and the Timed Up and Go Test with and without dual task were used to assess balance and function of all participants at baseline and after the 6-week intervention. Fall rates, as reported on institutional charts by the facility staff, were recorded before, during, and after the intervention. **Results.** A split-plot analysis confirmed that multi-sensory stimulation had no impact on the balance of participants in the intervention group. There were no statistically significant differences between the intervention and control groups on any test, nor was there any significant multivariate interaction effect of group by time. There were no statistically significant differences in falls rates for the intervention group before, during, and after the intervention. **Conclusion.** Results suggest that the regular practice of Snoezelen room does not alter the balance performance or falls occurrences of institutionalized individuals with dementia. The best use of Snoezelen room in dementia care lies in providing leisure activity and possibly improved mood and attention.

**PB7 292 ASSOCIATION OF OXYGEN CONSUMPTION WITH LOWER LIMBS MUSCLE PERFORMANCE IN COMMUNITY ELDERLY PEOPLE**  
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**Introduction:** The aging process is characterized by modifications in several systems including the cardiopulmonary and musculoskeletal. Characterizing the physical impairment may help optimizing training strategy. **Aim:** To investigate the association between oxygen peak consumption ( $\text{VO}_2$  peak  $\text{mL.Kg}^{-1}.\text{min}^{-1}$ ) and the lower limbs muscle performance (average power, peak torque and maximal torque-to-body weight ratio - MTBW) among 65 aged or older seniors. **Methods and Materials:** 28 volunteers living in the community (average age  $73.46 \pm 6.12$ ) were evaluated by incremental test with gas analysis using treadmill and ramp protocol and also by maximal strength test using an isokinetic dynamometer and concentric contractions of hip and knee. The study was approved by the Institutional Ethics Committee. After confirmation of normal data distribution, correlation test of Pearson was accomplished considering a significance level of 0.05. **Results:** There were found significant correlations between  $\text{VO}_2$  peak, the most accurate indicator on functional capacity with the average power of knee extensors ( $r=0.44$ ), peak torque (in the speed of 60%) of hip flexors ( $r=0.49$ ) and extensors ( $r=0.51$ ), peak torque of knee flexors ( $r=0.49$ ) and extensors ( $r=0.58$ ) and also with MTBW of hip flexors ( $r=0.47$ ) and extensors ( $r=0.48$ ) and MTBW of knee ( $r=0.40$  and  $r=0.54$ ). **Conclusion:** This results suggest that a decrease of the capacity to produce maximum and explosive lower limbs force is related to the decrease of oxygen consumption and

contribute to reduce the elderly physical performance. This study reinforces the need of global programs including aerobic and resistance training to improve the elderly physical fitness. Sponsored by: CNPq, FAPEMIG

**PB7 293 COMPARING CHARLSON AND ELIXHAUSER COMORBIDITY SCALES FOR MORTALITY PREDICTION IN OLDER BRAIN INJURY PATIENTS**  
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**Introduction:** Trauma patients with comorbid conditions are at higher risk for death. Comorbidities are common in older adults. Currently, the most widely used predictive tool for mortality is the Charlson comorbidity index (CCI), which does not account for prevalent chronic conditions in older adults such as hypertension and warfarin use, which may influence outcome following trauma. The goal of the present study was to compare the CCI to the Elixhauser score to predict mortality at discharge in a sample of older adults with traumatic brain injury (TBI) controlling for initial injury severity [injury severity score (ISS), Glasgow coma score (GCS)], age and gender. **Methods:** Secondary data analysis was conducted using the Harborview TBI dataset. Available clinical and outcome data were obtained for subjects aged 55 and older and medical records were reviewed for comorbidities (N=196). Logistic regression modeling was used to predict mortality at discharge. **Results:** Mean age of the sample was 69.3 years (SD 10), initial GCS in the ED was 9.9 (SD 4.1), mean ISS was 25.6 (SD 9.4), with an in-hospital mortality of 31%. Using the CCI, 58.5% of subjects scored 0, 26.5% scored 1, 9% scored 2 and 6% scored 3 or higher. In contrast, on the Elixhauser, 19.5% scored 0, while 35% had a score of 1, 37.5% had a score of 2, and 7.8% had a score of 4 or higher. Using logistic regression modeling, age and GCS were independently predictive of mortality at hospital discharge in both models. However, use of the Elixhauser score improved sensitivity from 75 to 79.5% over the CCI method for prediction of mortality. **Conclusion:** As the Elixhauser scale accounts for more prevalent conditions in older adults, it may be a more robust method for prediction of mortality. Further validation in other geriatric trauma populations is warranted.

**PB7 294 FREQUENCY OF AQUATIC EXERCISES IN RELATION TO MANAGEMENT OF KNEE AND HIP OSTEOARTHRITIS IN WOMEN**  
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**Introduction:** Hydrotherapy is frequently used with patients for the management of hip and knee osteoarthritis (OA). However, there is only a small quantity of research establishing the frequency of rehabilitation for this population. The purposes of this study were to determine if the frequency of attendance during a 6-week hydrotherapy intervention can affect measures of pain, stiffness, and overall physical function, and determine the efficacy of hydrotherapy on overall health and well-being for women with knee or hip OA. **Method:** Nineteen women with knee or hip OA were randomly assigned to participate in a 6-week deep water running intervention either 1-2 days a week (n=10 for Group A) or 3 or more days a week (n=9 for Group B). Participants were evaluated pre and post-training for changes in pain, stiffness and physical function, using the Western Ontario McMaster Universities Osteoarthritis Index (WOMAC), as well as overall health and well-being, using the Medical Outcomes Study Short Form 36 Version 2 (SF-36v2). **Results:** The intervention resulted in less pain and joint stiffness and greater physical function for both Groups A and B. Pain scores improved significantly for both groups ( $p < 0.05$  for each). Joint stiffness and physical function scores improved, but not significantly. There was no noted increase in physical or mental health component scores. **Conclusion:** Both programs of hydrotherapy in the 6-week period resulted in significantly less pain and lower levels of stiffness, and improved physical function. This study supports the notion that 1-2 days per week of hydrotherapy is an appropriate rehabilitation frequency for knee or hip OA. The findings demonstrate that if individuals who are diagnosed with mild to moderate hip or knee OA participate in 1-2 days of hydrotherapy per week, their pain scores will show significant improvements. It is recommended that the effects of hydrotherapy exercise programs be further investigated.

**PB7 295 DISABILITY MODERATES THE ASSOCIATION BETWEEN NEIGHBORHOOD ENVIRONMENT AND SOCIAL PARTICIPATION AMONG OLDER MEN BUT NOT WOMEN: THE NUAGE STUDY**  
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**Introduction:** Social participation, a key determinant of healthy aging, can be enhanced by a neighborhood with a wealth of community resources and services. The influence of neighborhood can differ according to disability, a frequent phenomenon among seniors. Unfortunately, few studies have examined this impact. This study examined the moderating effect of disabilities on the relationship between neighborhood environment and social participation among older women and men. **Method:** Embedded in the NuAge longitudinal study on nutrition and aging, this cross-sectional study used data from

268 women and 212 men collected three years into follow-up. At baseline, participants were healthy community-dwelling older adults from 6 equally distributed age/sex strata ( $70\pm2$ ;  $75\pm2$ ;  $80\pm2$ ). Data on frequency of participation in activities in the community, user-friendliness and accessibility of neighborhood resources, and ability of the person to perform activities of daily living were collected by interviewer-administered questionnaire. Results: A higher proportion of resources available within 5 minutes from home and a lower level of disabilities were associated with higher social participation ( $R^2 = 0.12$ ,  $p < 0.001$  and  $R^2 = 0.6$ ,  $p = 0.001$ , for men and women respectively). A significant moderating effect of disabilities was observed for men ( $p = 0.048$ ) but not for women ( $p = 0.45$ ). Disability level of women had the same effect on social participation regardless of availability of resource. For men, however, greater availability of neighborhood resources enhanced social participation, but only in men having a lower level of or no disabilities. Conclusion: These results show that disability moderates the association between neighborhood environment and social participation among older men but not women. Future work should investigate these specific effects using a longitudinal design. This study was supported by the Canadian Institutes of Health Research (MOP 62842 & IAP 66544).

**PB7 296 THE ASSOCIATION BETWEEN LIPID PROFILE, LIFE STYLE AND FRACTURES OF THE VERTEBRAE IN ELDERLY WOMEN**

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Introduction: There are a lot of evidences that suggest that bone, fat metabolism and life style are related. The aim of the study was to investigate if the low levels of total cholesterol, triglycerides and LDL-cholesterol and life style factors (coffee and cigarette consumption, the type of physical activity) are associated with the fractures of the vertebrae in elderly women. Methods and materials: The study was carried out on a group of 86 elderly women, aged between 55-85 years, admitted in The IVth Medical Clinic of University of Medicine and Pharmacy Victor Babes Timisoara, Geriatric Department in a three year period. We noted in every patient the quantity of coffee and cigarette consumption per day and the type of physical activity. All the patients were clinically and paraclinically investigated (serum lipid levels, lumbar spine, hip and radius, bone mineral density measurements, lateral dorsal and lumbar spine radiographs). Results: We observed vertebrae fractures in 58 elderly women (67.44%) with low levels of total cholesterol, LDL-cholesterol and triglycerides. Total cholesterol level was most strongly associated with vertebral fractures. The BMD measurements (T-score) indicated osteoporosis in 31 women (36.04%). The lipid profile in osteoporosis women wasn't significantly different comparative with the lipid profile in women without osteoporosis. 35 women (40.69%) with over 20 cigarettes smoked per day, over 3 coffee cups per day and a sedentary life presented also vertebrae fractures. Conclusion: Our study showed that there is a connection between the lipid profiles, life style factors and vertebrae fractures in elderly women. Preventive measures include: antiresorptive drugs, controlling lipid profile every 3 months, regular exercise against gravity to make bone stronger accompanied by an adequate daily intake of calcium and vitamin D.

**PB7 297 COMPARISONS OF FALL RISK INDEX WITH ACTIVITIES OF DAILY LIVING, DEPRESSION, AND QUALITY OF LIFE, FOR COMMUNITY-DWELLING ELDERLY AMONG THREE TOWNS IN JAPAN**

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Introduction: Falling in elderly people effect to decrease their quality of life (QOL). We reexamined the relation with falling and activities of daily living life (ADLs), depression, and QOL by using the "fall risk index" (FRI) in three towns in Japan. Methods and Materials: The study population consisted of 4383 people aged 65 and older (men 1871, women 2512, mean age  $75.4\pm6.7$ ) living in 3 towns in Japan. They were screened by the self-reported questionnaire contained FRI, ADLs, GDS, and QOL in 2006. FRI was validated by the Working Group for Fall Prevention in the Japanese Ministry of Health, Welfare and Labor. It consists of 21 questionnaire-based items on a yes/no basis. For the assessment of basic ADLs, the scores for seven items (walking, ascending and descending stairs, feeding, dressing, using the toilet, bathing, and grooming) were summed (0-21). For advanced ADLs, Tokyo Metropolitan Institute of Gerontology index of competence rating scale of 0 to 13 was used. Depression was assessed by the 15-item Geriatric Depression Scale (GDS: 0-15). QOL was rated on 100-mm visual analogue scale in five indicators (subjective health, relationship families, friends, financial satisfaction, and happiness). We separated two groups by FRI, who had over 10 points and others, and compared each groups scores of ADLs, GDS and QOL, used for calculating chi-square tests and unpaired t-test. Result: Response rates of the eligible population in each town were 79%, 90%, and

83%. The elderly who scored high in FRI had significantly lower scores for each item of the ADLs, GDS, and QOL in all three towns ( $p < .001$ ), and high scores for GDS ( $p < .001$ ). Conclusion: Fall risk index has significant correlation between ADLs, depression and QOL. We could use this index not only the screening of fall risk, but also fragility in community dwelling elderly.

**PB7 298 COST-EFFECTIVENESS ANALYSIS OF THE OTAGO HOME-BASED STRENGTH AND BALANCE RETRAINING IN SENIOR FALLERS**

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Introduction: We sought to estimate the cost effectiveness of trained physiotherapists individually prescribing a home-based exercise programme aimed at reducing falls in older adults with a history of recent falls compared with guideline falls prevention care. Methods & materials: We conducted an economic evaluation based on a 12-month randomized controlled trial in 74 community dwelling women and men aged 70 years and older who presented to a healthcare professional after a fall. Participants were recruited from two dedicated referral-based falls clinics. The clinic provided falls risk factor assessment followed by a comprehensive geriatric assessment and treatment. Thirty-six participants received the intervention (Otago Exercise Programme; OEP) and 38 participants received guideline falls prevention care (CON). We recorded number of falls for each participant, cost of the falls clinic and the cost of delivering the Otago Exercise Programme by a trained physiotherapist. Results: Of the 74 participants enrolled in the trial, we have falls follow-up data for 52 participants. At 12-months, fewer falls (41%) occurred in the OEP group compared with the CON group. The total cost of delivering the Otago Exercise Programme for the study duration was \$CDN 14285 (\$US 11805, € 10720). The incremental cost of delivering the OEP compared with guideline care was \$CDN 247 (\$US 204, € 185) per fall prevented. Conclusions: An individually tailored exercise programme, delivered at home by trained physiotherapists was effective in reducing falls. Further, our results demonstrate that delivery of the Otago Exercise Programme in Canada yields an incremental cost-effectiveness ratio comparable with pioneering studies conducted in New Zealand.

**PB7 299 MAPPING FACTORS ASSOCIATED WITH FALLING TO THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING**

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Falls risk is complex and the application of a holistic framework such as the International Classification of Functioning, Disability and Health (ICF) can account for the impact on falls of activity and participation, the environment and personal factors, in addition to body systems and structures. Aim: To map the factors associated with falls risk in the Australian Longitudinal study of Women's Health (ALSWH) cohort dataset. Method: First, items from five ALSWH surveys conducted between 1996-2005 were mapped to ALSWH survey categories and checked for accuracy across the surveys. Secondly, two occupational therapy researchers individually mapped these ALSWH survey items to the primary ICF components according to their interpretation of the meaning of the ICF components. Agreement between the raters was evaluated. The ten linking rules by Cieza et al and the 8 updated rules by Cieza et al were then used to link the ALSWH health status measures to the ICF. Scale items were allocated as a block rather than allocating individual items from scales to the ICF components. Results from both mapping exercises were compared and a consensus decision was made about the final linking of the items. Results: 410 items were mapped across the surveys. The OT raters differed on the placement of only 7 items. Differences were related to interpretations of activity and participation. Mapping using the 10 rules method allocated items differently due to personal factors not being classified and activity and participation being classified together. SF36 items were defined according to the rules method, but differently to the OT raters. Conclusion: The mapping exercise was challenging to accommodate both the professional interpretations of the OT raters and the rules published for this purpose. A review of the combination of activity and participation ICF components, and further definitions of personal factors and environmental factors are needed.

**PB7 300 THE RELATIONSHIP BETWEEN SUBJECTIVE & OBJECTIVE PHYSICAL FUNCTION & QUALITY OF LIFE IN PEOPLE LIVING TO ADVANCED AGE**

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Introduction Increasingly, longitudinal studies are being conducted to investigate the ways that older people age successfully. A major component of successful ageing is physical

function. This paper describes the variability of physical function and the relationship with frailty and quality of life in a cohort of older New Zealanders enrolled in a feasibility study. Methods and materials 112 people from 3 North Island locations in New Zealand (urban and rural) undertook a comprehensive questionnaire and physical assessments. Cross-sectional data were gathered on subjective and objective health status. Subjective measures included the Nottingham Extended Activities of Daily Living Scale (NEADL) and the SF36. The Short Physical Performance Battery (SPPB) generated an objective physical performance score from balance, gait speed and chair stand tests. We calculated a composite frailty score, based on Edmonton's frail scale. Results 64 women (57%) and 48 men (43%) were enrolled. 84% of people rated their health as good, very good or excellent. 77% scored >15 on the NEADL and 52% scored >7 on the SPPB, indicating good physical function. The correlation between self-reported (NEADL) and observed (SPPB) function was .55, and with frailty, -.59 and -.52 respectively. These variables were all independently associated with physical health-related quality of life (SF-36 PCS); frailty explained more of the variance than the others. In a regression analysis the three variables altogether accounted for 33% of the variance in SF-36 PCS score. This relationship was unaltered when mental health-related QOL was added to the model. Conclusion Although correlated, self-reported and observed function were both independently related to physical health-related QOL and may represent and measure different things. Frailty was closely related to QOL. These relationships will be examined longitudinally in a cohort of very old people and will add New Zealand data to the growing global understanding of the ageing process.

**PB7 301 EFFECTS OF JUMP TRAINING PLUS LOW-INTENSITY RESISTANCE TRAINING WITH MODERATE VASCULAR OCCLUSION (LIO) ON BONE MINERAL DENSITY OF HEALTHY ELDERLY AND MIDDLE-AGED FEMALES**  
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**INTRODUCTION:** Jump training has protective effects against the loss of bone mineral density (BMD) in elderly. Low-intensity resistance training with moderate vascular occlusion (LIO; Ishii 2002) is a resistance exercise wearing belt. It is not clear whether the combination of both trainings elevates BMD. The purpose of the present study is to examine the efficacy of jump training plus LIO on BMD of healthy elderly and middle-aged females. **METHODS:** Thirty-four healthy female subjects aged 50 and older were non-randomly allocated to the LIO plus jump training group ( $n = 23$ ) or control group ( $n = 11$ ). They did not have any identifiable medical problems. The training was conducted twice weekly for 6 months, using 6 sets of dynamic jump exercises. Each session of exercise included the 6 sets of 10 repetitions of the movements. At the end of jump training, LIO was performed. Control group maintained their usual daily activities. Various indicators of BMD, muscle strength, and endurance were used. BMD of femur, knee extensor muscle strength, reaction time, 10 m shuttle walking, and body mass index (BMI) were measured at pre- and post-intervention. **RESULTS:** Three subjects dropped out from the study because they were lost interest. In the follow-up study, thirty-one could be evaluated (91.2%). Among the analyzable subjects, average participation was 26.9 out of 48 sessions (range 2-45). Average age ( $\pm SD$ ) was 64.8( $\pm 5.9$ ) years in training group ( $n=21$ ) and 60.4( $\pm 4.4$ ) years in control group ( $n=10$ ). BMD did not change between pre- and post-intervention measurements. BMI was significantly decreased in the training group, but not in the control group. **CONCLUSION:** This intervention program might not have given enough stimulus to increase BMD of femur. We should consider how to provide mechanical strain to improve BMD in jump training plus LIO.

**PB7 302 AGE-FRIENDLY COMMUNITIES, WALKABILITY, AND HEALTH: A REVIEW OF EMPIRICAL STUDIES**  
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**o Introduction** This study reviews empirical research on the built environment, physical activity and health, including age-friendly communities, walkable neighborhoods, and health interventions. **o Methods and materials** To identify potential studies for review, several strategies were used. First, a key-word search was conducted using five major health databases and three planning databases. Second, potential studies were identified by reviewing all issues (1995 or later) of several major gerontology and planning journals. Finally, reference lists of studies identified from the first and second strategies were inspected. **o Results** Three main research areas exist. First, many studies investigated the effects of the built environment on obesity, almost universally measured using the Body Mass Index (BMI). Most found negative correlations between measures of walkability and levels of obesity; however, BMI and levels of physical activity (PA) were inconsistently related in studies examining both factors. Second is the wave of studies investigating environmental correlates of walking, which commonly differentiated between various forms of walking, including walking for recreation versus for transport, and travelling to public transportation stops. Different types of walking appear to be associated with different aspects of the built environment. A third area involves environmental effects on various physical and psychological outcomes, such as hypertension and depression. **o Conclusion** Many communities have experienced aging in place, but sample populations in studies reviewed were typically children, adolescents, and adults (usually all ages above 18); very few studies focused exclusively on older adults (i.e. 65 years and older). More

evidence-based research on older adults is needed. In addition, the built environment is considered as background or context in building conceptual models. This has limited efficient implementation of health interventions and policies for new urbanism that might translate into improved health.

**PB7 303 STAYING SAFE AT HOME: WHY AREN'T COMMUNITY DWELLING ELDERS ACCEPTING HOME MODIFICATIONS DESIGNED TO ASSIST THEM TO LIVE INDEPENDENTLY AT HOME?**

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**Background:** Previous research has demonstrated that home modifications prescribed by an occupational therapist are effective in reducing falls in the elderly<sup>1</sup>. This study draws on data collected from a randomised controlled trial of two different service delivery models for a falls prevention service located in Brisbane, Australia<sup>2</sup>. Clients are typically referred to the service for falls, declining mobility and/or difficulties with ADL's and receive an initial home visit including an environmental audit and recommendations made to improve safety and independence at home. **Results:** Clients presented to the service with a wide range of issues including being outside normal weight range, incontinence, no longer driving, abnormal cognition and anxiety/depression. Physical skills were significantly poorer than normal for age for walking, balance, strength, reaction times and hand function. Overall, 80 clients received an environmental recommendation. An average of 3.5 environmental changes was recommended at the initial home visit. At the 6 month follow-up an average of 50% of these had actually been completed. Recommended modifications were categorised into bathroom, toilet, bedroom, flooring, reducing obstacles, mobility aids and other. The majority of modifications were in the bathroom and toilet (grab rails and transfer benches) and flooring areas. Multivariate logistic regression analysis found that age, health status, the clients living arrangements, the number of falls they had experienced and their education level are all significant predictors of likelihood to comply with recommendations. **Discussion:** The uptake of recommendations by elderly community dwelling clients is poor. Clinicians need to develop an understanding of their clinical practice reasoning processes when undertaking home visits and their recommendations. This will assist with informing current and future practice and improving the uptake of any home visit recommendation. Further research into this area is required. 1. Cumming et al. Home Visits by an Occupational Therapist for Assessment and Modification of Environmental Hazards: A Randomized Trial of Falls Prevention. *Journal of the American Geriatrics Society* 1999;47((12)):1397-1402. 2. Comans TA, Brauer S, Haines T. Domiciliary vs Centre-Based Rehabilitation of Older Community Dwellers: Randomised Trial with Economic Evaluation *The Open Geriatric Medicine Journal* 2008;1:62-67 (6).

**PB7 304 EXERCISE FOR INDEPENDENT LIVING: RANDOMISED CONTROLLED TRIAL OF EXERCISE FOR MAINTAINING INDEPENDENCE DURING AGEING**

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**Introduction:** Our aims were to: test the efficacy of tai-chi in delaying disability among older people, investigate the associated mechanisms, and to evaluate the economics of tai-chi. **Methods:** Community dwelling people ( $n=503$ ), 70+ years and screened for pre-clinical disability, were randomised into twice-weekly exercise groups for 48 weeks: tai-chi (TC), or a flexibility and stretching program (FS). The primary outcome measure was the Late-Life Function and Disability Instrument (LLFDI) score. Secondary outcomes included falls, joint pain, cardiac function, strength, balance, quality-of-life. The primary economic measure was incremental cost per change in Quality-Adjusted-Life-Years. The effect of TC on function and disability was estimated by weighted linear regression, adjusted for the baseline score and the clustering variable of site. **Results:** 68% of participants were women and 82% had at least one chronic medical condition. Ages were 70-74 (33%), 75-79 (32%) and 80-84 (24%) and 85+ (12%) yrs. Average baseline LLFDI function, disability-limitation, and disability-frequency mean scores ( $sd$ ) were 59.2 (8.0), 73.4 (12.0), and 52.8 (4.9) (max possible score 100). By 24 weeks, 53% of TC and 35% of FS participants had ceased attending classes. Average number of classes attended was 31 ( $sd$  14) for TC and 32 ( $sd$  10) for FS. At 24 weeks, the adjusted mean LLFDI basic, and advanced, lower limb function scores for the TC group were 0.36 units lower (95% CI -1.8 - +1.1,  $p=0.62$ ), and 0.18 units lower (95% CI -0.93 - +0.57,  $p=0.62$ ), than the FS group. The disability-limitation score was 0.86 units lower (95% CI -2.5 - +0.76,  $p=0.28$ ), and the disability-frequency score was 0.35 units lower (95% CI -1.4 - +0.67,  $p=0.49$ ). **Conclusions:** There was no evidence that TC reduced disability, relative to FS, among this

sample. The dose of tai-chi delivered may have been insufficient to impact on disability. Examination of secondary outcomes may assist in explaining this result.

**PB7 305 BEDSIDE ASSESSMENT OF VISUAL IMPAIRMENT IN OLDER FALLS PATIENTS**

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Introduction 1/3 people >65 years fall annually. Treating falls in the UK due to visual impairment alone cost £128m in 2004. The National Institute of Clinical Excellence advises all falls patients should have vision assessed. After auditing, we found only 20% of falls patients received a full visual assessment. We therefore investigated bedside visual impairment screening tools in the falls in-patient population at a large UK teaching hospital. Methods and materials Non-confused falls patients aged ≥60 years were deemed eligible for the study. Confusion was assessed using the Abbreviated Mental Test Score (AMTS). Patients were asked our screening questions for visual impairment, particularly symptoms of cataract, age-related macular degeneration, glaucoma and diabetic retinopathy. They were then examined by a non-ophthalmic practitioner to assess for visual impairment: eyelids, pupils, eye movements, visual acuity (using LogMAR charts), visual fields (using Damato campimetry/confrontation, & Amsler Grid) and red reflexes (using ophthalmoscopy) were performed, and timed. Results 30/70 falls patients were not confused. Mean age: 81 years (63-94). Mean number of falls in last 12 months: 4.1 (1-12). 23% had not seen an optometrist for ≥24 months. 50% had a known ophthalmic diagnosis. 73% were visually impaired using their current spectacles, with 50% of them having no previously known ophthalmic history. Using pinhole testing, 32% improved to non-impairment standards and 50% of all patients showed improved visual acuity. 10% had ptosis, none had pupil abnormalities and 7% had abnormal eye movements. 27% of patients had visual field defects, 48% had an Amsler Grid abnormality and 7% had a new red reflex abnormality. Conclusion Our screening was quick and simple for a non-ophthalmologist to perform. It detected a high proportion of patients with visual impairment that was amenable to correction. This would improve patients' quality of life and reduce their risk of falls.

**PB7 306 ESTIMATION OF LEAN BODY WEIGHT IN ELDERLY PATIENTS**

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Introduction Lean Body Weight (LBW) decreases with age while total body fat increases, affecting drug pharmacokinetics. LBW increases non-linearly with total body mass and linearly with drug clearance. A semi-mechanistic model estimating LBW using height, weight and gender was recently developed in healthy adults. We investigated the transportability of this LBW model to predict Dual Energy X-ray Absorptiometry-derived fat free mass (FFMDEXA) in frail older patients. Methods Body composition data was obtained on 28 participants in the Sarcopenia and Hip Fracture study, a cohort study following 193 patients admitted for surgical repair of hip fracture. LBW was calculated using the LBW equation\*. Body composition was classified using Body Mass Index (BMI) and Bioelectrical Impedance Analysis (BIA)-sarcopenia data as: 'overweight/obese', 'sarcopenic', or 'sarcopenic obese'. The ability of the LBW equation to accurately predict FFM in this cohort was determined by agreement with FFMDEXA using Bland-Altman plots and statistics.. Results The mean±SD age of participants was 83±7 (females, n=23) and 81±9 years (males, n=5). Most were sarcopenic (65.2% female, 80% male). Mean±SD FFMDEXA was 48.7±8.26kg (males) and 36.7±6.69kg (females). Bland-Altman plots demonstrated modest agreement between LBW and FFMDEXA with limits of agreement of -10.1, 8.5 kg (females) and -4.1, 8.6 kg (males). Bias (95% Confidence Interval) was 0.77kg (-1.24, 2.78kg) for females and -2.26kg (-6.19, 1.68) for males. Precision was 4.60 (-11.29, 20.49) for females and 3.62 (-24.73, 31.97) for males. Agreement appeared similar for females who were sarcopenic, sarcopenic obese or overweight/obese. No baseline data was available for patients. Conclusion The LBW equation provides a reasonable estimate of FFMDEXA in women after hip fracture; insufficient data is available in men. However, individual variation in FFM prediction was large enough to be potentially clinically important for drug dose adjustment. \*LBWMALES (kg) = (9270 x WT (kg)) / (6680 +

$$(216 \times \text{BMI} (\text{kg}/\text{m}^2)) * \text{LBWFEMALES (kg)} = (9270 \times \text{WT (kg)}) / (8780 + (244 ? \text{BMI} (\text{kg}/\text{m}^2)))$$

**PB7 307 EFFECTS OF COMBINED AEROBIC WITH RESISTANCE EXERCISE MODEL ON PHYSICAL FITNESS AND ENDOTHELIAL FUNCTION IN THE ELDERLY**

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Introduction: Aging is an independent risk factor for hypertension, atherosclerosis and coronary heart disease. It has been hypothesized that endothelial dysfunction precedes these pathological disease states. Regular aerobic and resistance exercise training are recommended for the prevention and treatment of cardiovascular disease associated with aging. However, studies that examined the effects of one performs aerobic and resistance training simultaneously were limited. Exercise with flexible stick (EF) , the innovation of aerobic exercise model which applied motion from Thai dance and Ram krabi-krabong movement compatible with Thai instrumental music and using the increasing resistance equipment, flexible stick should therefore be developed. This study was to investigate the effects of EF on physical fitness and endothelial function in the elderly. Methods and materials: Sixteen older women who practiced EF (OE), fourteen older sedentary women (OS) and fifteen younger sedentary women (YS) were recruited. OE group performed EF with intensity 70% of maximum heart rate (maxHR), 40 min/day, 4 days/wk for 12 wk. Physical fitness and biochemical data were determined in all participants. Postocclusive reactive hyperemia (PORH) was used to monitor endothelial function by using the laser-Doppler fluxmeter. Results: OE group had lower in resting HR, systolic blood pressure and %body fa ( $p<0.05$ ) when compared with OS group. Flexibility, muscular strength and maximal oxygen consumption of OE group were higher than OS group ( $p<0.05$ ) but lower than YS group ( $p<0.05$ ). PORHpeak/resting was higher in OE group than in OS group ( $p<0.05$ ). Plasma malondialdehyde, an indicator of free radical damaging, c-reactive protein, von Willebrand factor and cholesterol levels in OE group were lower than those of OS group ( $p<0.05$ ). Conclusion: Our results indicated that EF, a combination of aerobic and resistance training during their usual training regimen, had a favorable effects in promoting health related physical fitness and improving endothelial function in the elderly.

**PB7 308 INNOVATIVE STRATEGIES TO ASSIST FALLING ELDERLY (ISAFE): A COMMUNITY INITIATIVE FOR FALLS AND INJURY PREVENTION IN AUSTRALIA**

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Introduction Previous studies of community dwelling people have shown that falls rate is reduced through multidisciplinary team interventions. The purpose of this study was to evaluate reduction of fall risks in people 65 years and older living in the community through the implementation of a sustainable model of service delivery based on best practice falls prevention interventions. Method and Material 517 community dwelling people with a mean age of 81 were recruited from the community over 12 months period. They were individually screened and referred to allied health, medical practitioners and falls clinic as necessary. All participants undertook an exercise program that was delivered at their residential location or a senior's centre. Participants attended a 12 week twice weekly specific balance strategy training exercise program designed and delivered by physiotherapists. Assessment included balance and mobility measures, cardiovascular endurance and self-assessed functional level. Results: Post screening 30.6% were referred to allied health professionals, 48% to general practitioners and 31.4% were referred to falls clinic. All participants showed significant improvement in balance, mobility and endurance measures ( $p<0.001$ ). Frenchay activity index also improved ( $p=0.048$ ). A formal community infrastructure that manages falls risks was established in South-East Queensland between a falls clinic, existing allied health providers in the community, general practitioners and other stakeholders using a collaborative multi-sectoral fall prevention approach. Conclusions: The results provide evidence that this holistic approach to management including physiotherapist assessment and intervention reduced falls risks in this target group. Implementing a sustainable falls program through collaboration with other existing services should be considered to ensure the best outcome to reduce the possibility of a fall thus minimize demand on limited health resources.

**PB7 309 PREDICTORS FOR WALKING SPEED LOSS AMONG COMMUNITY-DWELLING OLDER ADULTS**

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**Introduction:** Walking speed is a good measure for lower extremity function of older person, and has been documented to be one of the best predictor for adverse health outcomes in older adults. However, knowledge is still limited regarding the predictor for change in walking speed. This study examined the predictor for walking speed loss among the elderly. **Methods and Materials:** Subjects comprised 656 community-dwelling older Japanese aged 65 years and over who were initially intact in walking speed (upper 75% by age and sex), and underwent again walking test 2 years later. We defined the walking speed loss as a person whose walking speed declined within lower 25% by age and sex. We compared socio-demographics, medical conditions, blood pressure, hematological parameters including markers for kidney function and inflammation, and walking speed at baseline between subjects who showed walking speed loss and those who did not. The multiple logistic models were used to examine predictors independent of other potential confounders. **Results:** Two years later, 84 persons (12.8%) were determined to have walking speed loss. They were characterized as having lower walking speed at baseline, poorer self-rated health, higher levels of serum measures of renal function (cystatin C and beta2-microglobulin) and inflammation (IL-6, TNF-alpha, and CRP). The factors which were independently associated with walking speed loss included baseline walking speed, self-rated health, and serum IL-6. The odds ratios (95% CI) of 2nd and 1st tertile relative to 3rd tertile were 3.05 (1.24-7.51) and 12.5 (5.38-29.2) for walking speed; that of fair/poor relative to excellent/good was 2.71 (1.51-4.87) for self-rated health; those of 2nd and 3rd relative to 1st tertile were 1.86 (0.94-3.68) and 2.15 (1.07-4.31) for IL-6, respectively. **Conclusions:** Lower walking speed, poorer self-rated health and higher level of serum IL-6 independently predict the future onset of walking speed loss in community-dwelling older adults.

**PB7 310 PREDICTIVE VALIDITY OF BIO-ELECTRICAL IMPEDANCE EQUATIONS IN PREDICTING FAT FREE MASS IN AN AUSTRALIAN POPULATION**

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**Introduction:** Bioelectrical Impedance Analysis (BIA) is often used in community studies to estimate fat free mass (FFM). It is fast and convenient. The aim of this cross-sectional study was to evaluate the predictive validity of six previously published prediction equations in Australians. **Methods and Materials:** 195 healthy subjects (age 18-82 years, 40% men) underwent measurements of FFM using bio-electrical impedance analysis (BIA) and dual energy x-ray absorptiometry (DEXA). Reactance and Resistance values from BIA were entered into various prediction equations-Sun, Kyle, Lukaski, Segal, Deurenberg and Kushner. **Results:** Not surprisingly, the correlations between  $FFM_{DEXA}$  and the FFM estimates derived from the various prediction equations were strong ( $r = 0.85-0.93$ ). There was no difference between the mean FFM estimates using the Kyle ( $0.17 \pm SD 4.26$ ) and Deurenberg ( $-0.41 \pm 4.28$ ) equations. In men, a significant mean difference was seen only for the Kushner equation. In women, except for the Kyle equation, significant mean difference was seen for all other equations. For all predictive equations, wide limits of agreements ( $\pm 2SD$  of mean difference) were observed. **Conclusion:** This study suggests that for an Australian population, the Kyle equation is the most accurate predictive equation for estimating FFM. It would appear that all other equations performed poorly in women.

**PB7 311 A COMPARISON OF HUMAN PLASMA GLYCOPROTEOME BETWEEN PRE-FRAIL AND NON-FRAIL OLDER ADULTS**

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**Introduction:** Frailty is a clinical geriatric syndrome characterized by adverse health outcomes, vulnerability to decline, poor tolerance to stressors, and physiologic distinction from non-frail individuals. To date, physiologic alterations associated with frailty have almost exclusively demonstrated modifications in glycoproteins, such as interleukin-6 and C-reactive protein. Glycoproteins are a result of glycosylation, the most common type of post-translational modification. They are involved in various cellular processes thought to be altered with aging, particularly the regulation of cell-to-cell and cell-to-matrix interactions. The objective of this pilot study was to utilize proteomic biotechnology to analyze glycoprotein alterations between non-frail and pre-frail older adults. **Method:** Plasma was isolated from 4 pre-frail and 4 non-frail community-dwelling older adults, who were matched by age ( $\pm 9$  years) and sex. Pre-frailty was assessed using previously validated screening criteria (1 or 2 of weak grip, slow walk, weight loss, exhaustion, or low physical activity). Glycoproteins were isolated in Concanavalin A lectin columns and eluant was separated and quantified using 2-dimensional polyacrylamide gel electrophoresis. We measured differences in spot intensity using PDQuest software (Bio-Rad, Inc) to identify glycoproteins which differed in intensity (2-fold or greater) between pre-frail and non-frail individuals. Glycoproteins of interest were identified by matrix-assisted laser desorption/ionization time of flight spectrometry. **Results:** We studied 4 men

and 4 women (2 pre-frail and 2 non-frail for each gender) with an overall mean age of 81. Seven glycoproteins were upregulated in pre-frail individuals compared to non-frail (2 haptoglobin isoforms, 2 transferrin isoforms, 1 fibrinogen-G, and 2 unidentified). **Conclusion:** The up-regulation of several inflammatory glycoproteins in pre-frail vs. non-frail individuals indicates that this methodology may be useful in detecting alterations in glycoprotein expression between pre-frail and non-frail individuals. Moreover, differences in glycoproteins demonstrated at an intermediate stage, when frailty is not clinically apparent, may suggest feasibility for the identification of potential biomarkers for frailty and earlier identification of older adults at risk for adverse health outcomes.

**PB7 312 THE RELATIONSHIP BETWEEN ORAL FUNCTIONS AND MENTAL, AND PHYSICAL CONDITIONS ON THE OLDEST OLD**

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**Introduction:** Maintaining excellent oral function is important to achieve a healthy long life and to improve QOL. Therefore, there has been considerable research on the possible relationship between oral functions and general health. However, what studies on the oldest old (85 years old or more) are limited. This research examined whether oral functions affect nutritional state, physical performance, and cognitive function among the oldest old. **Material and methods:** The study involved 152 oldest old in Tokyo (65 men and 88 women, mean age 88.44±3.1). The number of remaining teeth, the condition of dental prosthesis and the bite force were examined as investigation items for oral functions. Body mass index (BMI), serum levels of albumin (Alb), total cholesterol (TC), and C-reactive protein (CRP) were measured for nutrient state. The grip, the chair standing in 30 seconds, and timed up and go test were investigated as physical performance. MMSE was investigated as cognitive function. Additionally, the correlation was examined between each of these items. **Results:** Mean values of the number of remaining teeth were 5.3, and did not differ by sex. The mean value of bite force was 8.44±4.5 kg. A significant correlation was found at the number of remaining teeth with bite force, Alb, chair standing, and walking time. A significant correlation was found at the condition of the dental prosthesis with chair standing, and walking time. In men, the chair standing and Instrumental ADL was associated with the bite force. In women, the grip was associated with the bite force, but not with I-ADL. **Conclusion:** Our results suggested there were significant relations between the oral function, the nutritional state, and physical performances in the oldest old. In addition, the cooperative relationships of oral muscles and the limb muscles were found.

**PB7 313 THE PREDICTIVE VALUE OF ASSESSMENT FOR FALLING RISK IN THE ELDERLY INPATIENTS**

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**Introduction:** Although the prediction and prevention about the falling incidence is quite important, it is very difficult to predict because the heterogeneity of the elderly patients, even if use well-known falling assessment score. Therefore, we designed a retrospective observational study to improve predictive value of assessment score. **Methods and Materials:** We recruited serial 215 cases with some kinds of incidences (mean age 69±12 y.o.) assessed by falling assessment score before incidence, and classified into two groups; falling group (n=59) and no-falling group (n=156). **Results and Conclusions:** The risk grade III was higher frequent in the falling group ( $p<0.0005$ ), and the score of history of falling and physical activity is higher ( $p<0.0001$ ). In the risk grade II, the history of falling ( $p<0.0001$ ), muscle weakness ( $p<0.0001$ ), necessary support for movement ( $p=0.0040$ ) and dizziness ( $p=0.0007$ ) is higher in the falling group. The additive effect of these four factors was found (50% for two, 66.7% for three and 100% for four in the falling group). In the risk grade III, only muscle weakness was the risk for falling ( $p=0.0212$ ). To improve the predictive value, if the risk grade II with more than one of history of falling, muscle weakness, necessary support for movement or dizziness, or the risk grade III with muscle weakness is considered as the risk for falling, the sensitivity (81.3%) and the specificity (75.6%) become much better than classical one. It would be quite important to clarify the important factors for falling, and to predict high-risk patients and to prevent the incidences of falling.

**PB7 314 REPRESENTATIONS OF OSTEOPOROSIS AT THE TIME OF ANNOUNCEMENT OF THE DIAGNOSIS -ROAD**

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Paris (Grennevilliers, France); (5) CHU Bobigny (France); (6) TNS Healthcare (France); (7) CHU St Etienne (France); (8) SFGG (France)

**Introduction** ROAD is the first cross-sectional psychobehavioural study conducted on representations of osteoporosis, perception of consequences in their future among newly diagnosed women and women in the general population. **Methodology** The first part of this study (ROAD 1) conducted throughout France among general practitioners (n=1,000) and private rheumatologists (n=200) is still ongoing. The second part (ROAD 2) was launched in the general population, evaluating unselected women of the same age-group (> 55 years) by means of a structured post-mail questionnaire. We present hereafter the results for the 1172 (53%) participants who were > 70 years, including 320 (27%) were osteoporotic women. First results When asked "Do you fear osteoporosis?", only one half of the women, whatever the age or presence of osteoporosis, agreed. Among women above 70, osteoporotic women perceived more negatively their disease and 70.9% perceived osteoporosis as a consequence of ageing (vs. 63.4% of osteoporosis-free women and 63.6% for all interviewed women). Only 45% of osteoporotic and osteoporosis-free women considered osteoporosis as a pain-free disease until the first fracture and almost 80% of these women considered osteoporosis as a painful disease after the first fracture (vs. 82%). When asked "Is there any recommended treatment?" 85% of osteoporotic and 81% of osteoporosis-free women agreed. The consequences of osteoporosis were judged severe by 98.1% and 95.5% and extremely severe by 39.4% and 38.5% respectively. 44.9% of the osteoporosis-free women believed that the consequences of osteoporosis could occur in the 5-10 years following the diagnosis. Conclusion: results expected for the 1st quarter 2009 Whether osteoporotic or not, French women appear to be informed of osteoporosis and aware of its consequences. However they don't seem worry about the diagnosis or its consequences. This may explain in part, the current poor adherence to treatment. Further analysis will compare the points of view of patients, doctors and osteoporosis-free women.

**PB7 315 THE FALL TELEPHONE: CAN FRAIL OLDER PEOPLE HANDLE IT?**

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**Introduction:** Of different methods for falls registration in research in older people, the most commonly used is the fall calendar. These calendars must be filled in daily and sent to the researchers every two weeks. However, this method has several disadvantages in a frail population. The 'fall telephone' is an automatic computer system which phones participants once a week. Participants type in the amount of falls they experienced that week using a touch-tone telephone. It is unknown whether frail older people are able to handle such a system. **Methods:** Six frail older people with cognitive and physical limitations used both the fall telephone and fall calendars for four weeks to register falls, after receiving a personal instruction by one of the researchers. After four weeks, the researcher visited the participants again to conduct a semi-structured interview on their experiences with the two fall registration systems. Additionally, if caregivers aided the participants with the use of the system, the caregivers were also asked about their experiences with the systems. **Results:** Participants admitted they forgot to fill in the fall calendars daily and to mail them after two weeks. The fall telephone was easy in use and the greatest advantage was that participants could not forget to fill it in. Though, not every call was answered by the participants themselves. When asked directly, all participants preferred the fall telephone over the calendars. Conclusion: The fall telephone seems a feasible method to report falls data and is preferred over the use of fall calendars by frail older people. A larger study will be conducted and presented (N=30) in which we assess the validity of the fall phone to enable future research on falls in frail older people.

**PB7 316 ACUTE MEDICAL ILLNESSES OF ELDERLY MEDICAL INPATIENTS WITH SEVERE FUNCTIONAL DECLINE AND PREVALENCE OF IMMOBILIZATION COMPLICATIONS AMONG FRAIL ELDERLY ADMITTED IN MEDICALWARDS THROUGH EMERGENCY UNITS. THE FRENCH SAFES COHORT STUDY.**

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**Introduction** Acute functional decline is frequent among elderly inpatients. This study focuses on the medical causes of admission and complications related to reduced mobility. **Methods and materials** An observational cohort study, belonging to the SAFES multicentre research programme was conducted in nine French hospitals among 1,306 medical inpatients aged 75 and older admitted through emergency departments. Data were collected through a comprehensive geriatric assessment conducted during the first week of admission. This descriptive study aimed to identify pathologies linked to severe acute functional decline, to estimate the prevalence of decubitus complications and the impact in terms of mortality. Four groups of patients regarding to mobility decline were defined with the item "mobility" from the Katz' ADL scale, measured 15 days before admission (baseline) and at admission. The group "severe functional deterioration" included patients

independent for mobility at base-line and becoming immobilized after admission. Results Data from 1,237 inpatients were considered. 37% of the patients had no mobility loss, 24% a previous reduced mobility, 30% a moderate functional decline and 9% a severe functional one. Acute medical illnesses significantly related to acute immobilization were: cerebro-vascular diseases, musculoskeletal pathologies, pulmonary embolism. Among patients independent before admission, those severely declining were significantly more affected than those keeping independent regarding to frailty criteria such as denutrition, cognitive impairment, loss of at least 2 IADLs and physiotherapy before admission. They had a significantly higher prevalence of immobilization complications: pressure sores (9%), venous thromboembolism (10%), digestive complications (9%) during the first week of admission. Hospital stay duration, mortality and institutionalization increased significantly with the severity of mobility loss. Conclusion 12% of previously independent patients became bedrest following admission. Cerebrovascular accidents and traumas were the main acute illnesses linked to immobilization. Early detection of mobility loss could facilitate prevention of decubitus complications and reinforce early rehabilitation care.

**PB7 317 INFLAMMATORY MARKERS AND FUNCTIONAL PERFORMANCE AMONG THE OLDEST-OLD**

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**Introduction:** Recent studies have suggested that inflammation may play an essential role in the process of aging and the development of disabilities. However, the knowledge about the role of inflammation in the development of muscle weakness and disabilities among the oldest-old is limited. The purpose of this study was to examine the association between inflammatory markers and functional performance among the oldest-old men and women. **Methods and materials:** This study is part of The Vitality 90+ Study. The study population (n=285) consisted of 218 women and 67 men aged 90 years and older. Eighty-four % of the participants lived in the community and 16% in institutions. Hand grip strength was measured using dynamometer and functional performance was assessed with chair stand test. Plasma levels of interleukin-6 (IL-6), interleukin-1 receptor antagonist (IL-1Ra) and C-reactive protein (CRP) were determined. Logistic regression analyses were adjusted for sex. **Results:** The likelihood of belonging to the worst tertile in the hand grip strength was higher among those who belong to the highest tertile in IL-1Ra (Odds Ratio [OR] =2.15; 95% confidence interval [CI] 1.08-4.25) or in CRP (OR= 2.41; 95%CI 1.20-4.83), but not in those in the highest tertile of IL-6 (OR= 1.37; 95%CI 0.69-2.71). In chair stand no significant association with inflammatory markers were found. Odds and 95% CIs in the highest tertile: IL-1Ra OR=0.79, 95%CI 0.36-1.73; IL-6 OR= 1.42, 95%CI 0.64-3.15; CRP OR= 1.32, 95%CI 0.62-2.82. Conclusion: The association between high levels of inflammatory markers and poor hand grip strength was evident also among the oldest-old. However, the association with chair stands was not significant.

**PB7 318 ACCELERATED SARCOPENIA: THE ADVERSE EFFECT OF DIABETES, ADIPOSITY AND ATHEROSCLEROSIS IN 4000 OLDER MEN AND WOMEN**

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**Introduction** Sarcopenia contributes to frailty in old age, when metabolic diseases are prevalent. While sarcopenia is accelerated in renal replacement patients with diabetes, little is known about how it is affected by metabolic conditions in the elderly. We examined how metabolic diseases and adiposity affect rate of muscle loss in older adults. **Method** 4000 Chinese elderly 65 or over were followed for 4 years. Demographics, medical conditions, physical activity and muscle mass by DXA were recorded at baseline then 2-yearly. Appendicular skeletal muscle (ASM) was analyzed by general linear mixed models with repeated measures. In the first step, atherosclerosis (ankle-brachial index <0.9), diabetes, overweight (BMI >23), central adiposity (WHR >0.9 men, >0.85 women) were found to correlate with accelerated ASM loss in both genders, adjusted for age and physical activity. Multivariate analysis was then performed, including all conditions under study, age, physical activity, and interaction terms of conditions x time. Percentages of additional ASM loss were calculated by ASM loss due to conditions divided by background annual ASM loss. Results ASM declined at rate of 0.054 (0.009) and 0.044 (0.011)kg/year in men and women respectively. Compared with time effect solely, diabetes increased the rate of loss by a further 0.076 (0.016) and 0.049 (0.013)kg/year, atherosclerosis by 0.104 (0.030) and 0.038 (0.016)kg/year, and overweight by 0.033 (0.012) and 0.024 (0.009)kg/year, in men and women respectively. Physical activity was protective against muscle loss, while hypertension, stroke, heart disease and central adiposity was not significantly related. The additional ASM loss due to diabetes amounts to 140% (men) and 111% (women), to atherosclerosis, 193% (men) and 86% (women), and to overweight, 61% (men) and 55% (women), of the annual loss due to ageing.

Conclusion Diabetes, atherosclerosis and overweight in older adults significantly accelerate age-related sarcopenia.

**PB7 319 DAY-TO-DAY VARIABILITY OF PHYSICAL ACTIVITY OF OLDER PERSONS LIVING IN THE COMMUNITY**

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**INTRODUCTION:** The purpose of the study was to investigate by intra-individual comparison whether a 24h recording period is sufficient to describe PA of one week in older retired persons. Furthermore, we analyzed whether physical performance (PP) can be used as a surrogate marker of PA. **METHODS:** PA was captured on seven consecutive days in 44 community-dwelling older adults (80.75 ± 4.05 years) by a body fixed sensor which consists of triaxial accelerometers and single axis gyroscope. PP was measured by the SPPB. It contains unsupported standing, chair rise, and gait speed. **RESULTS:** Mean time of walking and mean "time on feet" of the group was 10.2 hours (+3.5 hours) and 35.1 hours (+9.43 hours), respectively, for the duration of seven consecutive days. The intra-individual variability of walking and of „time on feet“ of all participants was 31.9%+10.79 and 19.4%+8.76, respectively. The accumulated time of variables of PA of all participants showed no differences between weekdays with a variability of 3.8% and 1.8% for walking and „time on feet“, respectively. Association between the SPPB and different aspects of PA was limited (walking: r=0.397; „time on feet“: r=0.41). **CONCLUSIONS:** We could demonstrate that the measurement of PA of only one day could describe the mean time of activity (i.e. standing and walking) for the whole group, but not for a single person. A measurement of a single day cannot be used to compare results for medical interventions in a pre-post design for individual person. Measuring PA of a single day seems to be an efficient way to obtain comprehensive and objective data on PA on group level. The data show that PP is only a weak surrogate marker of PA.

**PB7 320 ALCOHOL CONSUMPTION AND THE FRAILTY PHENOTYPE IN COMMUNITY-DWELLING YOUNG-OLD PERSONS**

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**Introduction:** The association between alcohol use and frailty has not been extensively studied. The objective of this study was to examine the cross-sectional association between alcohol consumption and the frailty phenotype in young-old persons. **Methods:** In 2004, the Lausanne cohort 65+ enrolled 1564 randomly selected community-dwelling persons aged 65 to 70 years. Data collection included demographics, health and functional status and physical examination. Alcohol use was measured through the AUDIT-C. Frailty was assessed using Fried's frailty phenotype and participants were categorized into robust (0 criterion) and vulnerable (1+ criteria). **Results:** Overall, 92.9% of men and 83.4% of women reported any consumption of alcohol during the last 12 months, and 5% reported any previous alcohol-related problem. About half of these latter persons were current drinkers. Fifty percent of participants (men: 62.1%; women: 47.8%) were considered at risk drinkers using the AUDIT-C. Women who abstained from drinking were more frequently vulnerable than current alcohol drinkers (44.7% of non-drinking women, vs 27.4% of light/moderate drinkers and 34.5% of at risk drinkers, p=.001). A similar pattern was observed in men, although the differences were not significant (37.1% vs 23.3% vs 26.6%, p=.17). Although the proportion of vulnerable subjects was higher in at risk drinkers than in light/moderate ones, no significant association between the quantity of alcohol and frailty was observed. However, reporting any previous alcohol-related problem was associated with vulnerability (46.6% vs 27.7%, p<.001). **Conclusion:** In these relatively young-old persons, current abstinence from alcohol was associated with the frailty phenotype. Although the risk of vulnerability was lower for light/moderate drinking than for at risk drinking, no significant association with the quantity of alcohol could be shown. A possible explanation is that, in this age category, those who experienced alcohol-related problems or chronic health problems already stopped drinking.

**PB7 321 STRENGTH IN OLD AGE – HEALTH EXERCISE PROGRAMME 2005-2010 DEVELOPING EXERCISE ACTIVITIES THROUGH COORDINATION**

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**Introduction** A national programme coordinated by the Age Institute promotes the autonomy and quality of life of independently living older adults (75+) with decreased functional capacity. This is achieved by increasing muscle strength and balance exercise services for the target group in 35 local third sector projects. **Methods and materials** The programme functions in local projects and produces good practices. General functions include communications, cooperation and training, which aim to increase awareness about strength and balance exercise for older adults. The Age Institute supports the local projects with interactive guidance including a written contract of cooperation, personal counselling, training, communication materials, and forums for cooperation. Peer support, evaluation and continuous feedback are encouraged in the projects. The projects are followed-up with

an annual questionnaire, mentoring diaries, client and training feedback, media monitoring, a description of good practices, and an external evaluation of the programme. Results According to the local actors, the network of local projects and the project guidance have improved the project activities and the instillation of good practices. Based on the reports from local projects, the first Good Practices Guide has been produced. According to external evaluation, the Age Institute and the local projects are committed to the common goal. The target group of older adults have received exercise services that otherwise would not have been available. Excellent training and learning materials have enabled good practices. The programme has created new networks and models of action. The success of the programme can be seen in the fact that the dissemination of its models of action has been set as a goal in several national documents of health and social policy. Conclusions Project guidance has proved to be a successful model of action. Cooperation between decisionmakers and various actors is essential for the instillation of action.

**PB7 322 FUNCTIONAL RECOVERY IN ELDERLY AFTER A STROKE, IN A REHABILITATION GERIATRIC HOSPITAL : A MULTI-PARAMETRIC ASSESSMENT**

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Bretonneau's hospital (Paris) has 8 beds in post acute care units with geriatric orientation dedicated to the patients requiring reeducation. The prediction for outcome after a stroke in the elderly can be rather difficult. Firstly, we conducted a study to determine predictive factors of functional outcome after a stroke and predictive factors of discharge. Secondly, with an aim of standardizing the patients after a stroke, a multidisciplinary group was created for an evaluation of the professional practices. It's an observational cohort study of 41 patients, admitted to the rehabilitation unit after a stroke. In order to show the predictive factors of the functional evolution of the patient, and their orientation we performed a multi-parametric statistical test. The elements collected gathered demographic data, the presence of risk factors cardiovascular, the nutritional state, the place of life before and after the hospitalization, the scores of Functional Independence Measure (FIM) and National Institute Heath Stroke Scale (NIHSS) at admission and discharge. The average age of patients was 85 years. FIM score in particular admission FIM cognitive evaluate the extent of functional recovery. FIM score at discharge is a predictive discharge destination. The outcome of the patient can be explained by the final FIM mainly and partially by the age. There is an interest to collect the scores of FIM and NIHSS in geriatric rehabilitation unit at admission and discharge of the patient: both scales are predictive for the functional evolution and to outcome of those patients.

**PB7 323 USEFULNESS OF A DEDICATED TILT CLINIC IN OLDER PEOPLE WITH UNEXPLAINED SYNCOPE, FALLS OR DIZZINESS**

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**Introduction:** There is growing awareness that carotid sinus syndrome and vasovagal syndrome are important causes of unexplained syncope, falls or dizziness in older people. The aim of this study was to determine the positive yield of a tilt testing clinic in older subjects. **Methods:** Patients aged ≥70 years who had syncope, falls or dizziness where the cause remained unexplained after routine clinical assessment and investigations were consecutively referred to the tilt clinic. Bilateral carotid sinus massage (CSM) was performed for 10 seconds separately and in the supine and upright (70 degrees) positions. Prolonged (40 minutes) upright stress, including sublingual Glyceryl Trinitrate (400mcg) provocation after 20 minutes, was performed. Carotid Sinus Syndrome (CSS) was diagnosed if, after CSM, either there was an asystolic pause on the cardiac monitor of >3seconds (cardioinhibitory CSS) or a 50mmHg systolic blood pressure drop (SBP) with symptoms (Vasodepressor CSS). Vasovagal syndrome (VVS) was diagnosed if SBP fell >50mmHg associated with symptoms of presyncope or syncope. **Results:** 177 subjects (age 70-94 yrs, 110 women) were studied (respectively; syncope, falls, dizziness; 123, 28, 26). Overall the positive diagnostic yield (95%CI) in the syncope, falls and dizziness groups were 66.7% (58.4-75.0), 64.3% (46.6-82.0) and 38.5% (19.8-57.2) respectively [Chi<sup>2</sup>=7.3;df2; p=0.026]. In the syncope group 42.3% (33.6-51.0) were diagnosed with VVS and 35.0% (26.6-43.4) with CSS. In the falls group 39.3% (21.2-57.4) had VVS and 28.6% (12.9-44.3) CSS and in the dizziness group 23.1% (6.9-39.3) had VVS and 19.2% (4.1-34.3) had CSS. **Conclusion:** The diagnostic yield of a dedicated clinic incorporating carotid sinus massage and a prolonged head up tilt test is high in older patients with unexplained syncope, falls or dizziness. The positive yield in syncope and falls patients was significantly higher than those with dizziness alone, although even then it was worth performing the test in the latter group.

**PB7 324 THE IMPACT OF A MECHANICAL THERAPY FOR OSTEOPOROSIS ON HEALTH-RELATED QUALITY OF LIFE**

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**INTRODUCTION** Approximately 2 million women are affected by osteoporosis in Spain (Diaz Curiel, Garcia, Carrasco, Honorato, Perez, Rapado & Alvarez, 2001). Osteoporosis, or porous bone, is a disease characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased risk of fractures of the hip, spine, and wrist. This pain can impact in the activities of daily living, social relationship and emotional state due to the low back pain resulting from vertebral fractures (Cook, Guyatt, Adachi, Epstein & Juniper, 1999). **METHODS AND MATERIALS** A sample of 194 subjects was recruited and femur and spine densitometry was made in order to establish whether they had osteopenia or osteoporosis. 126 of the 194 subjects had osteopenia or osteoporosis. Two equivalent groups were matched for osteopenia, osteoporosis, quality of life, age and gender. 69 took part in the experimental group and 56 in the control group. Those in the experimental group attended three weekly sessions of half an hour to a mechanical therapy for 18 months, subjects in the control group continued to lead an active life. Health-related quality of life was measured by the SF-36 questionnaire. **RESULTS** At the end of the experiment statistically significant differences were found in Physical Function ( $p=0.024$ ), Mental Health ( $p=0.015$ ) and General Health ( $p=0.030$ ). **CONCLUSIONS** This mechanical therapy increases significantly some aspects of the quality of live such us Physical Function related to the capacity to carry out the activities of daily living, Mental Health related to emotional states like depression and anxiety symptoms, and General Health related to the way they perceive their own health. Further research is needed in order to improve osteoporosis therapies and the quality of life of people affected by this pain, but this mechanical therapy could be one of the treatments for these patients.

**PB7 325 THE EFFECTS OF TAI CHI ON FALL PREVENTION, FEAR OF FALLING, AND BALANCE IN ELDERLY PEOPLE: A SYSTEMATIC REVIEW AND META-ANALYSIS.**

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Falls are a common problem among older people. Tai Chi Chuan is a promising exercise intervention to prevent falls, but its effectiveness on fall prevention is inconclusive. Besides reported beneficial influences on fall risk Tai Chi may also influence risk factors for and consequences of falls like impaired balance and fear of falling. We performed a systematic review according to the Cochrane standards to assess the effect of Tai Chi (TC) on fall prevention, fear of falling and balance in healthy elderly people. We used a broad computerised literature search on Tai Chi interventions, covering Medline, Cinahl and Psyclit and used a highly sensitive search strategy for RCT's. References in relevant reviews and identified RCTs were also screened. We assessed the risk of bias with the Delphi criteria list and used a standardised form to extract the data. Whenever studies were clinically homogeneous concerning intervention, study population and outcome measures we performed statistical pooling with random effect models. In case of heterogeneity we performed a qualitative analysis and used a rating system for "levels of evidence". We included 14 trials in this systematic review with a total of 2658 elderly people of 50 years and older. Most trials in community setting used fall calendars, the measurement instruments used in facility setting trials were more divers. We will calculate a pooled incidence rate ratio in homogenous study populations and intervention groups, when complementary data arrive. Because of heterogeneity in the balance measurements and study population in fear of falling we refrained from statistical pooling for these outcomes. Preliminary results show conflicting evidence for the effect of Tai chi on both static and dynamic balance and fear on falling. The effects of Tai Chi on fall prevention will be presented on the Congress.

**PB7 326 IS THE USE OF AN ALGORITHM EFFECTIVE IN THE DIAGNOSIS OF ORTHOSTATIC HYPOTENSION?**

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**Background:** Orthostatic hypotension (OH) is a major healthcare problem in older persons, leading to dizziness, falls and increased (cardiovascular) mortality. It is underdiagnosed and therefore undertreated. As it is a multifactorial problem, the diagnostic process can be problematic, especially in busy daily practice. Therefore, correct diagnosis and treatment are important. We designed a diagnostic algorithm to facilitate the diagnostic process and the consequent clinical care (ref. 1). **Methods:** The algorithm consists of a stepwise approach, starting with measurement of blood pressure and heart rate supine and standing at 1, 3, 5 minutes and recording of symptoms; followed by an inventory of drug use and of underlying conditions. This will lead to a systematic hierarchical differential diagnosis of the most likely underlying cause(s). This is followed by a checklist of treatment options. In-hospital patients on a geriatric ward were included, if mobilisation was possible. **Results:** Twenty-two patients were tested with the algorithm and a further 20 will serve as controls. At baseline 20/22 experienced OH, 15 were symptomatic. The main diagnoses were OH-inducing drugs (18/20), cardiovascular diseases (12/20) and dehydration (4/20). According to the diagnosis all patients were given the required treatment. In 5 patients medication was withdrawn, 4 patients received IV-fluids, elastic stockings were prescribed for 1 patient. Average duration of the work-up with the diagnostic algorithm was 15 minutes. Results of the control group will be presented at the meeting. **Discussion:** The algorithm appears to be time-saving and comprehensive, because it presents a clear pathway for recognizing possible underlying conditions and for establishing treatment options for OH. Especially for young doctors on the ward the algorithm is an effective tool for optimizing care for the elderly with OH. Supported by a Forschungskolleg Geriatrie Grant from the Robert Bosch Foundation, Stuttgart, Germany.

**PB7 327 MOBILITY, FUNCTIONAL ABILITY AND QUALITY-OF-LIFE AMONG PEOPLE OF 60 YEARS OR OLDER**

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**Introduction:** It is well known that reduced ability to perform activities of daily living (ADL) and declining mobility are both related to advanced age. This relation is also valid for low quality-of-life. It is not, however, the advanced age per se that causes the low quality-of-life. Rather, it seems that it is the declining mobility that unable people to manage their daily lives satisfactory - a circumstance that is often overlooked, since the most frequently used measuring method, the ADL-scale, is mainly focusing on people's functional ability and not their mobility. Hence, the assumption and aim for this study has been to investigate to which extent mobility factors, in comparison to the control factors age, gender and ability to perform ADL, may explain low (physical) quality-of-life (SF-12, PCS-12). **Methods:** The study includes people (n=1402) aged 60-96, who participated in a baseline survey in one (Blekinge) of four included centres of the longitudinal and multi-centre cohort study, The Swedish National study on Ageing and Care (SNAC), in 2001, a study with a 61% response rate. **Results:** Collected data indicated that mobility factors such as reduced ability either to walk a distance of 200 metres or less without stopping, or walking in stairs, or rising from a chair or opening a bottle played a crucial part when developing conditions of low (physical) quality-of-life (PCS-12), while control factors such as gender, age and ability to perform ADL, did not. **Conclusion:** The results suggest that multiple factors of reduced mobility, rather than impairment in ability to perform ADL, appear to increase the risk for low (physical) quality-of-life, and that targeting these phenomena in health care interventions, are essential.

**PB7 328 ARE FALLS OCCURRING DURING POST-ACUTE CARE ASSOCIATED WITH REHABILITATION OUTCOMES?**

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**Introduction:** The objective of this study was to investigate the association between falls occurring during post-acute care and rehabilitation outcomes. **Methods and materials:** Over a 5-year period (2003-2007), all falls (n=1217) were prospectively recorded among 4026 patients consecutively admitted to post-acute rehabilitation. Patients' characteristics, including health, functional, cognitive and affective status were systematically collected using standardised instruments. Rehabilitation outcomes considered were length of stay, discharge destination, and rehabilitation success, defined as at least 50% gain in the possible improvement in Barthel score (difference between maximal and admission Barthel score). **Results:** Overall, 11.4% patients fell once and 6.3% were multiple fallers. The fall incidence rate was 12.6/1000 bed-days. Compared with non fallers, one time fallers and multiple fallers, respectively, were older ( $80.5\pm7.9$  vs  $82.1\pm7.8$  vs  $82.7\pm7.4$  years;  $p<.001$ ), more often cognitively impaired (MMSE<24: 26.1 vs 46.2 vs 55.0%;  $p<.001$ ), and had more frequently depressive symptoms (GDS $\geq$ 5: 16.7 vs 24.4 vs 25.1%;  $p<.001$ ). They also had lower Barthel score at admission ( $63.8\pm20.4$  vs  $54.0\pm19.3$  vs  $47.0\pm18.3$ ;  $p<.001$ ). Compared to non fallers, one-time and multiple fallers had prolonged lengths of stay by an average of 4.1 days (95%CI 3.2-5.0;  $p<.001$ ) and 7.7 days (95%CI 6.5-9.0;  $p<.001$ ), respectively, independent of demographics, comorbidities, affective, cognitive and functional status. One-time (adjOR 0.68, 95%CI 0.53-0.87;  $p=.003$ ) and multiple fallers (adjOR 0.47, 95%CI 0.35-0.64;  $p<.001$ ) were also less likely to be discharged home after rehab compared to non fallers in multivariate analysis. However, only multiple fallers had

significantly decreased odds to achieve rehab success (adjOR 0.65, 95%CI 0.47-0.90; p=.009). Conclusion: In this population of frail older patients admitted to post-acute rehabilitation, fallers had longer length of stay and were less likely to be discharged home. Interestingly, only multiple fallers were less likely to achieve rehab success. These results suggest that falls prevention programs in similar setting should primarily target these high risk patients.

#### **PB7 329 EMBEDDING BALANCE AND STRENGTH TRAINING IN DAILY ROUTINES (LiFE): AN RCT OF FALL PREVENTION INTERVENTIONS**

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Introduction Improved balance, and to a lesser degree strength, are major contributors to reducing falls. However, population studies have shown that, outside of studies, there is a very low regular participation rate by older people for strength exercises (<6%) and even less for balance activities. Thus, what is needed are viable and sustainable choices for older people. In the innovative LiFE approach balance and strength exercises are individually tailored for the older person and embedded within their daily routines. Methods A 3-arm randomized controlled trial was conducted to establish the efficacy of both the new LiFE approach and a structured balance and strength exercise program compared to a control flexibility gentle exercise program in reducing falls with community residing older people. Results 317 people were followed for 12 months with data collection completed December 2008. The major outcome is the reduction of falls measured by a Negative Binomial Regression Model. Secondary measures examined differences in static and dynamic balance, strength and gait stability, self-efficacy for activities of daily living , habitual physical activity and functional independence. Analysis was by intention-to-treat. In our initial pilot-feasibility study we had significant results for LiFE with a 79% reduction of falls (RR=0.21 (0.06-0.67), n=34). In this paper we will present the final results of our major trial, comparing differences in outcomes between the exercise interventions. Conclusion There are many opportunities in everyday life to challenge your balance and to load your muscles and make them work harder. This project has rigorously examined the efficacy of such a novel approach for older at-risk elders. It will advance our knowledge about the role of balance and strength in falls prevention, challenge our thinking about balance and strength training and physical activity and has the potential to impact on practice across a number of health professions.

#### **PB7 330 : PHYSICAL AND MENTAL ACTIVITY: ASKING OLDER ADULTS ABOUT THEIR EXPERIENCES, BELIEFS AND PREFERENCES.**

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**INTRODUCTION:** Physical and mental activity are well-known to prevent disability and dementia, respectively. Furthermore, they contribute to an active aging as defined by the WHO. However, the regular engagement of older adults in these activities is difficult. Therefore, our aim was to study experiences, beliefs and preferences of community-dwelling older adults in Catalonia with respect to these activities. **METHODS AND MATERIALS:** Cross-sectional study with a consecutive sampling of patients from 7 primary care centres in Catalonia. Study population consisted of persons above 65 years old who lived at home, were independent for the activities of daily living and had no cognitive impairment. 281 subjects fulfilled the inclusion criteria (187 women, mean age 78.4 y). Socio-demographic data were recorded and specific questions on beliefs and preferences on physical and mental activities were asked. Nurses conducted the interviews. **RESULTS:** 70.1% of the participants had practiced physical exercise at least once, while only 28.4% exercise currently. Nevertheless 82.2% considered exercise important to aging well. 56.6% pointed out that physical activity helps to prevent diseases, 53.4% to improve mood and 14.6% to prevent falls. Concerning mental activity, 93.6% considered it important, while only 8.5% had participated in at least one memory training. 80.4% agreed that memory training would improve cognitive functions and 36.3% that it would ameliorate mood. 45.9% would participate in a physical activity program, while 57.7% in a memory training. **CONCLUSION:** Although there is high knowledge on the benefits of physical and mental activity for healthy aging and a high willingness participate, only a low proportion currently practice these activities. Remarkably, there is very low knowledge on the effect of physical exercise on fall prevention and a high agreement on the positive effect of both activities on mood.

#### **PB7 331 EFFECTS OF A NETWORK REHABILITATION PROGRAMME IN FRAIL OLDER PERSONS**

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S. KARPPI

Introduction. A new network-based rehabilitation program was developed in Finland for frail older persons with progressive disability and unspecific morbidity to support their living at home as long as possible. A nation-wide multi-center trial was designed to

evaluate, whether the programme could postpone institutionalization. The programme was based on the networking of institutional rehabilitation providers and the local social and health services. Methods and materials. Subjects were 708 home-dwelling persons, aged 65+, without severe cognitive impairment (MMSE <18), but with progressively decreasing functioning and need of assistance. The setting included 41 municipalities and 7 rehabilitation centres in Finland. Within 8 months the intervention group (IG, n=343) received a multidisciplinary network-based rehabilitation in three inpatient periods (totalling 21 days) and a home visit. At a rehabilitation centre, a comprehensive geriatric assessment was followed by an activating programme aiming to maintain or improve person's functional ability and support independent living at home. The controls (CG, n=365) received standard social and health services. Measures applied at baseline and at 12 months: health, pain, living conditions, functional ability (FIM 5.0), mood (GDS), ADLs, IADLs, mobility (walking speed, chair rise test, balance), handgrip strength. Results. The subjects' mean age was 78 years (65 -94 yrs). There were no differences between the groups at baseline. By one year, beneficial effects in measures of health, mood and functional capacity were seen in IG as compared to CG. By five years, 46 % of persons in IG and 43 % in CG were still living at home, mortality was 30% and 34%, respectively. There were no differences in the institutionalization rate. Conclusion. Although multidisciplinary network-based rehabilitation programme delayed deterioration of functional capacity and disability development in frail elderly persons compared to the controls, it did not result in differences in institutionalization in a 5-year follow-up..

#### **PB7 332 QUALITY OF LIFE BEFORE AND AFTER AN EXERCISE INTERVENTION TARGETED TO PREVENT FALLS AND FRACTURES IN ELDERLY WOMEN**

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Introduction: Our previous 12-month RCT\* in home-dwelling, elderly women indicated that the supervised exercise training could prevent functional decline and bone loss – risk factors of falls and related fractures. Here the effects of participation in training on health-related quality of life (HRQoL) are reported. Methods and materials: Relatively healthy, independent-living women (n=149) were randomly assigned to three intervention groups and the control group. The intervention groups participated either in resistance, balance-jumping or their combination (COMB) supervised training three times a week. HRQoL was assessed by the RAND-36 Questionnaire at the baseline and after the intervention. The scores were analysed with paired sample t-test and Wilcoxon Signed-Rank test. Results: In each of the RAND-36 scales at baseline, the scores were higher compared to the age-equivalent reference group of Finnish population, and heavily accumulated to the favourable values. Accordingly, the scale reliability values were slightly lower (Cronbach's alphas .60 to .83) than in the reference population. Comparisons by group indicated that the scores at baseline and after the intervention were significantly ( $p < .05$ ) different only in the General health scale (GH) in the COMB group. No differences were found in the control group. When the scores of the intervention groups were pooled, significant differences emerged between values obtained at baseline and after the intervention for the Physical functioning, Role limitations/emotional and GH scales. All observed changes favoured the exercise intervention, but the absolute differences were minimal. Conclusion: Considering that the participants were more favourably positioned in the RAND-36 than their age-mates at baseline, increases in the scale values were less likely. Within the limits of the moderate sensitivity and reliability of the scales we conclude that the intervention neither improved nor reduced the HRQoL of these women. \*Karinanta et al. Osteoporos Int 2007;18:453-462.

#### **PB7 333 MUSCLE STRENGTH IN THE KOREAN LONGITUDINAL STUDY OF AGEING(KLoSA) PARTICIPANTS: AGE AND GENDER PATTERNS OF CORRELATES**

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Introduction: Muscle strength is a robust predictor of functional decline, fractures, and mortality among the elders. Good muscle strength and its maintenance seem to be important to achieve successful aging for individual, and to relieve care burden for aging society. We compared gender and age differences of muscle strength measured by grip strength, and its different correlates by age and gender among Korean adults. Methods and Materials: The Korean Longitudinal Study of Ageing(KLoSA) 2006 baseline survey was used in this study. Two-stage stratified random sampling was conducted to select a nationally representative sample of Korean adults aged 45 or older . Study subjects were derived from 8424 persons(aged 45~105) in the KLoSA participants who underwent a hand grip strength test. Handgrip strength was measured 2 times for both left and right hands in a standing position using a dynamometer in units of kilograms. The average of all measurement was used for the analyses. Socioeconomic variables, health behaviors, ADL, IADL, fall experience, weight, height, Mini-Mental Status Examination(MMSE) and Center for Epidemiological Studies-Depression were measured by trained interviewers.

**Results:** Bivariate and multiple regression analyses showed that grip strength were lower in women, older persons, and low educated persons. Throughout the age range, gender difference was the largest (standardized coefficients of women= -8.0 ~ -14.0), and Body Mass Index, MMSE, CES-D score were significantly associated with grip strength in all subgroups of gender and age. Employed, higher physical functions, and regular exercise were associated with higher grip strength only for men, not for women. Similarly, for elders aged 85 years or older, physical functions, exercise were not associated with grip strength. **Conclusion:** The patterning of grip strength and its correlates by age and gender may reflect the common factors and unique factors for improving muscle strength between age group and gender.

**PB7 334 PREVALENCE AND RISK FACTOR FOR FALLS IN DEMENTIA PATIENTS LIVING IN THE COMMUNITY. RESULTS FROM THE NUTRIALZ STUDY.**

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**Introduction** The incidence of falls in Alzheimer patients is higher than in elderly without dementia. It is not clear the mechanisms by which dementia increases the risk of falling. **Objectives** To estimate the incidence and risk factors of falls in a cohort of non-institutionalized people with dementia. **Methods** A total of 926 outpatients from 11 Alzheimer centres where controlled after 6 and 12 months of the first visit. The question of interest was 'Has the individual fallen in the previous 6 months?'. Those variables significant in the univariate analysis were included in a logistic regression analysis. **Results** 626 patients completed all assessments, while 320 dropped-out or had missing assessments (institutionalized (31%), death (24.8%), contact lost (4.1%), medical complications (9.0%), refuse (9.7%), other 21.4%). Mean Age was 78.6 (50-96), 68 % were female. 63 % had Alzheimer disease. 223 (35.62%) individuals felt. Age, mmse, CDR score, severity dimension of npiq scale, stress dimension of npiq scale, Cornell scale, MNA, B and I ADL, weakness, cerebrovascular disease, previous fall, mixed dementia and participant centre where significant at the univariate level. The final model only kept age, ADL, cerebrovascular disease and previous fall as significant independent risk factors for falls. **Conclusions** Falls are frequent in patients with dementia. For each 5 year increase in age, the odds of falling increases in a 10%. The two main risk factors are presence of cerebrovascular disease and the occurrence of a fall during the previous year, whose presence respectively increase the odds of falling in a 50% and a 100 %.

**PB7 335 THE IMPACT OF UNDERNUTRITION ON THE STRENGTH IN OLDER PEOPLE.**

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**Introduction:** the elderly population is increasing fast, especially in countries of the Third World, and this is associated with an increasing incidence of chronic and degenerative diseases. Lean body mass decreases with normal aging and, as lean mass is directly related to muscle strength, there is a reduction of strength with aging. Undernutrition is also associated with the reduction of lean body mass, but there is a lack of studies about strength in the undernourished elderly. This research aimed to investigate if there is correlation between reduction of strength and lean body mass in the undernourished elderly. **Methods and materials:** forty one male volunteers aged 62 to 87 years participated in this study. The subjects were submitted to evaluation of body composition by dual energy X-ray absorptiometry and strength by hand dynamometer (Jamar). **Results:** the results showed that strength and lean mass are reduced in undernourished older persons as compared with eutrophic ones {23.07±6.9 and 30.27±8.4 (Kg), p=0.005; 40.18±4.5 and 48.6±5.1 (Kg), p<0.001, respectively} and that there is correlation between age and lean mass of the right arm in the eutrophic group ( $r=0.515$ ,  $p=0.02$ ), but not in the undernourished group ( $r=-0.344$ ,  $p=0.13$ ). Also, strength and age are associated in the undernourished group ( $r=-0.38$ ,  $p=0.10$ ). **Conclusions:** it can be supposed, then that strength is related to lean mass of the right arm in eutrophic and undernourished older persons but, the aging process could be more important on the strength in undernourished ones, when compared with eutrophic older people.

**PB7 336 PREDICTING FALLS DURING REHABILITATION UNIT STAYS: A PROSPECTIVE COHORT STUDY**

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**Introduction:** Falls present an important challenge for those delivering clinical services for older people as well as for health policy. Falls in aged care rehabilitation units have not previously been well investigated. This study aimed to establish the frequency of falls during rehabilitation unit stays and develop a predictive model for these falls. **Methods and materials:** This prospective cohort study included 533 rehabilitation inpatients in two large public hospitals. All people aged 50 years and older admitted to the participating wards during this time period were considered for inclusion in the study unless they were unable to safely complete the assessments due to medical conditions, did not speak conversational English or have an available interpreter. Data were collected from medical records, interviews with staff and participants and from physical assessments conducted in the 48 hours following admission to the ward. **Results:** Seventy five (14%) participants fell during their rehabilitation ward stays. A multivariate model to predict falls included: male gender (OR 2.76, 95% CI 1.59 to 4.79), prescription of Central Nervous System (CNS) medications (OR 2.28, 95% CI 1.33 to 3.90), a fall in the previous 12 months (OR 2.07, 95% CI 1.00 to 4.30), frequent toileting (OR 1.86, 95%CI 1.09 to 3.17), Mini-Mental Status Examination (MMSE) score <28 (OR 1.88, 95% CI 1.03 to 3.45), and standing balance time in 5 positions (OR 0.96, 95% 0.94 to 0.99). The area under the ROC curve (AUC) for this model was 0.77 (95% CI 0.71 to 0.82) and the bootstrap-corrected AUC was 0.76. **Conclusion:** We propose a tool to assist in the prediction of falls during rehabilitation unit admission. This tool can predict falls with sufficient accuracy to assist in clinical decision making and therefore may assist wards to implement intervention strategies to prevent falls.

**PB7 337 VITAMIN D STATUS AND FUNCTIONAL EFFICIENCY, BALANCE AND FALL HISTORY IN ELDERLY PEOPLE**

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Vitamin D is essential for many processes including calcium homeostasis, bone turnover, muscle function. The aim of the study was to evaluate the relationship between 25(OH)D plasma level and functional status, balance & falls in elderly people. **Methods:** The medical and falls history was obtained. Functional status was assessed with basic (ADL) and instrumental (IADL) activity of daily living and Timed up&go test. Balance was evaluated with 1leg and tandem stance tests scored 0 (unable) – 4 (able to stand for 10 or 30 seconds respectively), and by measurement of center of feet pressure (COP) movement on balance platform (mean and maximal lateral and antero-posterior COP displacement (mm), COP movement velocity (mm/s), COP path length (mm) in eyes open-EO and closed- EC tests. **Results:** Mean age of 89 subjects (59 female) was 79.3±7.3 years. Fall in the last year was reported by 51 persons (42.7%). Mean 25(OH)D level was 40.69±27.5 nmol/L. Fallers had lower 25(OH)D level than non-fallers (35.01±19.4 vs 49.74±35.6 nmol/L,  $p=0.03$ ). People efficient in ADL had higher 25(OH)D than ADL dependent (54.04±33.6 vs 30.67±16.1 nmol/L,  $p=0.0003$ ). Subjects with 25(OH)D below median value (34.19 nmol/L) had poorer functional and balance parameters than those with 25(OH)D above 34.19 nmol/L: ADL 5.08±1.5 vs 4.33±1.5\*, IADL 20.4±7.3 vs 16.8±6.4\*, tandem stance 1.68±1.6 vs 0.71±1.1\*, EO'1lateral mean 3.9±2.9 vs 5.6±3.0\*\*, EO'lateral-max 18.7±13.8 vs 31.7±22.3\*\*\*, EO'anteroanterior'max 15.9±10.3 vs 21.2±10.1\*, EO'path'area 10.7±12.5 vs 5.9±8.6\*\*\*, EO'path length 317.5±204.4 vs 452.7±258.6\*\*, EO'velocity'mean 10.6±6.7 vs 15.1±8.6\*\*, EO'velocity'lat 6.3±4.1 vs 10.2±5.8\*\*\*, EC'lateralmax 32.4±24.3 vs 44.5±23.5\*, EC'velocity'lateral 11.5±9.2 vs 16.5±9.2\*\*, EC'path length 739.5±377.7 vs 581.4±397.1\* (\* $p<0.05$ , \*\* $p<0.01$ , \*\*\* $p<0.001$ ) Plasma 25(OH)D level correlated with IADL ( $r=0.3$ ,  $p=0.03$ ), 1leg stance ( $r=0.3$ ,  $p=0.03$ ), tandem stance ( $r=0.34$ ,  $p<0.005$ ) and Timed up&go test ( $r=-0.3$ ,  $p=0.03$ ). **Conclusions:** Low 25(OH)D level may be a marker of functional decline and risk for balance deterioration and for falling in older people.

**PB7 338 HEALTH STATUS, FUNCTIONAL ABILITIES, AND OUTCOMES OF HOSPITALIZED OLDER PATIENTS**

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**Introduction:** Hospitalization has a significant impact on health status and functional ability of older patients. This study aimed to describe health status, functional ability, and outcomes of hospitalized older patients. **Methods & Materials:** The sample consisted of 349 patients aged 60 years and older who were admitted to medical and surgical wards during October to December 2004 at Ramathibodi Hospital, Bangkok, Thailand. **Results:** The analysis showed that two-thirds of the sample were female. The age ranged from 60 to 97 years with a mean of 72.48 years. Most older patients (83.7%) had at least one underlying disease. The most common underlying diseases were hypertension, diabetes mellitus, and heart disease. The major health problems were poor eyesight, alteration of bowel elimination, difficulty in chewing, and sleep disturbance. The functional ability

scores on the Barthel Activity of Daily Living Index were not normally distributed. Using the Friedman test, the researchers found that functional abilities before admission, at admission, and at discharge significantly differed. In a post hoc investigation using the Wilcoxon matched-pairs signed-ranks test, the score of functional ability before admission was highest, followed by that at discharge and at admission, respectively. Regarding outcomes of hospitalization, almost all older patients were discharged home. Almost two-thirds of the sample went back to their own home after discharge, while the rest moved to their relatives' house. The average length of hospital stay was 12 days. The readmission rate was 7.8 % and the mortality rate was 7.7%. Complications during hospitalization included acute confusion (5.1%), pressure sore (1.8%), and accident/fall (1.5%). Conclusion Functional abilities tend to decline over time in hospitalized older patients. Also, complications during hospitalization are preventable; thus, health care providers should find strategies to prevent functional decline and complications for preventing adverse health outcomes.

#### **PB7 339 INPATIENT'S HEALTH SUBJECTIVE PERCEPTION VERSUS COMPREHENSIVE GERIATRIC VALORATION**

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Introduction Inpatient's own health perception isn't always valued as it should. Practitioners tend to consider it a part of the adaptive disorder that goes with the illness, especially when talking about old people. Material and Methods Medical histories of 371 inpatients admitted to hospital were analyzed. Various items were evaluated: socio-demographic information, own health's subjective perception, and the result of the different scales that were used for making the comprehensive valuation of these patients. The statistical analysis was realized with SPSS for Windows. Results There were analyzed 371 inpatients, their mean age was 85.5 (SD 6.8) and 66.3% of them were women. 72% of the patients were firstly admitted to emergency service. 21.6% of the inpatients evaluated their own health as very good or good, 36.9% as medium and 41.5% as bad. Emotional alteration was observed in 83 inpatients (22.4%). The rest of the patients (77.6%) had a stable emotional situation. There weren't important differences between emotional situation and inpatient's own health perception. On the other hand, differences between dependent variable and the Barthel scale were found. Mean Barthel punctuation was: 36.25 (SD 29.51) for inpatients with bad health punctuation, 63.57 (SD 25.55) for medium, and 88.61 (SD 14.29) for good health perception ( $p=0.000$ ). Bad health perception matched up with a Charlson average rate of 2.68; medium health perception, with 2.11; and very good health perception with 1.76. ( $p=0.002$ ). For the screening of cognitive deterioration, test Pfeiffer was used. The average of errors obtained with this test was: 5.62, 3.74 and 1.76 for bad, medium and good health perception, respectively. Albumin levels were lower as worst health perception had the inpatient. Albumin average levels were 33.46g/L, 36.43g/L and 37.50g/L for bad, medium and good/very good health perception groups, respectively. ( $p=0.009$ ) When talking about advance directive or patients discharge, we also observe significant differences. Conclusions • Inpatients' own health perception is correlated with the objective data that practitioner obtains with the patient's valuation. • This is an opinion that might be borne in mind when making decisions. • It would be necessary to study in depth this data correlation when having to interpret the results of the comprehensive valuation.

#### **PB7 340 STRENGTH AND FLEXIBILITY RISE DURING FITNESS PROGRAM**

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Introduction: Strength and flexibility are two main fitness components that suffer aging effects. Losses in both components are associated with sedentary life pattern and muscle movements decay. Ten female participants, 65.8 7.6 years, part of the General Program of Physical Activities for Older Adults, of PUCRS – Physical Education Faculty, were measured after and before a four months fitness and flexibility program. Once a week, the group did muscle fitness associate with flexibility exercises and on the other day, team adapted sports as volleyball, basketball and handball, as part of the main objectives of the program; social integration and physical wellness. Methods and materials: A random sample was selected over a group of 30 participants freely subscribe for the program. The group had 50 minutes of physical activities twice a week. Sit and Reach test was used to measure flexibility and five kilogram dumbbell lateral raise fitness exercise was used to measure strength. Wilcoxon Test non parametric statistical analysis was used due to sample size to verify significant differences. Results: Flexibility increased from  $25.6 \pm 3.36$  to  $29.4 \pm 2.93$  ( $p=0.047$ ), and strength increased from  $5.8 \pm 0.95$  to  $8.7 \pm 1.86$  repetitions ( $p=0.091$ ), indicating an increase of 15% for flexibility and 50%, for strength. Statistical analysis was significant for flexibility but not for strength at a 95% probability level. Conclusion: It was seen that fitness associate with an sport activity at least once a week should be enough to breakdown sedentary life pattern and rise fitness components for an increase in quality life. Nonetheless, there were several difficulties on the prescription of

physical activity, because of the heterogeneity of the group. Social integration as part of the physical activity goal for each participant is important as an emotive variable.

#### **PB7 341 THE RELATIONSHIP BETWEEN GOING OUTDOORS AND FUNCTIONAL IMPAIRMENT**

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Introduction: Restrictions in physical activity such as being homebound are associated with deterioration of health and functional impairment in older adults. The purpose of this study was to determine the relationship between going outdoors and functional impairment in community-living frail older people who utilized day-care service. Methods and Materials: Participants were 535 (mean age,  $82.3 \pm 7.0$  years) older people enrolled in the Tsukui Ordered Useful Care for Health (TOUCH) program. Going outdoors in the participants during a month period was investigated retrospectively by family members. We selected two demographic variables (age and sex), three physiological or functional variables chair stand test (CST), timed up-and-go test (TUG), and independence of the stair climbing/descending), and a mental status variables (mental status questionnaire (MSQ)) as possible correlates of going outdoors. Results: Multiple logistic regression analysis revealed that only TUG was significantly associated with going into the town [OR 1.05 (95% CI 1.02-1.07)]. On the other hand, only independent of the stair climbing/descending was significantly associated with going into the outside the town [OR 1.77 (95% CI 1.17-2.66)]. Conclusions: The stair climbing/descending had key role to perform going into the outside the town which is required to adopt complex circumstance.

#### **PB7 342 POSTURAL CONTROL IN YOUNG OLD AND OLDEST OLD WITH HISTORY OF RECURRENT FALLS**

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Evidences suggests that there is a decline in postural control mechanisms with advanced of age, increasing the risk of falls in oldest old. However is unknown the impact of age on the body sway in the elderly with history of recurrent falls. Objective: To compare the body sway of young old (GIJC) and oldest old (GIMIC) with history of recurrent falls (2 or more falls in the last year). METHODS: 16 elderly people were recruited, of which 10 belong to GIJC ( $70.5 \pm 3.2$ ) and 6 to GIMIC ( $82.8 \pm 4.9$ ), submitted the assessment stabilometric, muscular strength, acuity of proprioception and the functional tests timed up and go test (TUG), time in one leg support (TAU) and Short Physical Performance Battery (SPPB). Secondary data related dimensions: sociodemographic, clinical, mental health (Mini-Mental State Examination, MMSE, Geriatric Depression Scale - GDS), level of activity (Profile of human activity-PHA), fear of falling (Falls Efficacy Scale - International FES-I) and functional capacity (Brazilian OARS Multidimensional Functional BOMFAQAssessment Questionnaire) were collected. RESULTS: The GIMIC showed higher average speed of sway of the pressure center (COP) ( $p = 0.01$ ), total displacement of the COP ( $p = 0.01$ ) and average anterior-posterior sway of the COP ( $p = 0.03$ ) compared with GIJC in condition soft surface eyes closed. The total work for the extension of the knee and ankle dorsiflexion was lower in GIMIC ( $p = 0.03$ ,  $p = 0.02$ ). With regard to functional tests and proprioception no significant difference was found between groups. It was found in the group GIMIC linear correlation between the displacement of the COP, the TUG ( $r = 0.84$ ) and TAU ( $r = -0.94$ ) in GIJC the correlation was observed between the displacement of the COP and the TAU ( $r = -0.89$ ;  $r = -0.86$ ). The age did not distinguish the performance of the elderly in the multivariate analysis. CONCLUSION: The performance of GIMIC was worse than in GIJC in relation to the parameters of stabilometry and muscle strength. The age did not distinguish the GIMIC of GIJC.

#### **PB7 343 THE EFFECT OF FUNCTIONAL STATUS ON THE NUMBER AND LENGTH OF HOSPITALIZATIONS AMONG OLDER ADULTS**

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Introduction: The elderly population is characterized by a high prevalence of functional deterioration, chronic disease and hospitalization. The aim of this study was to evaluate the effect of the functional status and chronic disease on the number and length of hospital stays among community-dwelling adults aged 65 years and above and to evaluate the effect of socio-demographic factors on the functional status and on the number and length of hospitalizations. Methods and materials: The sample included 93 community-dwelling older adults who are insured by Clalit Health Services. Functional status was assessed by nurses using the FIM - Functional Independence Measure scale. Data regarding chronic diseases and the number and length of hospitalizations in the previous year were retrieved from computerized databases. Results: No statistically significant effect was found of the functional status on the number and length of hospitalizations. Diabetes was associated with a greater number of hospital stays ( $p<0.05$ ) and hypertension with a greater length of hospital stays ( $p<0.06$ ). Among those who suffer from vascular disease there was no

statistically significant effect of the functional status on the number of hospitalizations, whereas among those without vascular disease, the lower their functional status, the greater the number of hospitalization ( $p<0.06$ ). Similar findings were found regarding hypertension. Among those with diabetes, the lower their functional status, the greater the number of hospitalizations ( $p<0.07$ ). No statistically significant effect was found among all the socio-demographic factors tested on the number and length of hospitalizations. Factors associated with high functional status were higher education, high self-assessment of health status and living alone. Conclusion: Among community-dwelling older adults the effect of the functional status on the number and length of hospitalizations is complex because of various confounding variables. Community health services for the frail elderly may have prevented hospitalization in this population.

**PB7 344 IMPACT OF AGE, ANTHROPOMETRIC DATA AND BODY COMPOSITION ON CALCANEAL QUANTITATIVE ULTRASOUND**

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Introduction. This study investigates the impact of age (A), body height (H) and body mass (BM), body mass index (BMI), fat-free mass (FFM), and fat mass (FM) on quantitative ultrasound (QUS) of bone within the longitudinal study on nutrition and health status in an aging population in Giessen (GISELA), Germany. Methods. Speed of sound (SOS) and broadband ultrasound attenuation (BUA) of the left heel were measured as variables for QUS (Achilles+ Solo, Lunar) in 229 women (age:  $73.5 \pm 5.8$  y, BMI:  $27.6 \pm 4.6$  kg/m $^2$ ) and 95 men (age:  $73.8 \pm 5.1$  y, BMI:  $26.9 \pm 3.3$  kg/m $^2$ ) and stiffness index (SI), which is a combination of SOS and BUA, was calculated. FFM (kg) and FM (kg) were measured by bioelectrical impedance analysis (Akern-RJL BIA 101/S, Data Input) using the formula of Kyle et al (2001). All measurements including body mass (kg) and body height (cm) were carried out in the morning after an overnight fast. Stepwise multiple regression analysis was applied to investigate the impact of the various parameters on SI in female and male subjects. Results. SI was significantly lower in women than in the men ( $78.1 \pm 17.4$  vs.  $94.3 \pm 13.5$ ,  $p < 0.001$ ). Stepwise multiple regression analysis revealed that in women age (12.4 %) and FFM (4.9 %) and in men FFM (6.9 %) and H (4.6 %) had the greatest impact on SI while BM, BMI, and FM had no impact on SI. Respective regression equations were for the women:  $SI = 103 - 0.78 A + 0.73 FFM$  ( $p: 0.000$ ,  $r: 0.42$ ,  $r^2: 0.17$ , SEE: 15.9) and for the men:  $SI = 127 + 0.97 FFM - 0.51 H$  ( $p: 0.000$ ,  $r: 0.34$ ,  $r^2: 0.12$ , SEE: 12.8). Conclusion. Results show that in both female and male elderly FFM is a significant predictor of the QUS parameter SI.

**PB7 345 LDL-CHOLESTEROL LOWERING EFFECT OF BISPHOSPHONATE IN THE ELDERLY PATIENTS WITH OSTEOPOROSIS**

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Introduction: Bisphosphonate is very effective therapy for osteoporosis and bisphosphonate with nitrogen (N) directly prevents apoptosis of osteoclasts via blockade of farnesyl 2-phosphatase, which one of the members of mevalonic acid pathway. On the other hand, "statin" inhibits HMG-CoA, which consists in up-stream of the pathway and strongly lowers LDL-cholesterol levels. As we speculated bisphosphonate with N lowers LDL-cholesterol levels via suppression of mevalonic acid pathway, we designed a retrospective observational study in the elderly outpatients with osteoporosis. Methods and Material: We recruited 62 patients with osteoporosis (male/female=10/52, mean age= $71 \pm 10$  y.o.) whose lipid profile was evaluated before and after starting of administration with bisphosphonate with N (alendronate; n=49 and risedronate; n=13). A 48% of participants were given lipid-lowering therapy, however, none of them was changed that therapy during this study. Results and Conclusion: Total cholesterol ( $210 \pm 25 \rightarrow 208 \pm 29$  mg/dL), triglyceride ( $111 \pm 47 \rightarrow 117 \pm 59$  mg/dL) and HDL-cholesterol ( $63 \pm 18 \rightarrow 64 \pm 19$  mg/dL) were not changed before and after bisphosphonate administration, however, LDL-cholesterol ( $121 \pm 20 \rightarrow 116 \pm 24$  mg/dL) was significantly reduced with bisphosphonate administration ( $p=0.0337$ ). Moreover, LDL-cholesterol with alendronate was not significantly changed ( $120 \pm 19 \rightarrow 118 \pm 24$  mg/dL;  $p=0.2355$ ), however, it with risedronate was significantly reduced ( $123 \pm 25 \rightarrow 112 \pm 25$  mg/dL;  $p=0.0254$ ). Although a large scale cohort trial is necessary to confirm this result, bisphosphonate with N, especially risedronate, might reduce LDL-cholesterol levels in the elderly patients with osteoporosis.

**PB7 346 HEALTH, SOCIAL AND BEHAVIORAL CHARACTERISTICS ASSOCIATED WITH PARTICIPATION OF COMMUNITY-DWELLING ELDERLY WOMEN IN A FALLS PREVENTION TRIAL: RESULTS FROM THE 'OSSÉBO' STUDY**

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Introduction : Our aim was to identify individual factors associated with participation in a falls prevention study among community-living elderly women. Methods and materials : The 'Ossébo' study is an on-going 2-year randomized controlled trial aimed at assessing the effectiveness of an exercise program for the prevention of falls and fall-related trauma. We used electoral rolls to invite women aged 75 years or older to a balance examination that included a clinical examination (standardized neuromuscular functional tests, visual acuity, weight/height) and a questionnaire on physical and social activity, quality of life (SF36), previous falls and fractures, fear of falling (FES-I), socio-demographic characteristics and prevention-related behaviors (systematic screening examinations, medical follow-up, vaccinations, use of dietary supplements). Women with diminished physical capacities (slow gait speed or inability to do 4 tandem steps) who had no medical contra-indication to physical exercise and did not already take gymnastic classes were invited to participate in the intervention study. Among eligible women, we compared characteristics of those who accepted to participate and of those who declined. Results : A total of 1222 women aged  $79.4 \pm 3.0$  years were examined, and 479 (39%) of those were eligible for the intervention trial. Among eligible women, 279 (58%) accepted to participate in the trial and 141 (29%) declined (59 were excluded because of anticipated move, repeated absences from home, etc). Compared to women who declined participation in this falls prevention trial, women who accepted were more likely to live alone and to take part in a physical or social leisure activity, but did not differ in terms of age, falls history, fear of falling, and other health or prevention-related characteristics. Conclusion: Our results suggest that social rather than health-related considerations motivate participation of community-dwelling elderly women in a falls prevention study.

**PB7 347 GENETIC ANDROGEN RECEPTOR POLYMORPHISM, TESTOSTERONE AND PSYCHOPATHOLOGY IN >50 YEARS OLD MALES**

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Introduction: Population means for serum testosterone (T) levels in men decrease with ageing and the effects of T are markedly modulated by the androgen receptor (AR) CAG repeat polymorphism (CAGn). We investigated how T and the AR polymorphism relate to psychopathology in aging men in clinical and nonclinical samples. Methods: 120 male patients of the Department of Psychosomatics and Psychotherapy (PP), 76 male patients of the Andrologic Clinic of the Department of Reproductive Medicine (AP) and 100 healthy male volunteers (HC) (all aged >50 years) were examined by means of the German versions of the Brief Symptom Inventory (BSI), the Patient Health Questionnaire (PHQ-9), the Screening for Somatoform Disorders (SOMS), and blood sample analyses for sex hormones and the CAGn polymorphism. Results: CAGn was significantly and positively correlated to all scales measuring psychopathology. In the subgroup defined by the longest CAGn and low T (i.e. the lowest androgenicity), psychopathology on all scales was significantly more pronounced than in the groups with short or intermediate CAGn, and clinically relevant "cases" of psychopathology were most frequent. T significantly contributed to overall psychopathology, depression, obsessive-compulsive symptomatology, hostility and psychoticism only in the upper quartile of CAGn. Conclusions: Results indicate that genetically determined long CAGn of the AR are an independent risk factor for global psychopathology in aging men, not only for depressive disorders. In the upper quartile of CAGn length, T levels could be protective. Our results could lead to new diagnostic and therapeutic options for psychic symptoms in aging males.

**PB7 348 EFFECTS OF LEAN AND FAT MASS ON BONE MINERAL DENSITY AND ARTERIAL STIFFNESS IN ELDERLY WOMEN**

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Introduction: The aim of this study was to evaluate the influence of fat and lean mass on both arterial stiffness and bone mass density (BMD) in elderly women. Methods: This study was performed in 138 French women over 60 years. Aortic stiffness was assessed by carotid/femoral pulse wave velocity (PWV). BMD and body composition were determined with a DEXA device in lumbar spine L1-L4, femoral neck and total body. Results: Lean mass was positively correlated with the three T-scores accounting for 13-16% of their variability. Fat mass had no effect on BMD but was positively correlated with aortic PWV accounting for 9.8% of its variability. This association was still significant in multivariate analysis ( $p < 0.003$ ) after adjusting for age, MAP, and heart rate. Lean mass was not a determinant of PWV. The multivariate analysis showed that regular physical activity was also associated with lower PWV. Conclusions: In women over 60 years of age, presence of

low lean and high fat mass is associated with the highest arterial stiffness and the lowest bone mineral density. Decreasing fat mass and increasing lean mass by means including regular physical activity could protect elderly women from accelerated arterial and bone aging.

**PB7 349 SEXUAL RELATIONSHIPS IN MEN OVER THE AGE OF 75 YEARS**

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**Introduction** Older people are often considered asexual and there are scant data regarding the participation of older people in sexual relationships. **Methods** We used an established population-based cohort of older men, the Health in Men Study. Initially, 12,216 men, resident in Perth, Australia, aged 65 years or older were recruited via random sampling from the Electoral Roll between 1996 and 1998. In 2008, a questionnaire was mailed to the men, and 3201 responded representing a 42.6% response fraction of the surviving men. **Results** Over the previous five years, 57% reported being sexually active with one partner, 1.6% with two partners and 2.8% with three or more partners. Over the previous 12 months, 31.6% had been sexually active, with 6.3% at least once per week, 9.3% two to three times per month and 16.0% once per month or less. The proportion reporting sexual activity over the previous 12 months ranged from 39.7% in the age group 75-79 years to 10.6% in the group 90-93 years. For those men who had been sexually active, 55.5% considered this was as often as they would like and 44.1% considered this less often than they would like. Common reasons for the absence of sexual activity was lack of interest of the men and their partners, and physical limitations of the men and their partners. Self-reported health conditions which were associated with a markedly increased odds ratio (OR) of no sexual activity included heart failure, OR 1.84 (95%CI: 1.20-2.81), carcinoma of the prostate, OR 2.41 (1.78-3.27) and depression OR 1.58 (1.14-2.19). **Conclusions** Contrary to popular belief, many men continue to engage in sexual activity until advanced old age.

**PB7 350 CORYNEBACTERIUM UREALYTICUM INDUCED MASSIVE HEMATURIA IN AN ELDERLY FEMALE PATIENT**

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Encrusted cystitis was the first identified in 1914, but the fact that it is caused by Corynebacterium urealyticum was highlighted recently. One of the symptoms of the disease was hematuria. We report the case of a 86 year-old woman with a history of hypertension and dementia who presented anorexia, weight loss and a massive hematuria. Ultrasonography and computerized tomography showed an irregular thickening of the bladder wall. Cystoscopy showed a marked inflammatory of the bladder mucosa with plaques corresponding to multiple encrusted calcifications. Even if the first urine culture revealed a sterile leucocyturia, the second urine culture was performed in enriched media proved positive. Medical treatment by Vancomycin and oral acidification of the urine allowed the regression of the disease. Corynebacterium urealyticum, has been a commensal microorganism of the skin. Its development involved many factors including a preexisting urological procedure, a prolonged antibiotic therapy, a preexisting lesion of the mucosa and immunosuppression. It produced an urease which modified the urine and it became alkaline and saturated with struvite and calcium phosphate. Thus, struvite and calcium phosphate can precipitate. Symptoms of the disease consisted of dysuria, massive hematuria, pollakiuria. The patient can expel abundant mucopurulent debris. Demonstration of the bacteria required prolonged cultures in enriched media. Computerized tomography showed calcification associated with an edema of the bladder wall. Treatment consisted of acidification of the urine and antibiotics, mainly glycopeptides, with positive results. Sometimes the deterioration of the bladder wall can reduce the bladder volume. Massive hematuria is a frequent urinary symptom in elderly patient, which may suggest at first a bladder neoplasm. This report show that this particular infectious disease can produce the same symptoms with a best prognosis.

**PB7 351 EFFECTIVENESS OF A URINARY CONTINENCE PHYSIOTHERAPY PROGRAM FOR CHINESE ELDERLY WOMEN IN COMMUNITY**

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**Introduction:** Urinary incontinence (UI) is prevalent among elderly women globally. In Hong Kong, the reported prevalence rate of UI ranges from 13% to 40.8%. Few studies investigated the effect of a structural combination exercise therapy for Chinese elderly women with stress (SUI), urge (UUI) or mixed urinary incontinence (MUI). A standardized Urinary Continence Physiotherapy Program (UCPP) was formulated and evaluated using a randomised control trial design. **Methods and Materials:** Fifty-five elderly women with UI of mild to moderate severity were recruited from various community settings in Hong Kong, aged over 65 years. The subjects in the treatment group

received 8 sessions of UCPP in 12 weeks, whereas an educational pamphlet on management of UI was given to the subjects in the control group. **Results:** There was significant improvement in the treatment group after the intervention. A significant reduction of the UI episodes per 7 days (UI7) was observed in the treatment group compared with the control group (Control = 7.43 ± 6.19, treatment = 1.00 ± 1.88, p < 0.001), with no significant difference among the three types of incontinence [F(2,25) = 0.92, p = 0.51]. A significant improvement in quality of life in the treatment group was demonstrated through the scores of the Incontinence Impact Questionnaire (Control = 5.00 ± 2.74, treatment = 1.07 ± 1.24, p < 0.001). The subjective perception of improvement in the treatment group was markedly better than those in the control group (Control = 1.42 ± 0.65, treatment = 8.70 ± 0.92, p < 0.001). The mean treatment satisfaction in the treatment group was 9.52 ± 0.74 as measured in a 10-point Visual Analogue Scale. **Conclusion:** This study demonstrated that a standardised UCPP was effective in the management of various types of UI for Chinese elderly women.

**PB7 352 EXPLORING ANDROPAUSE IN MEN AS A MEANS OF REDUCING SEXUAL DYSFUNCTION IN AGEING MALES IN EDO STATE, NIGERIA**

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**BACKGROUND** Andropause heralds a period of transition in the reproductive life of men and is commonly associated with features that may compromise the health of men. It has implications for the reproductive health and quality of life of older males. **OBJECTIVE** To explore andropause in men as a means of reducing sexual dysfunction in ageing males in Edo State, Nigeria. **METHODS** This was a descriptive cross-sectional study carried out among 350 older males in Benin City, Nigeria. Sexual function Questionnaire (SFQ) and international index of erectile function (IEF) questionnaire were administered. **RESULTS** Many of the respondents (94%) had no knowledge of andropause; however most of them feel their sexual dysfunctions is as a result of witchcraft attack. The most prevalent symptoms were loss of libido (64.8%) poor memory (42.7%), erectile dysfunction (37.5%). Most of the men (78.2%) said they had to marry another younger wife, but 32.5% sought treatment to relief symptoms from traditional medicine man. **CONCLUSION**. Our findings indicate very poor knowledge about andropause in older males in Edo State, Nigeria compared with other developing countries. There is therefore the need for massive health education about andropause in Edo State, Nigeria and other related male reproductive health. **Keywords:** Andropause, sexual dysfunction, witchcraft, divorce.

**PB7 353 STUDY OF GAIT DISORDERS IN COMMUNITY-RESIDING OLDER MEN: RESULTS FROM THE CHAMP STUDY**

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**Introduction:** Abnormal gaits have been found to be predictive of subsequent adverse clinical events. We aimed to study the prevalence and impact of gait disorders in a representative group of older men. **Method and Materials:** CHAMP study recruited 1705 community-residing men aged 70 and over for the baseline assessment. Gait diagnosis, Tinetti gait subscale and other clinical gait parameters were obtained in 1387 subjects (81%). **Results:** Of 1387 subjects, 1087 (78.4%) had abnormal gaits. Gait abnormalities were classified into pure neurological (73.0%), pure non-neurological (6.8%) and mixed gait (20.2%). Prevalence of abnormal gait increased with age. Abnormal gait was associated with increased risk of falls, functional limitation (any limitation in performing physical measures) and physical disability (any limitations in performing activities of daily living). All categories of abnormal gait were associated with increased risk of falls compared to normal gait. Non-neurological gait had the strongest relationship with functional limitation (OR 8.59; 95%CI 4.19-17.58, p <0.0001). Mixed gait had the strongest relationship with physical disability (OR 4.58; 95%CI 2.70-7.77, p<0.0001). Among neurological gaits, gait slowing had the strongest relationships with functional limitation (OR 4.34; 95% CI 2.74-6.86, p < 0.0001) and physical disability (OR 5.02; 95%CI 3.29 – 7.66, p < 0.0001) **Conclusion:** Prevalence of abnormal gaits is high in community-residing older men. Neurological gait was the most common type of abnormal gait. However, mixed gait and non-neurological appeared to have more impact on function. Gait slowing was also associated with poorer functional performances. Appropriate medical management and rehabilitation programs should be considered for these gait disorders in order to improve function and independence among older men.

**PB7 354 SEX DRIVE, SEXUAL FUNCTIONING AND SEXUAL STRATEGIES THROUGHOUT LIFE AND INTO VERY OLD AGE**

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**Introduction:** Nowadays, people have longer and healthier lives and sexuality plays a more vital role in old age than in the past. The recent more realistic and open perspectives on sexuality in later life value the important role of sexuality across the entire lifespan. Unfortunately, limited information and few high quality studies are available regarding sexuality among older adults. **Methods and materials:** This study consisted of two

independent cross sectional surveys. The first survey on sex drive and sexual functioning included 798 men and women in the age range of 16 to 81 years. The second focused on short- and long term sexual strategies and consisted of 489 men and women aged between 19 and 95 years. Results Into old age, participants reported sexual activities and preferences for short- and long term sexual strategies. Hierarchical regression analyses revealed that age and gender were significantly associated with sex drive, sexual functioning and strategies. The older a person, the lower the sex drive, the frequency of orgasms and masturbation, and the preference for sexual strategies. Compared to women, men reported a higher sex drive, more sexual activities and a more pronounced preference for sexual strategies. Educational level was not related to the dependent variables. Conclusion Because of the differences in sex drive and sexual functioning between men and women it is important to account for these differences in gerontological research and in sexological counseling and treatment. As predicted by evolutionary theory, sexuality decreases in old age. However, this decrease is not as strong as would be expected. Thus, despite the decrease in sex drive in late life, older people do report a substantial initial drive for sex and sexual activities.

**PB7 355 EVALUATING NOCTURNAL MOTOR ACTIVITY OF DEMENTED INPATIENTS BY A SHORT SEMI-QUANTITATIVE SCALE**

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**INTRODUCTION** Evaluating nocturnal activity is crucial during follow up of behavioural problems in severe dementia patients. Even in specialized units, their follow up is tiring, time consuming and nocturnal activity is usually based on subjective scales that depend on the staff appreciation. Our goal was to evaluate a semi quantitative scale for inpatients with high nocturnal activity. **METHODS AND MATERIAL** We used two patient bedrooms equipped with the GARDIEN® system that uses passive infrared sensors to monitor activity. We analyzed the nocturnal activity between midnight and 6 o'clock from patients hospitalized for 7 days. The patient or their legal person gave an informed consent. The night staff used the assessment scale. This scale has 4 scores : 0 = no observation of any mobility or getting up from bed. 1 = getting up from bed once or two times. 2 = getting up from bed > 2 times and less than 5 and 3 = getting up from the bed more than 5 times. The scale was then full filled by experts using the reports from the GARDIEN ® System as a Gold standard. **RESULTS** We registered a total of 352 nights gathered from 27 patients, 11 men and 16 women. Mean age was 82 years. All patients were hospitalized for medical reasons; including 19 with dementia of different types. The mean MMSE for these patients was 13 / 30. For the group with dementia (295 nights observed) the kappa was 0.45 (95%CI 0.38-0.52) and 0.27 (95%CI 0.08-0.46) for the cognitively normal group (57 nights). This difference between the populations is related to under evaluation by staff for low activity, especially in normal patients. **CONCLUSION** This scale can be useful to quantify nocturnal activity in elderly with severe dementia and can contribute to the follow up.

**PB7 356 ASSESSING COMPUTER SYSTEMS FOR THE REAL TIME MONITORING OF ELDERLY PEOPLE LIVING AT HOME**

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The elderly population is expected to grow dramatically over the next 20 years. The number of people requiring care will grow accordingly, while the number of people able to provide this care will decrease. Without receiving sufficient care, elderly are at risk of losing their independence. Thus a system permitting elderly to live safely at home is more than needed. In this context, we propose an automatic monitoring system which consists in analysing human behaviours and looking for changes in their activities. The system includes detecting people, tracking people as they move, recognizing events of interest and identifying a profile of a person - its usual and average behaviour - based on multi-sensor analysis, and human activity recognition. The proposed monitoring system is real time and takes, three types of input: video stream(s) acquired by video camera(s), data resulting from environmental sensors (e.g. contact sensors, pressure sensors, water consumption sensors) embedded in the home infrastructure, and a priori knowledge concerning event models and the 3D geometric and semantic information of the static environment. The output of the system is the set of recognized events at each instant. The laboratory GERHOME equipped with many sensors and composed of four rooms has been build to design the monitoring system and to explore the ADLs (Activities of Daily Living) that can be recognized by a computer system. While evolving in the laboratory, fourteen volunteers (aged from 60 to 85 years) have been observed during 4 hours to measure the quality of the detected events recognized by the monitoring system. This paper describes the experimentation and tries to highlight what are the capabilities of a computer system to

assess automatically the frailty of elderly people in order for them to have a better and more secure life at home.

**PB7 357 CELLULAR, METABOLIC, NANOMOLECULAR AND SOCIAL COMPONENTS OF HUMAN LIFE EXPECTANCY**

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**Introduction.** For the Sverdlovsk region of Russia low life expectancy of the population is characteristic, but discover to 14 % of long living individuals. We have conducted the research for disclosing of the possible reasons of it. Excitation of human body cells by oxygen, pro- and antioxidants can influence on ageing processes. The influence of a cellular lipid metabolism on ageing processes, life expectancy and the biological age are not clear. **Methods and materials.** The research lipid peroxidation in plasma and blood cells was carried out during 10 years (Chem Well Combi, the USA; Lucy 3 Anthos Labtec Instruments, Austria; Spineact, Spain). 1800 patients with a polyopathy of mature, elderly and senile age received hypoxitherapy, hyperbaric oxygenation, ozonotherapy, dry carbonic baths, L-arginin ("Vazoton", The Russian Federation, Altajvitaminy). These patients were measured the biological age and was registered the death rate indicator. **Results.** Hypoxitherapy and hyperbaric oxygenation activated lipid peroxidation in erythrocytes and plasma of human blood elderly and senile age persons, reduced a life of erythrocytes, increased a biological age and did not influence duration of a calendar life. Nanoparticles of ferric oxide did not render influences on this process. After carrying out of dry carbonic baths courses in all age groups and hypoxitherapy in group of mature age patients lipid peroxidation and the biological age decreased, and antioxidant activity and life time of erythrocytes increased. Ozonotherapy in all human groups normalized the studied indicators. We have created the mathematical model connecting lipid peroxidation in erythrocytes and blood plasma, the biological age, real life expectancy of blood cells and of a human organism. **Conclusions.** The correction lipid peroxidation in erythrocytes, blood plasma and a human organism by means of gas therapy is effective like a geroprophylactic remedy depending on age of patients.

**PB7 358 UNATTENDED AUTONOMOUS SURVEILLANCE IN COMMUNITY-DWELLING OLDER ADULTS**

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H. KORT

The Unattended Autonomous Surveillance (UAS) system, an integrated system that combines many technological functionalities, was placed among 18 older adults, who are entitled to receiving nursing home care at home, as a means to support ageing-in-place by providing a sense of safety and security. This paper presents the results of a second round of interviews (1 year follow-up) among 10 remaining participants in the cohort, with both somatic and psychogeriatric health problems. The paper particularly focuses on the changing user attitudes towards implemented technology, the integration and perception of technology in the home environment, and the efficacy of the system within the care processes. In order to investigate whether the expectations and needs at baseline were met by the UAS system, qualitative research was carried out at the homes of the participants using semi-structured interviews based on the WHO's ICF. The interviews were tape-recorded and transcribed verbatim. A phenomenological approach was used for analysis using the MAXQDA 2 program. First, each transcript was read in its entirety. Then, they were read a second time to develop codes that were grouped into themes consistent with the interviews, which emerged from the narratives and the interview guides. Third, quotes that summarised the essence of each person's subjective experience were recorded. Results showed a mix of positive and critical attitudes of the older adults, and of their informal carers in particular, towards the system, which is to take away a part of the burden of care. Some of these attitudes have changed over the year. Apart from the UAS-system, additional home modifications may be needed to support ageing-in-place. Results of the study are used to further improve the system and its implementation.

**PB7 359 VIDEOCONFERENCE BETWEEN ESTABLISHMENTS - EXPERIENCES OF HOSPITALS AT EMBRUN AND AIGUILLES IN THE HAUTES ALPES - FRANCE**

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Situated in the Hautes Alpes is a population base comprised of four districts: the Queyras Valley, the Guillestrois region, and the towns of Embrun and Savines le Lac. These districts have a significant geriatric contingent; of the 19,000 residents, 20% are older than 65 in age, and 10% exceed the age of 75. This is a vast mountainous area, with the effect of isolating communities and resources. This population base is served by four medical establishments with a combined total of 450 beds. In order to be able to provide a rapid response adapted to the needs, we have opted for a gerontologic telemedicine network, joining the hospitals at Embrun and Aiguilles. The equipment employed consists of a

portable miniaturized videophone system which is stationed at the patient's bedside. The local hospital at Aiguilles (caller) is equipped with a patient station which includes a large screen and a video camera on a mobile cart. The central hospital in Embrun (respondent) is equipped with a fixed-in-place system comprised of two screens, a camera, and a PC which permits access to computerized medical records. In our experience over the last two years, this system addresses the challenges of isolation and lack of direct access to care by geriatric patients. Consequently, medical professionals are able to communicate easily without need for significant travel. The use of this tool by these teams has been well received, and improves patient comfort by obviating transport to other establishments. Also improved are working conditions, diagnostics, and decision making. Furthermore, the tool has provided a structural improvement of the medical activities.

**PB7 360 IMPROVING HEALTH AND SAFETY FOR ELDERLY PEOPLE THROUGH AN ETHIC-OF-APPRECIATION.**

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Introduction: This paper uses data from MyHealth&Age (2008-2010), an EU, Northern Periphery funded project. Its aim is to offer the rapidly ageing population in the northern periphery regions of Europe, improved health, safety and well-being through the use of new services and new mobile ICT products. The project methodology is informed by the values and processes of participatory design, Form-IT and appreciative action research. The project's aim and its approach raise a fundamental ethical question namely, "In what ways do ICT solutions for improving the quality of life for older people (over 65 years), have an ethical dimension?" Methods: Our developing ethical awareness uses data from focus group meetings and storyboarding activities conducted with a group of 20 elderly persons, with/without functional limitations, in Norrbotten, Sweden. Using conversational analysis, thematic elucidation, semiotic and iconographic analysis, we present our efforts to do the 'right thing' and the 'best thing' to enhance the well-being of elderly people. Results: This paper illustrates ethical conflicts and dilemmas associated with trying to balance user needs (e.g. elderly people, healthcare professionals) with technological (product) design requirements and commercial or market opportunities. Four ethical themes have emerged which, collectively, form an ethic-of-appreciation. They are the need to clearly demonstrate an; Ethic of respect : Where the lived experiences of older people are actively listened to. Ethic of empowerment : Where older people feel they have a voice in decisions about their well-being. Ethic of critique : Where power differentials that often constrain and marginalise older adults, are confronted. Ethic of concern : Where ICT solutions enable older people to feel dignified and treated with kindness. Conclusion: ICT and ethics need to be creatively synthesised into an ethic-of-appreciation. This is imperative for projects based upon participatory design principles.

**PB7 361 A PRELIMINARY STUDY ON VIDEO GAME PLAYING AMONG THE KOREAN ELDERLY IN KOREA**

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Previous research has supported that playing video games has positive effects on the various functions (i.e. improving cognitive skills) of the elderly. Despite these results, few research efforts have been made on the use of video games among the elderly. Therefore, this preliminary research has investigated the appeal and interest of video games among elderly population in Korea. Data were collected from a survey of approximately 67 community-dwelling cognitively competent Koreans between ages of 55 and 89 years of age. Participants were asked to play an assortment of video games (baseball game, rhythm and beat game, drumming game) and complete a questionnaire pre- and post- game play. Results showed the participants showed a considerable degree of interest in video game; 26.9% of participants who have not experienced playing video games in the past expressed their interest in playing video games again. 46.3% of participants stated that they were satisfied with the video games played. In particular, those who evaluated the speed of the game slow and comfortable were more satisfied with the games. Based on these findings, the following conclusions were posited. There exists a potential market within this demographic group for the use of video games for fun as well as for improving various skills. Game developers should take into account a preference for slow speed of the screen, user friendly tools, and familiar content. In order to better serve the need of this population, a greater degree of instruction must also be accompanied. The knowledge obtained from this preliminary analysis will provide a point toward more specific investigations of the elderly population's use of video games and their effects on various functions of the elderly.

**PB7 362 SOCIO-CULTURAL FACTORS AND I-ADL DEPENDENCE AMONG VERY OLD EUROPEAN WOMEN**

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Introduction: Assessments of activity of daily living (ADL) can be defined in terms of dependence upon another person. Thus dependence could be a result of functional capacity, and also of the economy and social welfare. The present objective is to explore sociocultural impact on ADL-assessments. Methods and materials: The ADL Staircase assessments, with dependence/independence defined in terms of receiving personal assistance was collected in 1,448 very old single living women in Sweden, Germany, the United Kingdom, Hungary, and Latvia. Differences among the five national samples were studied with regard to health and socio-cultural factors and their possible influence upon dependence in four instrumental ADL; hereby univariate analyses as well as regression analyses were used. Results: There were highly significant differences between the samples with regard to health and economic factors, with regard to provided medical and domestic services and with regard to use of mobility devices. Health and income were generally higher in Sweden, Germany and the UK. Nonprofessional support was common although less in Sweden and Germany, where rather professional services as home health care, domestic service and special transport service (STS) were common. Canes were common in the five samples, while rollators were mostly seen in Sweden. Most participants were dependent in cleaning, especially so in the wealthier German sample. Dependence in shopping and transportation was high, the latter especially in Sweden where STS is often provided; the variations between the five national samples were highly significant. Particularly in Sweden and Latvia, the ADL dependent received significantly less non-professional support. Mobility devices were generally related to dependence of all types. Conclusion: Besides assessing functional capacity, the ADL assessment can be influenced of availability of support and ability to pay for services. This knowledge is important for valid interpretations, particularly in cross-national studies.

**PB7 363 DEVELOPING A NEW SMART DISTRESS MONITOR WITH OLDER AND DISABLED PEOPLE: WORKING WITHIN USER CENTRED, PARTICIPATORY FRAMEWORKS TOWARDS ASSISTIVE TECHNOLOGY SOLUTIONS.**

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Current literature on new assistive technology tends to assume that technology can improve the quality of life and independence of older and disabled people. However, there is little substantive, systematic evidence for this. To ensure that technological development is relevant to the lives of older and disabled people, the user centred research presented in this poster brings together technologists, social scientists and older/disabled people to develop a Smart Distress Monitor based on evolving sensor equipment. The purpose of the project is to develop, implement and evaluate an intelligent and reliable front end inactivity/fall sensor to detect vulnerable people when in need of assistance. The project has the following objectives: to identify the technological, psychological and social needs of older and disabled people; to explore the ways in which an activity monitoring system impacts on the everyday lives of older/disabled people in different settings; to ensure that older and disabled users are central to the development of the monitoring system and the research. A multi-methods approach includes: in-depth interviews, focus groups with older/disabled people and health/social care professionals, laboratory-based simulations, field trials in private home, residential home and hospital settings, and stakeholder workshops. Preliminary findings from the project highlight: concerns of the impact of technology on the relationship between the 'carer' and 'cared for'; the concern that the equipment installed could be intrusive and detrimental to privacy; the necessity to assess separately the various environments where the equipment is installed; and the need to understand people's experiential understandings of the home as a restorative environment which embraces social, emotional and symbolic components. Only when these latter components are incorporated into system design and implementation, assistive technology can become an important instrument to improve people's well-being and quality of life.

**PB7 364 CAN POSTUROGRAPHY PREDICT THE RECURRENCE OF FALLS?**

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As one of a number of multifactorial mechanisms, weakened posture control heightens the risk of falls. In a population having fallen, does posturographic assessment in the framework of an original form of home-based prevention of falls in the elderly (PADCHUTE®) effectively facilitate prediction of possible recurrence? Materials and method A cross-sectional prospective study of a population of elderly persons having fallen and who follow an activity program (PADCHUTE®) designed to counteract the tendency to fall. Clinical tests and posturographic assessments are performed on D0 and D+1 year. Taking into account the results after one year determining constitution of the two groups (n=16 « no longer falls » and n=4 « still falls »), statistical analysis (ANOVA and Post Hoc Tukey) allows for differentiation at D0 of the discriminative parameters of the future repeat fallers. Results As regards clinical tests, only the « Stop walking when talking test » and « finger-ground distance » effectively differentiate the two groups. "Eyes open" posturographic parameters (oscillation area, amplitude of the antero-posterior oscillations and mean pressure center displacement speed) characterize the « still falling » groups. In the "eyes closed"

condition, the two groups are significantly different as regards most of the posturographic parameters. Discussion Home-based posturography efficaciously rounds out the existing clinical approach. It objectifies the globally increased pressure center oscillations associated with the heightening of speed and amplitude, especially from a medio-lateral standpoint. While clinical tests alone cannot predict the future evolution of the elderly person having fallen, posturographic assessment appears to contain specific and sensitive predictive parameters for posture deterioration, especially in the « eyes closed » condition. Conclusion To a greater extent than classical clinical examinations, posturographic assessment appears to foster the emergence of relevant infra-clinical elements that are directly connected with the risk of recurrence in the elderly person having fallen.

**PB7 365 INFLUENCE OF THE AQUATIC EXERCISE CONCERNING THE INDEX OF RESISTIVITY CAROTID AND THE QUALITY OF LIFE IN ELDERLY WOMEN.**  
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**Introduction:** Improvements in life expectancy have prompted developments in science, attempting to appraise functional and structural deficits into the issue of human aging. At this stage in life, large arteries are affected, being responsible for cardiovascular diseases. The practice of physical exercise is a protecting factor against arteriocalanarian diseases. The purpose of this study was to assess the influence of physical exercise on the resistivity index of carotid, the quality of life, and the functional autonomy in elderly women. **Methods and Materials:** The sample was composed of 30 women aged (67,79±4,48), body weight (55,66±8,33), blood pressure systolic (129,3 ± 11,83) and diastolic (87,5 ± 3,2). The index of resistivity carotid internal artery (RCIA) has been analysed by ultrasound with Doppler, the quality of life (QL) by the Questionnaire WHOQOL-100 and the functional autonomy (FA) by the results of five tests of the GDLAM protocol. The sample was divided into group control (GC) and intervention group, (GH) being submitted within twelve weeks of exercise in water of medium intensity, controlled by perception of the effort of Borg. For intergroups comparison, the Student's t-test not paired was used to verify the differences between the groups ANOVA and for the correlation the Pearson test. **Results:** The RCIA In pre-test and post-test was maintained  $p = 0,537$ . The QL in pre-test and post-tests respectively was: GH = 14,9 and 13,9 and GC = 12,8 and 12,9 and  $p = 0,183$ . The data showed positive correlation between RCIA and FA  $p = 0,0039$  in pre-test; between one of FA in post-test and the domains psychological  $p = 0,044$  and personal belief  $p = 0,032$  in WHOQOL-100. **Conclusion:** The practice of 12 weeks of hydrogymnastics was not sufficient to alter the RCIA. All in all, the modifications in physical domain and personal beliefs in pre and post-tests were significant, suggesting gains in controlling risk factors that provoke carotid resistance and functional dependence. **Keywords:** Carotid artery, Elderly, Autonomy, Hydrogymnastic.

**PB7 366 USING A WEARABLE ASSISTIVE TECHNOLOGY SYSTEM—OPPORTUNITIES AND THREATS**  
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**Introduction** Population ageing poses one of the greatest social, economic and health challenges for Europe in the 21st century. Increased life expectancy does not necessarily translate into healthier lives; with age the prevalence of chronic illness increases, often compromising older peoples' independence and well-being. The introduction of assistive technology (AT) may support older people to live independently in their own homes. This paper explores the perceptions and needs of older people and their carers with regard to a wrist worn AT device. **Methods** A mixed method approach (focus groups/ survey) was chosen to explore the responses of older people and their carers with regard to using a wrist worn AT device. Focus group interviews were tape recorded and transcribed verbatim. Data were analysed using thematic analysis to explore themes of importance to participants and identify similarities and differences across data. Survey data were analysed using descriptive statistics. Results Nine focus groups with 47 participants (aged 58 to 91 years) were conducted from a diverse range of socio-economic and health backgrounds. Two main themes were identified: threats and opportunities such a device would offer. Two issues characterised the perceived threats: design and operational complexity and confidentiality/privacy concerns. Opportunities related to increased independence, reassurance and well-being. Older people described both threats and opportunities inherent in the device whilst carers placed greater emphasis on opportunities than threats. These findings were supported by questionnaire data from 121 respondents. **Conclusion** Assistive technology can have clear benefits for older people and their carers in terms of well-being and independence. However, such technology also raises concerns amongst older people, which need to be considered in order to ensure that the objectives of AT, increasing the well-being and independence of older people and their carers, can be achieved.

**PB7 367 USE OF TELEMEDICINE TO STRENGTHEN A PROGRAM OF BEST PRACTICES IN NURSING HOMES**  
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The quality of the care implies a continuous improvement of practices within geriatrics institutions, particularly in establishments hosting dependent old persons (named EHPAD in France). MobiQual ([www.mobiQual.fr](http://www.mobiQual.fr)) is a French national program of Quality in Nursing homes promoted by the French Ministry of Health and the Société Française de Gérontologie et Gérontologie. It promotes the Best practices in the palliative care, the pain's care, the depression's care and emphasizes the principles of "bientraitance", French neologism meaning "benevolence in taking care". The aim of the study is to promote Best practices ([www.HAS.fr](http://www.HAS.fr)) through video-meetings (video-consultation's recommendation of SFTAG 2009) of gerontology professional's multidisciplinary teams. Institutions are not able to facilitate the exchanges of practices between each others due to limited workforces. The video conference within the framework of a program of Telemedicine allows working on-line, deleting travelling and saving strongly the time necessary for meetings between several institutions. The study designs a regular link (a meeting each month) between a University Hospital geriatric team and a Nursing home's multidisciplinary team by video conferencing meeting, managed with supervision by a clinical psychologist. An evaluation of this program will be presented during the Paris 2009 IAGG World Congress. **Keywords:** Telemedicine, MobiQual (professional practices), Best practices, EHPAD (establishment hosting dependent old persons), Geriatric multidisciplinary team, University Hospital.

**PB7 368 THE REALAGE® ALGORITHM: A NEW MATHEMATICAL APPROACH TO BIOLOGICAL AGE ASSESSMENT BASED ON ROUTINE LABORATORY TESTS**  
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**Introduction** The availability of large cohort data regarding physiological functions measured with specific tests or general laboratory biomarkers has allowed the proposal of algorithms for biological age assessment based on regression models. Most of available literature, however, is based on limited sized cohorts of subjects, lacks real world derivation and rigorous external validation. **Methods** The statistical basis of our algorithm is represented by REALAB data base, a project aimed to redefine reference intervals for routine clinical laboratory quantities using a very large set of current data instead of small focused trials, gaining in statistical precision and describing the real quantity distributions in the population of interest. The data have been collected during 3 years of daily activity of CDI, one of the largest Italian laboratory located in Milano and concern over 15.000.000 electronic records in 197 350 individuals. On the working hypothesis that biological age is equal to real age for healthy subjects, we modeled the relationship between biological age and laboratory quantities for these subjects, extrapolating the predictive models to non-healthy subjects with a proper best-choice algorithm. **Results** In absence of gold standard for biological age, the validation of the algorithm has been based on the distribution of predicted age in healthy and not-healthy subgroups separately. The obtained results are consistent with the working hypotheses and show a close correlation between health status and predicted biological age. **Conclusions** REALAGE appears to be an interesting tool for the study of healthy aging in public health context.

**PB7 369 THE EUROPEAN PROJECT SMILING: SELF MOBILITY IMPROVEMENT IN THE ELDERLY BY COUNTERACTING FALLS**  
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**Introduction.** The European project SMILING (FP7, ICT, GA 215493, EC contribution € 2.250.000) has begun its activity on 1st January 2008. Eleven research centers, universities and companies of 5 European countries (IT, CH, UK, NL, SK, IL) are involved in it. The main objective of the project is to improve the elderly mobility and counteract falls with a new rehabilitation process, inducing variable environments that need active response and problem solving. The SMILING intent is to solve the motor problems of older people in real time, with the use of a new and innovative device. **Methods and Materials.** The SMILING system, a wearable computer-controlled device, is aimed to implement a systemic solution for facilitating or ameliorating walking schemas. Prototypes of the system will be built and tested on the end-users in four validation sites (IT, IL, CH, SK), using a protocol of training and questionnaires to evaluate psychosocial aspects, acceptance and safety of the new technology. For the validation phase, a randomized controlled cross-over trial will be conducted on 96 subjects. **Results.** A preliminary study on the end-users and professionals needs has shown that the maintenance of independence is the most expected outcome (97%), considering that 50% of interviewed subjects experience fear of falling sometimes or always (25%). For the professionals, SMILING fall-related program could be very useful (mean ± SD; 7.2 ± 2.1; range 1-10). The main results are expected from the future validation of the system. **Conclusion.** Elderly at risk of falling can be considered to be suffering from an involuntary motor behaviour that restricts their participation in society. The SMILING system, according to elderly needs, could increase the quality of life with improving their mobility. The elderly technology

acceptance represents an open issue to detect for the future development of gerontechnology solutions.

**PB7 370 QUALITY OF LIFE (QOL) OF ELDERLY SURVIVORS 12 MONTHS AFTER DISCHARGE FROM A MEDICAL ICU.**

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INTRODUCTION: QOL of medical ICU survivors  $\geq$  65 years 12 months after discharge is not well known. METHODS: ICU elderly patients who were alive 12 months after discharge from hospital were evaluated. Main diagnosis at ICU admission (APACHE III) and a comprehensive geriatric assessment were performed. EuroQOL-5D (EQ-5D) was used to assess QOL and evaluates five domains (mobility, anxiety, self-care, daily activity and pain) and global health status by means of a visual analogical scale (EQ-VAS). Main geriatric syndromes before and after ICU stay were also collected. RESULTS: From 193 patients aged 65 or more admitted to our medical ICU, 75 (age  $72.9 \pm 5.4$  years) were alive 12 months after discharge from hospital (survival rate: 38.9%). Main diagnosis at admission were: acute exacerbation of COPD, heart failure, sepsis and lung infections. EQ-VAS was decreased at discharge and 3 months later ( $p<0.01$  both), however, it was similar 12 months after discharge compared to baseline ( $69.6 \pm 17.0$  vs  $73.0 \pm 16.3$  points;  $P=0.3$ ). A higher percentage of patients referred difficulties in EQ-5D domains at 12-month evaluation compared to baseline: pain (58% vs 40%), anxiety (50 vs 34%), daily activity (50 vs 31%), mobility (33 vs 11%) and self-care (27 vs 13%). Most of these difficulties were classified as mild. The prevalence of  $\geq$  2 geriatric syndromes was 19% at baseline and was significantly higher (37%) at 12 months after discharge ( $P < 0.01$ ) those more were polypharmacy (72%), depression (21%) and urinary incontinence (21%). Most of the survivors (81%) would accept a readmission to the ICU. CONCLUSIONS: Elderly patients alive 12 months after discharge have a relatively good perceived quality of quality of life similar to baseline, although, there is a significant decrease in some domains.

**PB7 371 HYPOTHALAMIC-PITUITARY-ADRENAL AXIS REACTIVITY AND DEHYDROEPIANDROSTERONE SULFATE PLASMATIC CONCENTRATIONS IN CRITICALLY ILL ELDERLY**

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Introduction : The aim of this study was to investigate the activity of Hypothalamic-pituitary-adrenal axis and basal dehydroepiandrosterone sulfate in the elderly in comparison with non-elderly critically ill patients. Methods and materials : This is a prospective observational study in two multidisciplinary Intensive Care Unit (ICU) of a university-affiliated teaching hospital. Two groups of 18 severely acutely ill patients were admitted in ICU: elderly 75 years or older and non-elderly aged 65 years or younger. Patients with a hypothalamo-pituitary-adrenal (HPA) axis disease, previously treated with corticoids, etomidate, fluconazole or ketoconazole, were excluded. Basal ACTH, cortisol, DHEAs, stimulated cortisol 30 and 60 minutes after intravenous injection of 250 $\mu$ g of ACTH. Relative adrenocortical insufficiency was defined as a basal cortisol level  $>10\mu$ g/dl and a maximal rise in cortisol after stimulation (delta max) less than 9 $\mu$ g/dl. Results : Both groups were similar for the following parameters: sex ratio, SAPS II, diagnosis of acute illness, and the need of mechanical ventilation, hemodialysis or vasoconstrictive agents. Basal cortisol and ACTH measurements were similar between the two groups. Although mean delta max was lower in the elderly, the difference did not reach statistical significance. Relative adrenocortical insufficiency was diagnosed in four patients of each group, with an incidence of 22.2% in both groups. Basal DHEAs levels were however significantly decreased in the elderly patients. Conclusion : According to the definition criteria, incidence of adrenocortical insufficiency in ICU patients is not age-dependent. The significant decrease of DHEAs and the lower cortisol increment in elderly suggest however that ageing slightly alter the reactivity of HPA axis reactivity. In critically ill elderly, the diagnosis of relative adrenocortical insufficiency should be redefined in order to better identify patients who may benefit from stress doses of hydrocortisone.

**PB7 372 CHARACTERISTICS OF HOME CARE CLIENTS IN POLAND AND THE PROFILE OF DELIVERED NURSING SERVICES**

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Introduction A new form of services provided by nurses – long-term home care has been recently introduced in Poland. The purpose of the study was to provide descriptive data about the characteristics of today's home care clients in Poland and to describe the profile of delivered nursing services. Methods and Materials This study examined 577 home

health clients served by one of agencies in Podlaskie region in Poland in years 2004-2008. Demographic, health history, and clinical data were analyzed. The Barthel Index consisting of 10 items was used to measure a person's daily functioning specifically the activities of daily living and mobility. The scores for each of the items were summed to create a total score with potential maximum of 100. In addition nursing services provided to individual clients were recorded. Results The median age of home health clients was 76.8 years. Majority (n=376; 66.2%) were females and were older than 80 years (299; 51.8%). For 259 (44.9%) clients the total Barthel score was 0 indicating very high level of dependency. The nursing services delivered most frequently were: pressure ulcers management (69.3%) and urethral catheterization (56.5%). As many as 135 (23%) patients died during observed time of up to 180 days. Conclusions Majority of home care clients in Poland tend to be very old, sick and with very high level of dependency. This requires from nurses both provision of nursing services as well as good technical skills to operate medical equipment in home environment. The important task of home care nurses is also to support a patient's family, especially while caring of terminally ill. Our data suggest that education of home care nurses should take place in the context of comprehensive geriatric care.

**PB7 373 CARE HOME RESIDENTS' ENJOYMENT OF STRUCTURED ACTIVITY CLASSES: AN OBSERVATIONAL STUDY.**

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Introduction The provision of recreational and therapeutic activities for care home residents has been the subject of much discussion. One company, Motivation & Co, offers structured recreational classes to care homes on a commercial basis. We conducted a service evaluation of these classes and investigated the short term effects on the participants, and the views of residents and staff about the classes. Method We observed the participants at two care homes on seven occasions for levels of participation, sleep, and the need for physical assistance or verbal encouragement. We noted indicators of wellbeing and ill-being before, during and after activities. We conducted semi structured interviews to assess the views of staff, participants and activities coordinators about the classes. Results 58 residents were observed in total. 50 showed increased levels of wellbeing during the activities, 2 showed a decline in wellbeing, 3 showed no change, 3 were excluded due to not being present for either the before or after section of the class. Overall residents participated in 172/236 activities. Skittles and Music and Beanbag/Hoopla were the activities with the highest participation (participation of 100% and 92.9% respectively). During these two activities most people were awake and during skittles and music the highest levels of wellbeing were recorded. Only 50% participation was recorded during the sayings and proverbs activity. Key benefits noted from the interviews were enjoyment, variety of activities, choice for residents and participation in activities. Conclusions The increased wellbeing indicators during the activities indicate enjoyment of the classes which is backed up by the interview results. Preferences for certain activities were demonstrated. These could possibly be explained by the presence of hearing or visual impairments. Further research is necessary to help direct provision of the best activities for elderly people living in care homes.

**PB7 374 EFFECT OF ANTIBIOTICS ON MORTALITY IN NURSING HOME RESIDENTS WITH PNEUMONIA AND DEMENTIA**

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Previous observational studies on effect of antibiotics on mortality in patients with pneumonia and dementia are inconclusive. Treated and untreated patients were very different, thereby complicating adjustment for confounding patient characteristics when examining associations between antibiotics and outcome. Further, effectiveness may be decreased with more severe dementia or limited fluid intake. Methods We enrolled 110 nursing home residents with a new episode of pneumonia between February 2004 and November 2008 in US Veterans Affairs nursing home. We selected 94 first episodes. Follow-up was up to almost 5 years. Severe dementia was assessed as 6 on the Cognitive Performance Scale (CPS) pre-illness, which implies full eating dependency. Mortality risk was calculated with a validated risk score. Associations of any antibiotic use with 10-day mortality were calculated using logistic regression. Odds ratios (OR) and 95% confidence intervals (CI) were calculated. Results The large majority of residents (97%) were male and 71% were treated with antibiotics. Six-month mortality was 71% for treated, and 88% for untreated residents (n=92; p=0.08), and 10-day mortality was 37% and 74%, respectively (p=0.001). The groups did not differ by mortality risk, severe dementia, fluid

intake, or age. Use of antibiotics was strongly associated with decreased 10-day mortality (OR 0.21, CI, 0.08-0.56). The association remained after adjustment for mortality risk, CPS and age (OR 0.22, CI 0.07-0.70), and differed neither by dementia severity nor by fluid intake. Conclusion In our sample of male nursing home residents with dementia and pneumonia, antibiotics were associated with decreased 10-day mortality. Antibiotics are likely effective in reducing short-term mortality in nursing home residents, including those with severe dementia and limited fluid intake. Nevertheless, long-term mortality was substantial despite antibiotic treatment.

**PB7 375** SPECIFIC TRAINING IN GERONTOLOGY : A CHALLENGE FOR THE XXITH CENTURY

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The ageing of the populations in the next years implicates the necessity of reinforcing the qualification of the paramedical staffs and the development of specific competences to take care of the old persons in institution or at home. The training responds to permanent evolutions in : legal, scientific, professional and societal matters. The training process undertakes changes in the way of thinking and in professional acting. The training will adapt the competences of the staff in there knowledge, as well in there know-how, and there know how to behave. The training answers to the confusion of the nursing in front of patients affected by heavy pathologies, in front of the suffering and of the death. It acts like a prevention of the burnout, reinforces the motivation and the pleasure to work with the old persons and allows valuation of the individual professional project. The training must be a part of the establishment's project (Hospital, EPHAD – Geriatrics Hospital-, Home Care Service). The acceptability for giving financial ressources and suffisant time remains with the Director. Establishing adequate training programs supposes a good capacity of listening, efficiency in the expression of needs and more over it imposes the importance of the manager's supervision for the new trainee. The specific training in gerontology is a necessity in the taking care of the elderly people and his acquaintances (helping). This will be the challenge of the XXIth century in gerontology. Keywords: gerontology - training - competence - care - ethics.

**PB7 376** 26TH ANNUAL DAYS OF THE S F G G 5-6 OCTOBER 2005 VALIDATION A METHOD FOR COMMUNICATING WITH ELDERLY DEMENTIA PATIENTS  
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D. MARIE CHRISTINE(1) - (1) SFGG (Paris, France)

Communication is a vital need for humans. One of the characteristics of Alzheimer type dementia is the forgetting of words, the disruption in the conception of words and the loss of the capacity to speak. A verbal and non-verbal method of communication, "Validation" can be used with persons afflicted with dementia. Naomi Feil's theory of validation is based on principles developed by behavioral, analytical, and humanistic psychologies. "Validation" allows persons afflicted with Alzheimer type dementia to become aware of themselves and to keep their identity. "Validation" gives meaning to the acts of care administered. A description of the Validation methodology This method is situated in an approach of improving the care of elderly dementia patients who have trouble communicating. This approach has the benefit of producing positive effects on the speech of elderly persons, of giving care techniques to caregivers, and of combating the feeling of powerlessness on the part of caregivers.

**PB7 377** CARE PLAN LIFE PLAN  
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G. THIERRY

Elderly people move into institutions not because of their age, but because of health reasons (handicaps linked to progressive or chronic illnesses,) because of security issues (related to behavior and judgment,) and because of a disrupted quality of life which no longer allows them to live on their own or with their family. Their state of physical and mental health necessitates - A care plan, to safeguard, to foresee, to treat, to improve, to support, to serve the needs of the elderly person throughout the rest of their life. - A life plan, so as to improve the quality of life in institutions, to respond to cultural and social needs of the residents, and to improve their quality of life by combating isolation, withdrawal, denarcissism phenomenon, and boredom. But can we talk about a care plan without a life plan? Instituting a care plan without considering a life plan could have serious consequences for the well-being of the residents; the result could actually work against their positive treatment. There must be a correlation between a care plan and a life plan. In reality, both plans are one and the same, an individualized life plan. It replaces the care phase in the resident's life history, and from this point of view give meaning to care—it motivates and energizes health professionals and/or home health aids. The involvement of the multidisciplinary team in the development, implementation, evaluation and readjustment of the individualized life plan is a source of coherence in the care of the

elderly patient and centralizes the team around a common project. Without care, no quality of life Without a life plan, no desire to live

**PB7 378** CONCEPT OF MULTIDISCIPLINARY OR RATHER OF PLURAL PROFESSIONALISM

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Interdisciplinary or multidisciplinary, you should not rather speak of plural professionalism in the professionals' community of care that is the Nurses, Nurse's aide, Assistant Medical Psychological, physiotherapists, psychologists, doctors, social workers. Professional being it is to share values, to know and to recognize the missions, the competences and the role of each. It is indeed a question of caring together and also a question of thinking that the global care is a plural business where every professional approaches the situation of the person been looked after by a different angle. The principles of global care and continuity of care live in all these angles and allow a coherent meshing. The notion of team plural professional is a reality in the sectors of elderly people. We are not still many but really motivated to promote care, life and sense in the shared actions with the well-kept person and his entourage. To stay on the alert about this fundamental cohesion of all the professionals, it is advisable to ask some questions to « make care » or « to take care », about the postulate that the well-kept person is an actor of his care, about the place and the role of every professional actor. The new hospital's organizations with the governance and the departments of care's activities are going to ask us for a particular attentiveness to maintain our requirements and assert our competences. Beside the medical units of care, the sectors of old persons have difficulty in demonstrating a gain. It will be necessary to aim towards control of the expenses in human's resources, in material equipment, in logistics by organizing us better and by being creative and keeping this will to optimize care with plural professional's team. Our strength is our competences, our formations and our

**PB7 379** NURSING COMPETENCIES IN GERIATRICS.

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A. MARIE CLAIRE

The development of nursing competencies in the area of prevention will lower the cost of health care insofar as it will help avoid the sometimes irremediable consequences linked to a lack of intervention. The care pertaining to a "fragile" population, especially an elderly one susceptible to Alzheimer type dementia, underscores the advantage of developing a specific expertise in the care of this population. Care that is limited to actions does not respond to the needs of the elderly person, since care is constituted by a group of "little things." These "little things" are important ones and lie at the heart of quality of life issues. Care approach involves the team in a global supportive environment. It focuses on the person, on the life situation, on specific human reactions and on the medical situation. This approach is operational in diverse settings (at home, EHPAD, SLD, SSR, short stay,) which requires on the part of the nurse a knowledge of how to adapt life plan objectives to the elderly person. This approach occurs at a period in life that requires specific competences relating to physical and psychological help for the elderly person. The approach helps the elderly person adapt to aging, to loss, to end of life handicaps. It is an approach that involves nurses developing an ethical reflection in a multidisciplinary framework. It is clear that the acquisition of levels of competence rests on continuing education: a university degree, a clinical specialty in order to acquire different levels of expertise that allow nurses to exercise managerial tasks, strategize projects, analyze complex care situations. In this perspective, exchanges in nursing training schools foster the development of competencies through focus groups and the sharing of experiences, but also by participation in work groups on the practice recommendations and research that are currently underdeveloped.

**PB7 380** DEVELOPMENT OF AN INCLUSIVE INDEX OF HEALTH ASSESSMENT FOR ELDERLY

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Introduction: Currently most Japanese nurses use health indexes that lack a view of the elderly. We need specific measure of health for the elderly to empower the elderly and nurses because the elderly population is increasing in Japan. Objective: To develop inclusive index of health assessment for professional nurses to use to increase the capacity of the elderly in holistic health. Methods: A hybrid model of the concept development method (Schwartz-Barcott D. & Kim H. S., 1993) was applied. In the theoretical phase, to grasp the essential characteristics of health of the aging, all the available literature on health was widely reviewed. In the fieldwork phase, the assessment items and the method of creating the elderly's health index were investigated by the focus group interview among 6 CNS's in gerontological nursing and the participation observation with 2 doctors of specialty of geriatric medicine in Japan. In final analysis phase, the theoretical phase and the fieldwork phase were integrated. Results: Three domains were found as an inclusive index that illuminated the holistic views of health of the elderly by health professionals.

These are, health as stability, health as actualization, and health as wholeness (holism). Health as stability shows the stability of life base according to environment, the tenability of the baseline to which the individual of a physiological function is stabilized, and the maintenance of daily living. Health as actualization shows the achievement of one's possibility, creating purpose and meaning in one's life, and the maintenance integrity and pride. Health as wholeness shows a sense of wholeness including a sense of coherence, social interactions, belonging in the community, continuity, and enjoying inner peace and well-being. Conclusions: Future plans include creating and piloting a health assessment guideline for the elderly based on these three domains.

**PB7 381 PREVENTION OF THE RISKS RELATED TO A BAD INSTALLATION IN THE ARMCHAIR OF ELDERLY BEDRIDDEN PATIENTS IN LONG TERM CARE UNIT**

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**INTRODUCTION** An inadequate position of elderly bedridden patients in the arm chair is frequently observed and may have important consequences: pains, wounds of pressure, falls, disorders of swallowing...and bad quality of life. **METHODS** Professional practices evaluation gives us a method to improve the way in which the personnel installs the patients in their arm chair. One audit on practical aspects of installation according to 10 definite criteria and an investigation of knowledge of the medical staff concerning the risks and consequences of a bad installation are carried out initially. A plan of improvement is set up: purchase of positioning material (cushions of varied forms), staff training to the prevention of the risks, criteria of good installation, and use of positioning material. Posters showing the criteria for optimal sitting position and pointing the risks are posted up in the wards. A second audit of practices is realised six months later. **RESULTS** The first audit of practices highlighted a low number of patients answering the 10 criteria (11%) and a bad knowledge of the whole of the risks by the staff. The second audit six months later showed a clear improvement of the installation (60% answered the 10 criteria) and the knowledge of the risks among the personnel of the department. **CONCLUSION** An information of medical staff, a renewal or investment in material adapted to the patient conditions, a collaboration between various professionals (medical and physiotherapists, nurses...) show a great effectiveness to improve professional practices in the targeted field and especially the quality of life in institutionalized frail patients and the satisfaction of their entourage.

**PB7 382 IMPACT OF A TRAINING PROGRAM FOR NURSING STAFF ON CHRONIC PAIN IN RESIDENTS WITH DEMENTIA IN LONG TERM CARE INSTITUTIONS**

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**Introduction :** Chronic pain is highly prevalent in older persons, but frequently under-diagnosed and under-treated, particularly in seniors with severe dementia and serious limitations in ability to communicate. **Methods:** This study is part of a larger project about evaluation of a multifaceted pain management program for seniors with dementia living in long-term care institutions. The objective of the present study is to assess the impact of a training program to all staff members in a publicly funded long-term care (LTC) institution in Quebec City, Canada. The 10-hour training program focuses on knowledge, attitudes and beliefs regarding pain and its treatment in the elderly, as well as on the use of a pain observational instrument (PACSLAC) and implementation of individualized care plans for residents showing increased pain scores. Training sessions were given in groups of 6 to 10 participants. Outcome measures include impacts of the program on residents (pain, agitation and sleep) and on staff (knowledge, attitudes and beliefs about pain in older people). Knowledge of staff about pain was assessed using a validated questionnaire including 15 true/false items (score range 0-15). Attitudes and beliefs were assessed using the Family Pain Questionnaire, including 12 items on a Likert scale (score range 8-21). Questionnaires were administered before and after completion of the training program. **Results:** A total of 136 staff members received the training program. Average global scores increased by 30% post intervention for knowledge ( $p<0.0001$ ), and 11% for attitudes/beliefs ( $p<0.0001$ ). Specific areas of improvement will be presented and discussed. Follow-up regarding the impact of the training on residents is still on-going and will be published later. Average scores on knowledge improved from on Conclusion: A standardized training program on pain detection and management in LTC is effective in improving knowledge, attitudes and beliefs about chronic pain in residents with dementia.

**PB7 383 DETERMINING FACTORS OF PHYSICAL RESTRAINT IN ELDERLY POPULATION IN A LONG STAY WARD.**

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Physical restraint is still a common practice in elderly people admitted in long stay wards to prevent falls or manage behaviour troubles, despite its well-known harmful consequences on autonomy and dignity respect. The aim of the study was to evaluate the prevalence of physical restraint, as bed rails and belts, in a long stay ward in the University Hospital and to analyse some determining factors that lead to restrain people. In the same time, the second aim was to educate the nursing team to find alternatives, as recommended by the international guidelines. In case of no alternative to restraint was found, the team was asked to improve its practice as recommended by the French Health Authority (H.A.S.). The method was a clinical practices assessment driven by the care-givers themselves in 5 geriatric units involving 165 elderly individuals over a six-month period, from November 2007 to May 2008. In addition to the prevalence of the restraint practice, the authors also analysed the main pathology of the patients, age, gender, history of previous falls, disability level (scored by the French AGGIR scale), MMSE status, use of psychotropic drugs. Guidelines were reminded during several educational sessions. Results: at the first round of the practice appraisal, prevalence of restraint was bed rails: 67% and belts: 36%. At the second round, the prevalence declined respectively to 13% and 5%. In the same time, the prescription of bed rails and belts by a doctor rose from 41% to 76%. Alternatives were the acceptance of fall risk, the prescription of hips protectors, mattresses on the floor, without any increase of falls rate in the study period. The main pathologies were Alzheimer's dementia (85%) and stroke (13%). Main determining factors of physical restraint were significantly a low score of MMSE (score 6/30 in restrained patients versus 12 in non-restrained), a worst disability rate in restrained (GIR 1.3 versus 2), especially concerning orientation, judgement and mobility. Severe balance trouble was found in 80% of restrained people versus 38%. Conclusion: the improvement of a non restraining care-strategy has been effective during a six-month period as guidelines were reminded to geriatric teams. This improvement should persist in the future despite the increasing prevalence of severe demented people with high risk of falls

**PB7 384 TECHNOLOGY AND LONG-TERM CARE (TLC)**

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**Introduction:** Research has found that most recipients of long-term care (LTC) want to live in the least constrained manner possible. One approach to supporting the independence of elders is the use of new sensor technologies. The purpose of this study was to determine if the sensor technology, developed by Intel, could assist community-dwelling elders who need LTC in maintaining independence. **Methods:** We conducted a one year longitudinal pilot study in Seattle, Washington. For three months the technology was installed in the homes of 12 elders, used to monitor four activities (eating, physical activity, vitamin use, personal care) and to convey summary information to the elders, a family caregiver and/or a paid caregiver, on a picture frame monitor. The study design was a single group pre and post-intervention evaluation. Data collection consisted of interviews with all subjects at baseline, one-month and three-months post installation of the technology. Qualitative and quantitative analyses were conducted. **Results:** All subjects would recommend the technology and found it useful in at least one of the following ways: increased peace of mind while living alone, reminders for elders' daily tasks, helping structure an elders' daily routine, and enhanced communication between elders and caregivers. Communication patterns did not change much between elders and paid caregivers; however, all six family caregivers in the study noted a positive change in their communication with the elder. The family caregivers with the highest baseline caregiver burden benefitted the most from the technology. **Conclusions:** Elders and caregivers enjoyed using the technology and found it easy to incorporate into their lives. The technology has promise for supporting elders in independent living situations. A study with a larger sample size, including a cost analysis, needs to be conducted prior to broad implementation of this technology.

**PB7 385 THE "HARD TO PLACE" OR "DIFFICULT TO PLACE" PATIENT**  
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**Introduction** There is no clear definition in the literature of the "hard to place" or the "difficult to place" patient. Most clinicians and administrators have a nebulous idea of what they mean when referring to a hard to place patient, and there is no consistent approach to address service gaps identified in the health care delivery system. **Methods and Materials** A literature review was conducted using PubMed, Ovid and Google Scholar and the few articles that reference this topic are primarily related to the psychiatry literature and refer to a mainly schizophrenic population. There are no specific references to Geriatric Medicine patients. As a consequence, some preliminary data related to discharges from Lions Gate Hospital, North Vancouver, Canada, were reviewed to identify patterns that lead to the timely placement of patients deemed to require nursing home level of care in a long term care facility. **Results** Although the majority of patients were placed in a long term care facility, a small but significant minority in each reporting period required

intensive resources, both human and financial to identify an appropriate type of housing and care. The patient profile that emerges is one in which the majority are often young (<75 years of age), may have advanced dementia with aggression and/or sexually inappropriate behaviour, concomitant psychiatric illness, an uncertain prognosis, requiring ventilation and finally, non-adherence with medications or substance abuse. These patients do not respond to conventional intervention such as behaviour logs, care plans, increased staffing levels (1:1 care) and medications for the treatment of BPSD. Conclusion The definition of the difficult to place patient needs to be clarified and more consistently identified early on in during hospitalization. An interdisciplinary approach is one of the guiding principles required to address equally the myriad of clinical and social issues in this challenging patient population.

**PB7 386 LIFE CONDITIONS OF KOREAN CENTENARIANS LIVING IN BUSAN AREA, SOUTH KOREA: IN THE CONTEXT OF FAMILY**

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Introduction: The purpose of this study is to examine living conditions of community-dwelling Korean centenarians in the context of family systems. Since the oldest population (85 and older) is known as the fastest growing population, people aged 100 and more are likely to increase in a near future. Methods & Materials: All subjects were drawn from Busan metropolitan city, the second largest city in South Korea. The second(2006) and third(2007) wave of the BCS were used to study the relationships of physical and mental health conditions, life satisfactions, family relations, economic conditions and other areas. How to maintain physical autonomy appeared to be an important factor of increasing quality of life satisfaction. Those coresiding in multigenerational households were better in being helped from daily activities. Questionnaires developed by the BCS researchers were administered to a number of centenarians. Several methods were employed to identify their real age. Results: The current study showed that overall health and life conditions were relatively in good states, and most were well-connected to both family and community. Cohorts effects such as low level of socioeconomic conditions were observed and appeared to have an influence on their performance. Since co-residing family members played a gatekeeping role, making initial contacts with centenarians found to be difficult. Although results of the study reflected the changing trends of attitudes toward the elders, most centenarians were engaged in positive interactions such as companionship, mutual supports, and personal welfare. Most of them resided with their older sons family and received social and emotional supports. Conclusion: The Busan Centenarian Study(BCS) established in 2006 has conducted life conditions of Korean centenarians about socio-psychological aspects of aging processes. In times of medical and economic needs, resources were drawn from family members and thus the importance of social support from family members cannot be overemphasized.

**PB7 387 STABILIZING FACTORS OF HOME CARE AFTER HOSPITAL DISCHARGE: A LATENT PROFILE ANALYSIS**

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Introduction: The study investigates factors which promote an efficient home care of patients after an inpatient stay in a geriatric ward in Austria. Since April 2008 the institution implemented a Geriatric Basic Assessment (GBA) as a standardized instrument to evaluate the physical, mental, and social health status of patients. On the basis of these data the primary purpose was to explore different health profiles of patients. To determine stabilizing factors of home care practice, follow-up interviews were conducted to evaluate the health status 90 days after hospital discharge. Method: Latent profile analysis (LPA) was used to develop a typology of patient's health status at the beginning of an inpatient stay ( $N = 295$ ). Beside the latent class membership, demographic variables such as gender (66 % female), place of residence (52 % urban), family status (56 % living alone), and age (mean = 82,  $sd = 7.5$ ) were used to predict the health status after discharge by means of logistic regression. Results: LPA revealed three distinct profiles, showing serious impairments on all geriatric scales in 29 % of all patients, moderate in 32 % and low impairments in 39 % of all cases. Results demonstrated that even those who showed little impairments had clinically noticeable test scores. The logistic regression analysis showed no significant associations between covariates and patient's health status 90 days after discharge. Conclusion: The study identified three different types of hospitalized patients. Currently, there is no evidence that a certain latent class membership promotes an efficient home care practice. This may be attributable to power issues concerning the logistic regression, due to a low mortality rate. Further studies are needed to investigate the predictive value of latent class memberships within a longer time period after discharge.

**PB7 388 HEALTH PROMOTION IN LONG-TERM CARE**

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Introduction: The demographic trend in Germany shows that the number of frail elderly has risen during the last years and will rise further. Because of this trend the situation in institutions of long-term care (LTC) has changed enormously. The average age of nursing home residents has risen to 82 years. About 70% of these people suffer from dementia and a lot of them require a high level of care. The average length of stay in nursing homes decreases while the need of care increases. Rising strain causes impairment of health for all parties concerned – patients and employees. Methods and materials: The LBIHPR in Vienna (Austria) and the University of Bielefeld (Germany) have entered into cooperation for the next seven years of research in health promotion as a strategy to deal with the problems in the field of LTC. A Survey is planned to analyse the health status of residents and employees in LTC. On the basis of this data set interventions for both groups will be planned, carried out and evaluated. Results: At first we carried out a systematic literature review to explore the concept of health promotion in LTC with an extensive search for practice examples in the Setting "nursing home" in Germany. Afterwards we looked for interventions and their evaluation for residents as well as for employees in the field of international LTC. Conclusion: "Health promotion" is a central theme for the carers but what this means for the care receivers is rather unclear. There are a lot of examples for workplace health promotion, but not for the residents. It does not mean, that there are no activities in German nursing homes. The results suggest that health promotional activities for frail elderly living in nursing homes are not called health promotion, especially not, if these people are in need of care.

**PB7 389 IMPLEMENTING A NATIONAL LONG TERM CARE SYSTEM ON A UNIVERSAL BASIS: EXPERIENCE OF SPAIN.**

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Introduction: In 2007, a new long-term care system (LTCS) was implemented in Spain. This represents a major policy change to largely replace its regional means-tested systems for a national system with universal coverage for all population. Objective: We examine the Spanish LTCS, focusing on issues of eligibility and assessment, benefits, availability of services, and profile of recipients. Methodology: This study used ministerial data for 2007-2008 period collected from applicants to analyze the evolution of the system, and to compare gender, age, disabilities and diagnostics patterns of recipients. Results: The proportion of elders in applicants is 78.7%. Women elders represent the 53.7%. Dementia is the main diagnostic reported (7.9%) as a primary cause of chronic disabilities. There are six eligibility categories, which vary mostly by the number of problems with ADLs or IADLs. The proportion of eligible persons at any level of disability and at the highest level of disability is higher in the applicants with mental disabilities (98.6%; 48.6%) than physical disabilities (90.1%; 12.1%). Conclusion: Two years after implementation there remain controversial issues, including area variations on eligibility, difficulty of the assessment on people with mental disabilities, and encouraging further development on home care services. Future challenges include the promotion of functional independence on older people and early detection of dementia.

**PB7 390 THE INSTITUTIONALIZED PEOPLE HEALTH SURVEY OF CATALONIA: COMORBIDITY AND DISABILITY IN NURSING HOMES AND LONG TERM CARE HOSPITAL UNITS**

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INTRODUCTION: In Catalonia Health surveys exclude the 5% elderly people which are in long term care units (LTC) or in nursing homes (NH). The aim of this study is to describe and compare comorbidity and disability in these settings. METHODOLOGY: Population survey of elderly people (65 or older) hospitalized in LTC or living in NH in Catalonia. Stratified two-stage sampling, centre as primary sample unit. When the selected person had either cognitive or communication impairment, the information was gathered from a proxy worker. Morbidity was assessed with a list of diseases and the Charlson index. Disability was assessed with questions asking for degree of difficulty to perform activities and need of help, summarized in a Katz-like 6 activities scale, considering a person dependent for an activity when he was unable to do it or had high difficulties and needed help. RESULTS: 1379 participants (1042 NH and 337 LTC) with a mean age of 84.0years (84.3 and 82.2), 72% were women (73% and 64%). There were no differences between each type of centre on the average number of diseases (7.3), Charlson index (2.4), medications (5.6) and dementia (46.7%). MMS scores are worse in LTC among people with dementia (3.7 vs. 6.3) but also without (16.7 vs. 19.2). Once adjusted by age, sex does not affect the average number of disabilities, which increases with age, being greater in

LTC (4.0 vs. 2.8) for all age groups. Only 14% in LTC and 23% in NH are autonomous for all activities. Increasing of number of diseases affected disability both in NH and LTC, whereas Chalson index only did it in NH. CONCLUSIONS: The prevalence of disability is greater in LTC and NH than in the community. Number (and kind) of diseases explain better than the Chalson index the degree of disability.

**PB7 391 BODY MASS INDEX AND FUNCTIONAL IMPAIRMENT IN THE AGED WOMEN**

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**OBJECTIVES:** The main purpose of this study was to determine whether the degree of functional impairment related to body mass index (BMI) among the aged women. **METHODS AND MATERIALS:** A total of 62 apparently healthy Taiwanese women, aged 65-75 (mean age= 69.4±2.5) years, were recruited in 2008. Body mass index (BMI)(mean=27.5±3.4 kg/m<sup>2</sup>), waist circumference (WC)(84.3±3.7 cm), and body fat (32.1±1.7%) were measured. The participants were divided into 4 groups: Group I with normal BMI (<=23.99 kg/m<sup>2</sup>, n=15), Group II with overweight ( 24-26.99 kg/m<sup>2</sup>, n=15), Group III with first degree of obesity (27-29.99 kg/m<sup>2</sup>, n=16), and Group IV with second degree of obesity (BMI >=30 kg/m<sup>2</sup>, n=16). Activities of daily living (ADL) were measured with Barthel index. Functional impairment was defined when Barthel index was less than 80. The relationship between BMI, body fat, WC and ADL was examined using multivariate logistic regression analyses. **RESULTS:** The prevalence of abnormal BMI (BMI >=24 kg/m<sup>2</sup>) was 75.8% and the prevalence of ADL impairment was 61.29%, respectively. There was a strong association between levels of BMI and ADL impairment ( $P<0.001$ ). With increasing age, the ORs of having ADL impairment increased significantly (OR=1.35, CI=1.06-1.72). With increasing BMI (OR=3.04-4.51), the ORs of ADL impairment increased significantly. After adjustment for age, the ORs (2.59-17.78) of ADL impairment were significantly higher in subjects with abnormal BMI (BMI >=24 kg/m<sup>2</sup>). **CONCLUSIONS:** The present study revealed that overweight and obesity were related to ADL impairment in the female elderly. Therefore, weight reduction may alleviate the functional impairment in the obese elderly.

**PB7 392 CAUSES OF DECREASED ACTIVITY OF DAILY LIFE IN ELDERLY PATIENTS WHO NEED CARE OF DAILY LIVING**

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**Introduction** The causes of decreased activity of daily life (ADL) in elderly patients include cerebrovascular disease, bone fracture by fall and dementia, all of which result from complicated or overlapped lifestyle diseases. Investigation on the risk factors of lifestyle diseases, therefore, would be helpful in reducing mortality and morbidity in this age group. Thus, the present study was conducted among elderly patients with decreased ADL who were hospitalized in nursing wards in order to investigate the causes of decreased ADL, and to determine precautionary measures against decreased ADL. **Patients and Methods** The study subjects were 224 elderly hospitalized patients with decreased ADL and 49 elderly outpatients with favorable ADL. According to medical record information provided by the families, the causes of decreased ADL, current age, age at the start of ADL decrease, medical history, BMI, and blood pressure were investigated. History of cigarette smoking was also taken. Data were expressed as mean±SE. Factors affecting age at the start of ADL decrease were analyzed by both simple and multiple linear regression analyses using StatView. ANOVA was used for analysis between groups. Results In the two groups with decreased ADL, the mean age of bedridden status of the diabetic group was significantly younger than that of non-diabetic group (77.6±5.9 vs 82.8±8.7 years,  $p<0.05$ ). In the diabetic group, cerebrovascular diseases were the major causes of becoming bedridden at a younger age. Multiple linear regression analysis revealed that sex, presence of diabetes mellitus and history of smoking were the factors determining the age of becoming bedridden. **Conclusions** This study showed that diabetes mellitus and smoking habit are independent risk factors of becoming earlier bedridden. Therefore, the major targets of medical care to prevent from decreased activity of daily life among elderly are the male.

**PB7 393 ASSESSMENT OF BODY COMPOSITION BY BIOELECTRICAL IMPEDANCE AND ANTHROPOMETRY IN ELDERLY IN-PATIENTS: EFFECT OF OEDEMA.**

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**Objective.** To compare body composition assessment by bioelectrical impedance and anthropometry in elderly in-patients and to determine the effect of oedema on the correlations. **Methods.** Prospective study in a geriatric sub-acute care ward in a university-based hospital. In 80 consecutively admitted elderly patients, we recorded within 48 hours of admission: 1) age, body mass index (BMI) and plasma levels of albumin 2) clinical

evaluation of oedema 3) percentage of fat mass (%FM) by Multi-Frequency Bioelectrical Impedance Analysis (BI) 4) %FM by anthropometry using the SIRI formula including body density as assessed by the Durnin and Womersley equation relying on four skinfold measurements. Concordance was analyzed by the Bland and Altman test. **Results.** Patients were 83.7 ± 8.1 years old. Oedema was present in 15 patients (19 %) and was associated with higher BMI (27.9 ± 4.7 vs 23.4 ± 5.0 kg for patients with vs patients without oedema respectively;  $p = 0.003$ ) and slightly lower albuminemia (29.8 ± 3.9 vs 31.6 ± 5.1 g/L;  $p = 0.4$ ). Bland and Altman analysis showed a good concordance between BI and anthropometry in the 65 patients with no oedema. In opposition, concordance was poor in the 15 patients with oedema, with an error increasing with %FM. Conclusion. Body composition would be important to monitor in elderly malnourished patients undergoing renutrition. However, reliable and easily available techniques need to be validated in those populations. We show that %FM measurements by BI and anthropometry were concordant in elderly patients with no oedema but not in patients with oedema, representing 19 % of this population. Coupled measurements with different body composition assessment techniques may allow a more precise evaluation.

**PB7 394 WEIGHT LOSS AS AN INDEPENDENT PREDICTOR OF 3-MONTH MORTALITY IN HOSPITALIZED SUB-ACUTE CARE ELDERLY PATIENTS**

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**Objective.** To determine the predictive value of weight loss for mortality in hospitalized sub-acute care elderly patients. **Methods.** Prospective study including 97 elderly patients consecutively admitted in three sub-acute care wards in a university-based geriatric hospital. Recorded data were: 1) At admission : age, sex, functional status (ADL), primary medical diagnosis, comorbidity (Charlson comorbidity index), Mini Nutritional Assessment (MNA), body mass index (BMI), and plasma levels of albumin, transthyretin, C-Reactive Protein (CRP) and orosomucoid. 2) Weight variation 14 days after admission 3) Death at 3 months. **Results.** Mortality at 3 months was 11%. Univariate analysis revealed that weight loss during 14 days after admission, transthyretin < 200 mg/L and MNA < 17 were significantly associated with an increase in the risk of death at 3 months. The logistic regression model retained only weight loss during 14 days after admission (HR = 1.512, [IC 95% 1.089 – 2.100];  $p= 0.0136$ ) as an independent risk factor for death. **Conclusion.** Weight loss during 14 days after admission is an independent risk factor of death in hospitalized sub-acute care elderly patients. This study shows the importance of immediate nutritional support at admission in sub-acute care.

**PB7 395 DIETITIANS SHOW MORE RESPECT TO THE ELDERLY- A QUALITATIVE RESEARCH**

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**Introduction:** Obesity treatment in old age is a matter of dispute both physiologically (the weakening correlation between BMI, morbidity, and mortality as one ages) and behaviorally. On one hand there are claims about the difficulty of changing ones habits during old age, yet on the other hand the elderly person has more spare time to dedicate for changing his lifestyles. The aim of the study was therefore to explore and compare dietitians attitudes towards obesity treatment of the young vs. the elderly. In order to develop a research questionnaire a primary qualitative study was conducted. **Method:** Four focus groups were conducted, two in each of the two largest HMO's in Israel. The number of participants in each group was six on average (23 dietitians in total). One of the research questions (explored only in two groups) dealt with the dietitians attitude and interaction with a young vs. elderly obese patient. **Results:** Dietitians were unanimous that their treatment style was different between the young and the elderly obese individual. The difference is the result of the dietitians acknowledgement of the different needs of the elderly individual, and the sense of feeling that there is less pressure for immediate dietary results. Dietitians mentioned that they address the elderly patient more gently, with patience, huggingly, cheerfully, and respectfully. Moreover, dietitians brought up the importance of both personal and professional exposure to the world of ageing as something that influenced their way of treating the elderly patient. **Conclusion:** patients age influences the public dietitians practice skills while treating obesity. Dietitians have more respect to the elderly patient and therefore feel obliged to address him in the most proper way and in accordance with his needs.

**PB7 396 HOW HEALTHY IS THE DIET OF LONESOME PORTUGUESE ELDERLY?**

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Diet assessment is a complex issue although crucial considering its relation to the wellbeing and health status of populations, especially elderly ones. The use of diet quality

indices may be helpful to understand determinants of food consumption and also serve as a surveillance tool. We used the revised Healthy Diet Indicator (HDIr), evaluating compliance to the WHO goals to assess the diet quality of Portuguese elderly living alone. Data was obtained from the Portuguese Household Budget Survey carried out by the National Statistic Institute to provide the data on food availability within the DAFNE Project. Elderly living alone (N=902 and 1161 in 1990 and 2000, respectively) were compared with adults and the entire sample. The HDI<sub>r</sub> was measured in those two time periods, in order to assess changes in the quality of the diet. Data will be presented as median, 10th and 90th percentile as well as the percentage of elderly with a low (<=4), intermediate (5-6) and high (>=7) HDI<sub>r</sub>. The differences between lonely elderly with a low HDI<sub>r</sub> (if their scoring were below national median) and the remaining households were analyzed by means of logistic regression. HDI<sub>r</sub> median of lonely elders was higher than the national average. The percentage of elders with low HDI<sub>r</sub> score decreased in time with a corresponding increase in intermediate and high scores. The proportion of elderly in the high score increased (8.8 vs. 9.0 across time) compared to adults living alone and to the entire population in both periods. The reverse occurred in adults and in the total sample. Our results show that the compliance to WHO recommendations was low in the general population. Elderly seem to be more aware of healthy eating as we observed an increase in the HDI<sub>r</sub> median compared with adults living in similar circumstances.

**PB7 397 BODY MASS INDEX AND WAIST CIRCUMFERENCE ARE ASSOCIATED WITH INCREASED PREVALENCE AND INCIDENCE OF LOWER BACK PAIN.**

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**Introduction:** Obesity is positively associated with lower back pain in cross sectional analyses, however there is a lack of longitudinal studies that examine the association of anthropometry and lower back pain. Here we assess whether body mass index (BMI) and waist circumference predict lower back pain reporting in a national study of older men and women. **Methods and materials:** A prospective national cohort study of older English adults (the English Longitudinal Study of Ageing, ELSA). Body mass index and waist circumference were measured by a nurse at baseline in 1998, 1999 or 2001 (wave 0) and at follow-up in 2004 (wave 2) an average follow-up of 5 years. Assessments of lower back pain were made in 2002 (wave 1), 2004 and 2006 (wave 3). The number of participants varied between 5135 and 5806 (mean age 64 years, 55% women) depending on the analysis. **Results:** Women had a higher prevalence of lower back pain than men at wave 1. In both sexes the prevalence rates of severe and moderate back pain increased over time (between waves 1 and 2, waves 2 and 3 and waves 1 and 3) among those who were overweight and obese. Women also reported increased lower back pain at a lower threshold of BMI or waist circumference than men. Regression results show that in women, but not men, increased BMI and waist circumference (at baseline) is associated with higher odds of reporting lower back pain (at follow-up), after controlling for age. **Conclusions:** These findings suggest that increased BMI and waist circumference is associated with increased prevalence and incidence of reporting of lower back pain in older men and women.

**PB7 398 DOES NUTRITIONAL GUIDELINES ENSURE GOOD ROUTINES IN NUTRITIONAL CARE OF ELDERLY SUBJECTS WITH COMMUNITY SUPPORT?**

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**Introduction:** Malnutrition and inadequate nutritional routines in elderly care are common. To develop guidelines is one option to achieve improvements in this area. The Community of Uppsala, the 4th largest city of Sweden, adopted nutritional guidelines in 2000 for elderly receiving community support. The aim was to investigate the knowledge and practical use of those guidelines. **Methods and materials:** All directors of department (n = 68), community chief nurses (n = 6), nurses (n = 155) and a number of the care staff (n = 266) were asked to answer a questionnaire about the guidelines. The questionnaire contained 13 questions. **Results:** Altogether 340 persons (69 %) answered the questionnaire. About half of the responders (52 %) were aware of the nutritional guidelines. Directors knew the guidelines to a greater extent than nurses and care staff. Barely half of the responders (45 %) answered that the guidelines were used in practice. Again, directors answered more frequently that the guidelines were used than the nurses and the care staff. Forty-four percent (44 %) knew about the sheet form, that is advocated for screening of nutritional problems, and 38 % answered that they had documented routines for nutritional care. Around 70 % had knowledge about 7 of the 15 different diets that should be available for the elderly. According to the guideline every care giver should have a dietician for nutritional support. Fifty-seven percent (57 %) of the directors, one third (33 %) of the nurses and 17 % of the care staff knew of this. About two thirds (62 %) of the responders wanted additional knowledge about nutrition in the elderly. **Conclusion:** The knowledge about the nutritional guidelines in community elderly care was scarce and

was seldom used in practice. More research is needed about how guidelines can best be implemented into practical use to achieve a substantial improvement in this area.

**PB7 399 COMMUNITY BASED PREVALENCE OF DIABETES MELLITUS 2 AMONG ELDERLY AND ASSOCIATION WITH HEALTH STATUS COMMUNITY BASED PREVALENCE OF DIABETES MELLITUS 2 AMONG ELDERLY AND ASSOCIATION WITH HEALTH STATUS**

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**INTRODUCTION:** Once Diabetes mellitus 2 (DM) became an important public health concern in the elderly, the aim of this study was to assess the prevalence of DM in the elderly population and its association with health status, and sociodemographic characteristics. **METHODS AND MATERIALS:** Prospective cross-sectional study of 424 elderly ( $\geq 60$  years) from a population-based sample (second phase of the Multidimensional Study of the Elderly in Porto Alegre/RS/Brazil - EMIPONA - that enrolled 1078 older persons). We considered health self-perception, physical activity, body mass index, depressive symptoms, and hospitalization at the last year to determine the health status. Individuals were classified for the presence of DM according to the criteria of the Sociedade Brasileira de Diabetes. Odds ratio (OR) with 95% confidence intervals were calculated to test the influence of different variables and logistic regression were also done. **RESULTS:** The sample mean-age was 71.7±7.8 years; 69.8% females; 83.4% Caucasian, 17.5% African-Brazilian; 39.1% widowers, 36.5% married; 56.9% had incomplete elementary education. The prevalence of DM was 25.7% (CI95: 21.8-30.1) 23.4% (CI95: 16.9-26.7) in males and 26.7% (CI95: 22-32) in females. Twenty percent of 108 elderly with DM did not know that they were diabetic. When health characteristics were compared between elderly with and without DM there were significant differences. DM group showed higher prevalence of hospitalizations ( $P=0.006$ ), depressive symptoms ( $P=0.011$ ) and regular health self-perception ( $P<0.001$ ). There was an inverse relation of the prevalence of DM and the level of education and a direct relation with the body mass index. **CONCLUSION:** We document a high prevalence of DM in the elderly population of Porto Alegre, one of the highest prevalences in Brazil.

**PB7 400 PREVALENCE OF METABOLIC SYNDROME IN THE ELDERLY**

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**Introduction –** Currently, cardiovascular diseases are the leading cause of death worldwide, with high morbidity and low quality of life. Metabolic syndrome (MS) is represented by the joint occurrence of multiple risk factors of such diseases. Few data are known about its magnitude in the health of the elderly and the validity of diagnostic criteria used to measure its presence in this population. The objective of this review was to assess the prevalence of MS in the elderly population worldwide, according most widely used diagnostic criteria, as the National Cholesterol Education Program - Adult Treatment Panel III (NCEP-ATPIII), International Diabetes Federation (IDF) and the Organization World Health (WHO), identifying their differences. **Methods and materials –** Using the databases MEDLINE, LILACS-BIREME and SCIELO, the literature search included original articles, review articles and guidelines addressing the prevalence of MS in elderly published in the last ten years; was selected 50 articles. **Results –** The results suggest that MS increase its prevalence with age and tend to be more prevalent in women than in men of similar age. The IDF criteria suggests higher prevalence of values regardless of ethnicity, age or gender, probably by taking into account the lower values of waist circumference and blood glucose. Values were found between 10 and 39% prevalence of MS by NCEP-ATPIII criteria and between 14 and 69% with the IDF, new criteria that may be leading to an excess of individuals classified as carriers of MS. **Conclusions -** The diagnostic criteria for metabolic syndrome used until now can generate values very discrepant about the prevalence of SM in the elderly population. Specific criteria for this population should be considered by elucidative studies that can to improve the care of this population, the correct diagnosis of MS and the prevention of CVD, seeking longevity with quality of life.

**PB7 401 RELATION BETWEEN AGING AND SUPPRESSIVE EFFECT OF CANDESARTAN ON NEW-ONSET DIABETES : CASE-J TRIAL SUBANALYSIS**

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**Introduction:** Since diabetes is a crucial risk factor for cardiovascular events, its prevention is very important in hypertensive patients. Candesartan was reported to significantly suppress the new-onset of diabetes compared with amlodipine in the CASE-J study. The incidence of new-onset diabetes was compared between the treatment groups after stratification according to age in this subanalysis. **Methods and Materials:** The relation between suppression of new-onset diabetes and aging was examined in high-risk hypertensive patients without diabetes who were registered in the CASE-J study (mean age: 63.7 years). **Results:** Of 2,685 high-risk hypertensive patients without diabetes, 1,343

patients were assigned to candesartan group and 1,342 patients were to Amlodipine group. In patients under 65 years old, the incidence of new-onset of diabetes was significantly lower in the candesartan group (5.7/1,000 patients years) compared with those in the amlodipine group (12.6/1,000 patients years). In patients aged over 65 years old, the incidence of new-onset diabetes was also lower in the candesartan group (11.5/1,000 patients years) compared with the amlodipine group (14.5/1,000 patients years), although the difference was not significant. Conclusions: Candesartan reduced the incidence of new-onset diabetes compared with amlodipine in high-risk Japanese hypertensive patients, but a significant difference was only observed in the patients aged under 65 years and not in those aged over 65 years.

**PB7 402 RELATIONSHIP BETWEEN POLYPHARMACY STATUS AND NUTRITIONAL STATUS IN ELDERLY PERSONS**

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Introduction The impairments in physical health make elderly persons vulnerable to altered drug responses and changes in nutritional status. The aim of this study was to assess the relationship between the number of drugs in use and nutritional status. Methods and materials For the GeMS Study (2004-2007), a random sample of 1000 persons was drawn from the population of aged 75 years and older living in the city of Kuopio, Finland. They were allocated to two same-sized groups: intervention and control groups. A trained nurse and a physician collected the data on sosiodemographics, drug use, and nutritional status annually. This article included only home-dwelling elderly persons from control group. The analysis covered years 2005 (n=313), 2006 (n=293), and 2007 (n=274). The MiniNutritional Assessment (MNA) test was used to evaluate the nutritional status. Drugs were categorized in non-polyparmacy (0-5 drugs), polyparmacy (6-9 drugs), and excessive polyparmacy (10+ drugs) groups. Results In 2005, the non-polyparmacy group included 42% (n=132), polyparmacy group 37% (n=116), and excessive polyparmacy group 21% (n=65) of the participants. Nutritional status was the lowest in excessive polyparmacy group (mean MNA 23.2) compared with polyparmacy (24.1) and non-polyparmacy (25.6) groups ( $p<0.001$ ). At the end of follow-up, the respective scores were 22.7, 23.4, and 25.0 ( $p<0.001$ ). By using mixed model analysis, polyparmacy status ( $p<0.001$ ) was found to be a significant factor associated with decrease in nutritional status after adjusting for age, living alone, self-report health, IADL scores, and Barthel Index. Conclusion Polyparmacy status is a predictor of decline in nutritional status over a three-year period in elderly persons. Clinicians should pay more attention to maintaining adequate nutritional status in elderly persons with polyparmacy or excessive polyparmacy.

**PB7 403 AGE, BODY MASS INDEX AND MORTALITY A 42 YEAR FOLLOW-UP STUDY IN A GENERAL POPULATION.**

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**INTRODUCTION:** In the elderly a low body mass seems to be a strong predictor of death. Preclinical disease prior to baseline may confound the associations. We wanted to explore the association between body mass index (BMI ( $\text{kg}/\text{m}^2$ )) and total mortality when adjusting for possible confounders and sources of bias. **METHODS AND MATERIALS:** A random sample of 6811 Norwegians was invited to a longitudinal study in 1964. 5653 (84%) attended. The mean age was 47.5 years; range 22-75 years. 788 of these were 65-75 years. Mean follow-up time was 28 years. BMI was calculated from standardized measurements of body height and weight. Findings from complete clinical- and supplementary examinations were also recorded and information on time and cause of death was obtained after 42 years of follow up. **RESULTS:** In the elderly (age 65-75 yrs) the relative risk of death related to BMI was U-shaped, whereas in the youngest age group (20-44 yrs) the pattern was more linear. The highest mortality in the elderly was in the lower BMI category (<22.0) (adjusted Cox proportional Hazard Ratio (HR) 1.46, 95% Confidence Interval (CI) (1.08-1.72) compared to the BMI reference group (22.0-24.9). The pattern persisted after eliminating 72 months of early follow-up deaths. The unadjusted relative risk associated with the two upper BMI-groups (BMI 25-28  $\text{kg}/\text{m}^2$  and BMI  $\geq 28 \text{ kg}/\text{m}^2$ ) was 1.05 (95% CI 0.87-1.27) and 1.28 (95% CI 1.05-1.56) respectively. **CONCLUSION:** Obesity related risk of death diminishes with increasing age. BMI below 22.0 was a considerable risk factor of all cause mortality in the elderly in this population. More focus might be addressed towards the thinnest elderly.

**PB7 404 A NEW ENTERAL FORMULA SPECIFICALLY DESIGNED FOR THE ELDERLY: AN EXPERIMENTAL STUDY IN THE AGED RAT**

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Introduction. A new formula was designed specifically for the nutritional support of tube-fed elderly patients (elderly-specific formula, ESF, Nestlé Clinical Nutrition). This formula is slightly hyperproteic, the proteins employed are mainly whey proteins. For glycemic control, it is supplemented with fructose, chromium and fiber. We tested it against a standard formula (Sondalis® Iso, SI, Nestlé Clinical Nutrition) in sixteen 22-month-old Sprague Dawley rats fed by total continuous enteral infusion via gastrostomy for 7 days. Methods. Body weight, stool weight and nitrogen balance were measured daily. After sacrifice, we also measured muscle weight, plasma levels of amino acids, glucose, insulin, albumin and fibrinogen, and tissue protein and amino acid content. Results. The ESF limited weight loss ( $-7 \pm 8 \text{ g}$  vs  $-30 \pm 7 \text{ g}$ ;  $p = 0.04$ ), improved cumulative nitrogen balance ( $556 \pm 102$  vs  $251 \pm 64 \text{ mg}$ ,  $p = 0.02$ ), and increased jejunum protein content ( $79 \pm 3$  vs  $54 \pm 5 \text{ mg}/10 \text{ cm}$ ,  $p = 0.0008$ ). Plasma levels of threonine, leucine, isoleucine and the sum of total amino acids were higher in ESF-fed than SF-fed rats ( $p < 0.05$ ). Threonine and isoleucine content in the soleus and gastrocnemius were also higher in ESF-fed than SF-fed rats ( $p < 0.05$ ). The ESF improved intestinal transit (7 days stool weight  $25 \pm 2 \text{ g}$  vs  $9 \pm 1 \text{ g}$ ,  $p = 0.0001$ ). Conclusions. The new formula benefited nutritional status of old rats more than a standard formula. Clinical studies are now required to test this formula in elderly patients.

**PB7 405 METABOLIC SYNDROME IN OLDER SUBJECTS: COINCIDENCE OR CLUSTERING?**

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**INTRODUCTION** The prevalence of the metabolic syndrome (MS) increases with aging. Aging per se is associated with increased prevalence of most of the abnormalities contributing to the MS. Whether MS in older people consistently identifies a true pathophysiological entity or a casual aggregation of aging-associated metabolic abnormalities, remains to be elucidated. We aimed to evaluate whether in older subjects the aggregation of metabolic components of the MS, as defined by the National Cholesterol Education Program Adult Treatment Panel III (NCEP-ATP III), is consistent with a single latent variable. **METHODS AND MATERIALS** Age, waist circumference, systolic and diastolic blood pressure, metabolic variables were determined in 152 older (>70 years), non-diabetic, healthy men. Cronbach alpha was used to assess the internal consistency of the components of the MS. Structural equation modeling, using the Normed Fit Index (NFI), the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI) was used to assess the fit to a model with a single latent variable. **RESULTS** The Cronbach alpha test showed low internal consistency among the metabolic variables ( $\alpha = 0.31$ ). The calculated X<sub>2</sub> values were 28.31 and 32.52 for model entering hypertension as dichotomous variable and for model entering blood pressure values, respectively, both expressing low fit to a model with a single latent variable. In both models, CFI (0.41 and 0.55), NFI (0.59 and 0.55), RMSEA (0.25 and 0.22) and TLI (0.31 and 0.12) scores showed a low fit of the metabolic alterations to a single latent variable. **CONCLUSION** These findings suggest caution in making diagnosis of MS at older ages, since metabolic and cardiovascular abnormalities being extremely common in elderly people, do not appear to cluster together under a single common factor.

**PB7 406 SYMPTOMATIC HYponatremia SECONDARY TO UNKNOWN HYPOPItuitaRISM**

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Introduction: Hypopituitarism is often overlooked in the elderly. Its symptoms are protean and overlapping with those of aging. Methods and materials: A 78-year-old man came to observation for the incidental finding of a pituitary mass on contrast-enhanced CT performed for psychomotor and gait impairment, and hypoxemia. Anamnesis was remarkable for an ischemic stroke and he was currently on warfarin and flecainide for atrial fibrillation. The neurosurgeon judged the pituitary lesion as an intrasellar macroadenoma (diameter 14 mm) and advised morphological follow-up. The patient looked pale and had hypotension. Results: Pituitary function assessment revealed a global anterior hypopituitarism: reduced LH: 0.88 IU/L and FSH: 1.1 IU/L levels with markedly reduced testosterone levels: 0.2 ng/ml, normal PRL levels, low-normal FT4 levels: 0.9 ng/dl (0.89-1.76) and reduced FT3 levels: 1.97 pg/ml (2.3-4.2) with appropriately normal TSH levels: 1.4 microIU/ml, and reduced cortisol levels: 3.8 microg/dl (8-25). Severe hyponatremia (119 mEq/L) coexisted. Replacement therapy was started with cortisone acetate 37.5 mg/day with significant overall clinical improvement, and normalization of sodium levels (141 mEq/L). Subsequently, L-tiroxine (50 microg/day) was started. Conclusion: The patient showed pituitary macroadenoma and cerebrovascular disease, both possibly able to induce hypopituitarism. A cohort of multifaceted symptoms usually related to aging, may, although rarely, be secondary to hypopituitarism. Hyponatremia due to cortisol deficiency and hence to hypersecretion of vasopressin, is quite a common biochemical finding, able to cause severe neurological symptoms. An early and appropriate hormonal replacement therapy of hypopituitarism is able, also in

the elderly, to improve significantly the clinical condition and to normalize the electrolytic abnormalities.

**PB7 407 SENILE LOCAL EYE AMYLOIDOSIS ASSOCIATED WITH AGE-RELATED MACULAR DEGENERATION**

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Age-related macular degeneration (AMD) is the leading cause of blindness and the pathogenesis of the condition is largely unknown. AMD is characterized by the accumulation of extracellular deposits, termed drusen, between the retinal pigmented epithelium (RPE) and the choroid. Widespread drusen deposition is associated with retinal pigmented epithelial cell dysfunction and degeneration of the photoreceptor cells of the neural retina. The appearance of amyloid in eye tissues is related with development of some gerontoophthalmological diseases. They make it possible to see in a new light the problem of eye amyloidosis, as well as its place among different forms of amyloidosis known to us as of now. Histological, histochemical, and electron microscopic studies of the fundus oculi tissues in 111 eyes with AMD revealed amyloid in the drusen Bruch's membrane, and between the basal membrane of the RPE and the internal collagen layer of Bruch's membrane in the center of the fundus oculi. The detected amyloid incorporations are referred to senile amyloidosis and reliably differ from amyloid in generalized amyloidosis. Comparative analysis of morphologic changes in tissues of the macular and paramacular areas of the fundus oculi and of the incidence of amyloid incorporations in them permit us to propose that accumulation of local senile amyloid is conducive to development and aggravation of AMD. A relationship between the degree of RPE degeneration and accumulation of amyloid in the fundus oculi was revealed. Ultrastructural studies of Bruch's membrane in the macular region have shown that amyloid fibrils are localized in inner collagenous zones of Bruch's membrane with fragments of degrading RPE cells closely attached to them. The authors put forward a hypothesis of the pathogenesis of some stages of AMD, in which the principal role in the formation and deposition of abnormal protein, amyloid, is played by

**PB7 408 THE INFLUENCE OF RACE AND INCOME ON HEALTH-RELATED QUALITY OF LIFE AMONG OLDER DIABETICS AND NON-DIABETICS**

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Racial/ethnic differences and socioeconomic status are often associated with health disparities (Crimmins, Hayward and Seeman, 2004). Type 2 diabetes is more prevalent among persons in lower economic groups (Connolly, Unwin, Bilois , and Kelly 2004) and among various ethnic minorities (Winkleby and Cubbin, 2004). A secondary analysis of the Behavioral Risk Factor Surveillance System 2007 (BRFSS) was conducted in order to determine the influence of race and income on health-related quality-of-life among older diabetics and non-diabetics. Respondents selected for this study were 65 years old and above and diagnosed with diabetes by doctors (N=604). A contrast group were older non-diabetics (N=2,116). Three variables were used to test HRQOL, namely, general health self-reported by older adults, and the number of days that respondents' physical or mental health was not good during the past 30 days. Data analysis included descriptive statistics and regression models were tested for the impact of physical exercise on the QOL among older diabetics. The Statistical Analysis System (SAS 9.1) software was utilized to analyze data in this study. The results of chi-square showed no significant difference of the racial components between older diabetics and non-diabetics ( $p=0.06$ ), while the household income was found significantly different between two groups ( $p<.001$ ). A series of regression models revealed that the level of household income had significant positive impact on older adults' HRQOL variables and their general life satisfaction ( $p<.01$ ). The race variable had no significant influence any of the HRQOL variables and life satisfaction among older diabetics ( $p>.05$ ). Additional research is needed to understand the influence of socioeconomic status on health behaviors and outcomes and concomitant health promotion strategies for minimizing health disparities.

**PB7 409 ASSOCIATION OF NUTRITIONAL STATUS AND HEALTH RELATED QUALITY OF LIFE AMONG OLDER INPATIENTS WITH DELIRIUM**

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Introduction: The association of older patients' nutritional status and health-related quality of life (HRQoL) has as yet received limited attention in scientific literature. We studied the relationship between nutritional status and HRQoL among old inpatients with delirium. Material and methods: Our cohort consisted of inpatients (N=170). All participants were diagnosed with delirium according to the DMS-IV, and all underwent baseline assessment for their nutritional status with the Mini-Nutritional Assessment (MNA) and for their

HRQoL with the 15D index including 15 dimensions for HRQoL (mobility, vision, hearing, breathing, sleeping, eating, speech, elimination, ADL, mental function, discomfort and symptoms, depression, distress, vitality and sexual activity). In 15D a difference of 0.02-0.03 is considered clinically meaningful. In the analyses sexual activity was omitted because frequent lack of responses, and HRQoL index was compared between the MNA groups. Results: The mean age of the patients was 83 years, and 31% were diagnosed with prior dementia. Patients were classified into three groups according to their MNA- score: 1) malnourished <17 (N=49), 2) at risk for malnutrition 17-23.5 (N=101) and 3) well-nourished > 23.5 (N=20). Well-nourished patients showed significantly better HRQoL (mean 15D index 0.789) compared with those at risk for malnutrition (mean 0.697) or with those malnourished (mean 0.653) ( $p<0.001$  for both). There were significant differences between the MNA groups in several 15D dimensions: mobility ( $p<0.001$ ), vision ( $p=0.013$ ), sleeping ( $p=0.003$ ), and ADL ( $p<0.001$ ). Even omitting the items measuring similar 15D dimensions (mobility, eating), the difference between MNA groups was significant. Conclusions: Nutritional status assessed with the MNA is significantly associated with HRQoL among older inpatients with delirium. The results emphasize adequate nutritional care also from the HRQoL viewpoint.

**PB7 410 PROSPECTIVE EVALUATION OF TOLERANCE OF UPPER GASTROINTESTINAL ENDOSCOPY IN 70+ YEAR OLD PATIENTS**

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Introduction In recent years, there is a increase in the use of upper gastrointestinal endoscopy. For elderly population, the comfort of this investigation is significant. The tolerance of esophagogastrroduodenoscopy in the 70+ year old elderly was evaluated in a prospective study of patients undergoing endoscopic examination. Methods This study took place in 2008 in a geriatric unit of Nantes teaching hospital. Each patient was asked if they agreed to repeat the examination under the same conditions: it was our main criterion of tolerance. Tolerance was assessed with a 100mm visual analogue scale (VAS) too. Five specific items (secondary criteria) were assessed: pain, anxiety, nausea, discomfort, sensation of choking. Results 30 patients were included, 19 women and 11 men. The medium age of the patients, was 84.3 years old. The main indications for endoscopy were anorexia and/or weight loss and iron deficiency anemia. The tolerance was good since 20 patients (60%) would have agreed to repeat the procedure. No complication occurred related to endoscopy. 16 out of 30 patients (53.3%) did not suffer any pain (medium VAS: 2.36/10). 20 patients (66.7%) did not feel any sensation of choking (medium VAS: 1.44/10) 18 patients (60%) did not feel nausea (medium VAS: 2/10). 16 patients (53.3%) were not anxious (medium VAS: 2.7/10). This study showed that there tolerance was significantly linked to each secondary criteria ( $p<0.05$ ), i.e. when patients refused to repeat the procedure, it was linked to strong pain, high level of anxiety, important feeling of nausea or suffocation. Conclusion The present study showed that uppergastrointestinal endoscopy in the elderly is well tolerated. There tolerance was significantly linked to pain, anxiety, nausea and suffocation. However, a reflexion ethic remains necessary for every old patient for these investigations.

**PB7 411 ASSOCIATION OF WAIST-TO-HEIGHT RATIO WITH INDICATORS OF OBESITY AND METABOLIC RISK FACTORS AMONG MIDDLE-AGED AND OLDER ADULTS IN RURAL AREAS**

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Obesity is a growing global problem and is increasingly recognized as an important risk factor for cardiovascular diseases (CVD) and other metabolic risks. Waist-to-height ratio (WHtR) can be used to assess central fat distribution and to identify those at increased risk for metabolic disorders. This paper will present the association of waist-to-height ratio with indicators of obesity and metabolic risk factors among older adults (40+ years) from selected rural areas in Malaysia. The sample consisted of 3747 subjects (men=1378; women=2369). Information on demographics and health characteristics were collected using a questionnaire during face-to-face interviews. Height, weight, waist circumference (WC) and hip circumference (HC) were measured using standard procedures and appropriate instruments. Blood samples were collected after 8 to 10 hours of overnight fasting and analysed using the Chemical Analyser (Hitachi 902). WHtR>0.5 was the cut-off value to indicate increased risk for central obesity. The results showed that 80.3% of the subjects were classified with central obesity, representing 75.2% of men, 83.3% of women, 81.4% of older adults (>60 years) and 61.6% of those in the normal BMI range. Based on five metabolic risk factors, 27.8% were without any risk factors while 11.9% had three or more risk factors. The prevalence of metabolic risks were significantly higher among those with WHtR>0.5. Height and weight correlated negatively with age, while WHtR correlated positively with age. WHtR successfully identified 98.4% and 96.8% of overweight men and women, respectively. WHtR can provide a simple and practical indicator to identify metabolic risks among middle-aged and older adults. The usefulness

of this indicator needs to be confirmed among the Malaysian population through future studies among different age and ethnic groups, gender and strata.

**PB7 412 CHRONIC DISEASE AND CONDITIONS ASSOCIATED WITH BMI IN A POPULATION OF OLDER ADULTS LIVING IN THE AUSTRALIAN COMMUNITY.**

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Introduction: People with malnutrition can be overweight as well as underweight and may have serious chronic diseases and conditions irrespective of their weight status. We investigated predictors of malnutrition in a free living community of elderly (mean age  $83 \pm 4.3$ ) living in Sydney, Australia. Methods: In 2006-8 a falls prevention randomized controlled trial was conducted in a volunteer sample of 317 community-dwelling elderly. Anthropometric data were individually measured including height and weight. Self-reported baseline data included demography (age, gender, marriage status, socio-economic status), medical conditions (including hip fracture, falls, diabetes, coronary heart disease (CHD), arthritis, current medications). Respondents were classified into BMI categories slightly deviating from the international standards because of the age of the population. Results: In this population 15 % were underweight 40% overweight 18% obese and 10 % very-obese. High-BMI was associated with younger age, less education and being female. The very obese group had a significantly higher risk of having diabetes ( $OR=3.5$  CI=1.4-8.4), knee arthritis ( $OR=3.6$  CI=1.6-8.2) and CHD ( $OR=2.7$  CI=1.2-6.3) compared with the other groups. In contrast, those who were underweight had a significantly higher risk of having a hip fracture ( $OR=3.7$  CI=1.2-11.3). Contrary to expectations there was no association with the chronic diseases and conditions in the overweight group. Conclusion: In conclusion, these data pinpoint a need to further evaluate the real and important risks of being overweight or obese in the elderly.

**PB7 413 IS STATIN THERAPY REALLY FAVORABLE FOR THE HOSPITALIZED VERY OLD SUBJECTS?**

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Objectives: cardiovascular diseases are the first cause of mortality in the world and hypercholesterolemia is mainly implicated. A preventive treatment with statins is recommended in France to control plasma cholesterol level in subjects under 80. The aim of our study was to analyze blood lipid levels in old hospitalized patients receiving a statin therapy in a geriatric hospital. Methods: during a one day survey, the lipid status was established in 136 hospitalized patients taking a statin (48M, 88F, age:  $81 \pm 10$  years), by measuring total cholesterol, triglycerides, low- and high-density lipoprotein cholesterol (LDL-C, HDL-C). The serum albumin informed about the nutritional status. Results: 44% presented a hypocholesterolemia and 2% a hypercholesterolemia. Among the hypocholesterolemic patients, indications of the statin treatment were: cerebral vascular complications (35%), cardiac and/or vascular disease (29%), complicated diabetes (18%), other (history of hypercholesterolemia, not found indication: 17%). On these patients, 47% were malnourished, 100% had a LDL-C <2.6mmol/L (1g/L) and 67% had a HDL-C <1.0mmol/L (0.4g/L). Discussion/Conclusion: the benefit of a cardiovascular prevention has been demonstrated for the subjects from 70 to 80 years but not for the subjects after 80. Taking account of histories and risk factors of this population, therapeutic objectives in term of LDL-C lowering are reached. However more than half of the hypocholesterolemic patients presented a weak concentration of HDL-C which has been reported as a vascular risk factor in the under 80 years-old patients and may then modify the benefit/risk balance of the therapy. Since published data concerning comorbidity and mortality of hypocholesterolemia in the elderly are controversial, our study asks the question of the relevance of a statin prescription to the subjects more than 80 with multiple medication, especially in case of malnutrition.

**PB7 414 PREVALENCE OF GASTROINTESTINAL SYMPTOMS AND ASSOCIATION WITH CLINICAL AND FUNCTIONAL CHARACTERISTICS IN ELDERLY**

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Introduction The aim of the study was to evaluate the prevalence of the upper gastrointestinal symptoms and their association with functional and clinical characteristics in elderly outpatients in Italy. Methods and materials: The study was carried out by general practitioners in elderly outpatients. By using a structured interview, data on age, gender, education, Body Mass Index (BMI), smoking-alcohol-coffe use, functional status

according to Barthel-ADL, concomitant diseases and therapies were recorded. The UGISQUE (Upper GastroIntestinal Symptom Questionnaire for the Elderly), a validated tool including 15 items divided into five symptom clusters: A)abdominal pain; B)reflux syndrome; C)indigestion syndrome; D) bleeding; E)nonspecific symptoms (anemia, anorexia, weight loss, vomiting, dysphagia), was used. Chi-square and Fisher test, GLM procedure, Cochrane-Armitage test for trend and logistic regression were considered. Results: 3,100 subjects (M=1,547, F=1,553, mean age=72.2+6.2) were included in the analysis. The overall prevalence of upper gastrointestinal symptoms was 43.0%, cluster A)=13.8%, B)=21.8%, C)=30.2%, D)=0.3%, E)=5.7%. Patients with symptoms were significantly older ( $p=0.05$ ) and disable ( $p<0.0001$ ) than subjects without symptoms. Significantly higher BMI ( $p=0.0005$ ) and more concomitant diseases ( $p<0.0001$ ) and therapies ( $p<0.0001$ ) were observed in symptomatic vs non-symptomatic subjects. Logistic regression analysis demonstrated that female sex ( $OR=1.78$ ), disability ( $OR=2.13$ ), BMI ( $OR=1.07$ ), upper and lower gastroenterological ( $OR=8.44$ ;  $OR=2.93$ ,respectively), psychiatric ( $OR=1.80$ ),respiratory ( $OR=1.57$ ) and heart diseases ( $OR=1.54$ ) were significantly associated with upper gastrointestinal symptoms. Conclusions: Female sex, disability and obesity are significantly associated with upper gastrointestinal symptoms. Other than gastroenterological diseases, psychiatric, respiratory and heart disorders were also associated with symptoms.

**PB7 415 FRUIT INTAKE INFLUENCES BONE MINERAL DENSITY (BMD) AMONG JAPANESE MIDDLE-AGED AND ELDERLY**

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Introduction: The purpose of the present study was to evaluate the effects of fruit and/or carotenoid intakes on BMD among the middle-aged and elderly. Methods and materials: The subjects were the participants in the NILS-LSA (National Institute for Longevity Sciences-Longitudinal Study of Aging), a population-based study for aging and age-related changes. The participants were examined biannually. The cumulative number of the participants from the first to the fourth wave examination was 7203, aged from 40 to 79 at the first visit. Fruits and carotenoid intakes were estimated by 3 day weighed dietary records based on the Standard Tables of Food Composition in Japan (the 5th revised and enlarged edition). BMD was measured at 8 sites of the body using dual energy X-ray (DXA) and peripheral quantitative computed tomography (pQCT). The relationships of fruit and carotenoid intakes with BMD were evaluated by sex using mixed effect model controlled for age, BMI and auto-regression (SAS 9.1.3). The statistical significance was set of  $p<0.01$ . All procedure was approved by the Committee of the Ethics at the NCGG. Results: As fruit intake increased, BMD at site of total body ( $p=0.0001$ ), lumbar spine ( $p=0.030$ ), femoral trochanter ( $p=0.0002$ ) by DXA, as well as D100 ( $p<0.0001$ ) and P100 ( $p=0.0005$ ) by pQCT increased significantly among females. As for males, fruit intake influenced positively BMD at site of total body, lumbar spine, femoral trochanter by DXA and D50, D100 and P100 by pQCT. Carotenoid intakes showed no significant relationship with BMD among both of males and females. Conclusion: Fruit intake, or life-style related fruit intake, may have some benefits on maintaining BMD among the middle-aged and elderly.

**PB7 416 OBESITY AND PHYSICAL FUNCTIONING IN THE ENGLISH LONGITUDINAL STUDY OF AGEING (ELSA)**

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Introduction: The prevalence of obesity is increasing across the age spectrum even in the oldest age groups. In England, more than half of all adults are currently classified as overweight or obese. The aim of this longitudinal study was to assess whether excess body weight and raised waist circumference affected physical functioning in older persons living in England. Methods and materials: The study population consisted of 3681 participants aged 60 and older (mean age 71 years) who took part in three waves (2002, 2004 and 2006) of the English Longitudinal Study of Ageing (ELSA), a prospective national cohort study of people aged 50 years and over. The outcome measures included a self-reported physical function measure namely activities of daily living (ADLs) and an objective physical function test namely gait speed which involved timing how long it took to walk a distance of eight feet. Measurements were collected during the three waves. The main independent variables were body mass index (BMI) and waist circumference. Multiple regression analyses were used to investigate the effects of both BMI and waist circumference on physical functioning. Results: Among overweight men and women and obese women, mean walking speed decreased significantly from Wave 1 to Wave 3 (i.e. poorer mobility functioning). Similarly, regression results show that both men and women in higher BMI ( $OR=1.50$ ; 95% CI = 1.30-1.70;  $p<0.001$ ) and waist circumference ( $OR=1.06$ ; 95% CI = 1.00-1.12;  $p<0.040$ ) categories were more likely to report poorer physical function according to the ADL measure. Conclusions: The findings suggest that excess body weight and raised waist circumference were associated with a decline in

physical functioning in older men and women. The increasing numbers of overweight and obese older people is likely to create a strain

**PB7 417 FRUIT AND VEGETABLES AND COGNITIVE FUNCTION: PRELIMINARY RESULTS FROM THE SU.VI.MAX2 STUDY**

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**Introduction** Hypotheses suggest that intake of fruit and vegetables (FV) may protect from age-related cognitive impairment. We aimed to study the association between these dietary factors and cognition assessed 13y later, in a preliminary analysis of the on-going Supplementation with Antioxidant Vitamins and Minerals 2 (SU.VI.MAX2) study. **Methods** The SU.VI.MAX study (1994-2002) included 12,741 middle-aged adults and aimed at testing the impact of antioxidant nutrients on chronic diseases risk. Subjects were invited to complete 24-hour dietary records. After the intervention, about 7,200 participants accepted to take part in the SU.VI.MAX2 study launched in 2007. Subjects participated in a clinical examination including several cognitive tests: Mini Mental State Examination (MMSE), "5 words test" and self-reported Cognitive Difficulties Scale (CDS). The relation between cognitive impairment and food intake was assessed by logistic regression analysis. Results Preliminary analyses included 1,462 men and 1,204 women, aged 64±5 years at the time of cognitive evaluation. After adjustment for covariates, MMSE impairment was associated with a low intake of FV ( $OR=Q4versusQ1=0.71[0.49-1.01]$ ), of vegetables ( $OR=0.69[0.49-0.97]$ ), of FV folate ( $OR=0.63[0.44-0.89]$ ) and of FV vitamin C ( $OR=0.60[0.43-0.85]$ ), in men. "Five word" test impairment was associated with FV folate ( $OR=0.64[0.44-0.93]$ ), in women. **Conclusion** According to these preliminary results, cognitive impairment was less frequent among elderly having a high fruit and vegetable intake assessed 13 years earlier. We thank the volunteers and the clinicians who carried out the clinical examination. This work was granted by ANR (n° 05-PNRA-010), DGS (Ministry of health) and supported by Mederic, Ipsen and Pierre Fabre.

**PB7 418 GLYCEMIC CIRCADIAN RHYTHMICITY IN ELDERLY WITH DIABETES**

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**Introduction:** Diabetes in the elderly is characterized by a lack of increase in hepatic glucose output during the dawn period. Glucose profiles in the elderly are therefore likely to be different from those described in younger subjects. The objective of this preliminary study was to determine glucose profile in a diabetic population of elderly treated with oral antidiabetic medication only. **Research design and methods :** We selected 16 type 2 diabetic subjects over 70 years old treated with antidiabetic medication only. Glucose profiles were obtained using a continuous glucose monitoring system (Guardian RT™, Minimed) during 12 to 72 hours. Drug therapy and nutrition were stable during monitoring. Increase in preprandial glycemia was estimated using linear mixed model. **Results :** Subjects were  $80.5\pm4$  years old, with a mean diabetes duration of  $9.4\pm7.7$  years, a BMI of  $27.5\pm6.5\text{kg/m}^2$  and a HbA1c of  $7.3\pm1.4\%$ . An increase in preprandial glycemia during daytime (7h:  $1.31\pm0.36\text{g/l}$ ; 12h:  $1.46\pm0.52\text{g/l}$ ; and 19h:  $1.47\pm0.57\text{g/l}$ ) with a maximum attained at midnight ( $1.48\pm0.45\text{g/l}$ ,  $p=0.018$ ) was observed. During nighttime (0h-7h), glycemia decreased continuously ( $0.047\text{g/l/h}$ ,  $p=0.001$ ), without dawn phenomena, independent of sex, BMI, diabetes duration, antidiabetic medication and HbA1c level. **Conclusion:** Glucose profiles in patients over 70 years old and treated with oral antidiabetic medications are different than those from younger subjects. We observed in the elderly an increase in glycemia during daytime and a decrease during nighttime without dawn phenomena. Our results suggest a preferential use of basal insulin in the morning, in this age group. Other studies including a larger number of patients with a greater diabetic imbalance are needed to confirm our results.

**PB7 419 GENDER DIFFERENCE REGARDING DYSLIPIDEMIA AND GLUCOSE SERUM LEVELS AS PREDICTIVE FACTORS FOR COGNITIVE DYSFUNCTION IN ELDERLY**

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Cardiovascular risk factors have a major and well-known role in ethiopathogenesis and evolution of cardiovascular and cerebrovascular disease with great impact on cognitive function. This study aims to evaluate some of the cardiovascular risk factors especially lipidic and glycemic profile on elderly people. There were 121 patients included, age 60-95 years, men and women diagnosed with mild cognitive impairment. A comprehensive geriatric and psychogeriatric examination was done to all patients. Exclusion criteria comprises acute or severe diseases, neurological or psychiatric diseases, severe cardiovascular disease or diabetes mellitus. We have evaluated anthropometrical, social, biochemical and hematological parameters. Statistically significant correlations were observed between some cardiovascular risk factors and cognitive dysfunction with interesting correlations and differentiations by gender.

**PB7 420 FRAIL ELDERLY OUT-PATIENTS: PREDICTORS OF OUTCOME AFTER ONE YEAR**

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**Objective.** Frail community-dwelling outpatients represent an important population for preventive actions. Nutrition and inflammation markers have consistently shown to be associated with mortality in hospitalized or community-dwelling non selected elderly populations, but little data is available for frail outpatients. Also, other outcomes (hospitalisation, admission to nursing home) have been little studied. **Methods.** 192 outpatients aged  $80.6\pm7.6$  years with loss of autonomy and cognitive disorders referred to the hospital outclinic for comprehensive geriatric evaluation. Data concerning nutrition and inflammation were collected on the initial visit: BMI, arm and calf circumference, Mini Nutritional Assessment, and plasma concentrations of albumin, transthyretin, CRP, orosomucoid, Iron, ferritin, vitamin B9 and B12, calcium, and creatinin were also noted. A questionnaire was sent to the general practitioner so as to collect information for outcome one year after the visit to the hospital (death, hospitalisation, nursing home admission). **Results.** We received information about outcome for 123 (69 %) of our patients. Eighteen had died, 18 had been hospitalised at least once and 10 were in nursing homes one year after the initial visit. In multivariate analysis, significant risk factors for death were age ( $RR=1.079 [1.001 - 1.163]$ ), CRP ( $RR = 1.037 [1.010 - 1.063]$ ), creatinin ( $RR=1.023 [1.005 - 1.042]$ ) and ferritin ( $RR=1.002 [1.001 - 1.004]$ ). The higher the BMI, the higher the risk for hospitalisation in the year following the visit ( $RR=1.111 [1.033 - 1.194]$ ). Multivariate analysis showed that only serum creatinin was predictive for admission in a nursing home ( $RR=1.031 [1.006 - 1.056]$ ). **Conclusions.** Predictive factors differed when considering the different outcomes such as death, hospitalisation or admission in a nursing home. This shows the difficulty for predicting outcome in these frail elderly outpatients.

**PB7 421 INCREASED WAIST CIRCUMFERENCE THE MOST IMPORTANT CRITERIA FOR DETECTING METABOLIC SYNDROME IN THE ELDERLY.**

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**Introduction:** Cardiovascular diseases are the leading causes of death in both developed and developing countries, and affect the quality of live of the elderly patients. Researchers have stressed the importance of simultaneously controlling risk factors as a way to prevent cardiovascular diseases. Metabolic Syndrome (MS) is an important and prevalent risk factor for cardiovascular diseases in the elderly. This study aims to quantify the most important criteria for diagnosing MS in Brazilian elderly (60 years and older) and in octogenarian (80 years and older) subjects. **Methods and materials:** We analyzed data from 226 elderly community dwelling subjects who participated in a general health evaluation in Porto Alegre, Brazil between January and July 2006. Using the International Diabetes Federation criteria for MS, participants were classified as having Waist-circumference (WC) criteria (80 cm or over for women and 94 cm for men), Blood Pressure (BP) criteria (135 mmHg for systolic or 80 mmHg for diastolic, or treatment), HDL cholesterol (HDL) criteria (less than 50mg/dL for women and 40 for men), triglycerides criteria (150mg/dL of higher) and glycemic criteria (100mg/dL or higher). **Results:** mean age was  $72.8 \pm 7.7$  yo, 35 were octogenarians, SM diagnosed in 156 (69%). Waist Circumference showed the highest positive predictive value (91%), followed by PA (88), HDL (79) triglycerides (70) and glicemic (59). In contrast WC was the lowest negative predictive value with 39%. Among the 14 participants with no WC criteria all had positive PA and HDL criterias. Octogenarians showed the same pattern of MS criteria frequency, similar results were found using NCEP-ATP III classification. **Conclusion:** increased WC is the most important factor in the assessment of cardiovascular risk for both elderly and octogenarian patients. In normal waist subjects PA or HDL cholesterol measurements may be important tools to detect MS.

**PB7 422 FACTORS ASSOCIATED TO OVERWEIGHT AGED INDIVIDUALS ASSISTED BY THE FAMILY HEALTH PROGRAM IN VITÓRIA, ESPIRITO SANTO, BRAZIL**

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**Introduction:** To verify the possible association of overweight and socio-demographic variables (sex, age, conjugal status and income source), self-reported Hypertension and Diabetes and physical activity in aged individuals. **Methods and Materials:** This was a sectional study with a sample of individuals with 60 years or more, users of the Family Health Program in Vitória, Brazil. Bedridden and institutionalized elders were excluded. Interviews were carried out at their homes and information relative to socio-economic, demographic and anthropometric variables was collected, along with health conditions, social support network, physical activity and self-reported morbidity. Univariate and bivariate analysis were performed and prevalence ratios with 95% confidence intervals were calculated, for the outcome overweight. Multivariate analysis was carried out through Poisson regression and only variables with statistical significance ( $p > 0.20$ ) were tested in the models. **Results:** The study population had 995 elders, with a predominance of women (69.4%). Analysis of nutritional state showed that 46.6% of the participants were overweighted. Comparing both genders, women presented a higher percent of overweight (49.1%) than men. More than half of the sample (53.4%) presented waist circumference compatible with high risk for metabolic diseases. Variables statistically associated with overweight were years of schooling, hypertension, do not take walks and to be a pensioner. To be a woman was directly associated with overweight, but without statistical significance. The following variables remained in the final adjusted model: hypertension (PR=1.30; CI 1.13-1.40), to be a pensioner (PR=1.44; CI 1.14-1.84) and do not take walks (PR=1.23; CI 1.07-1.43). **Conclusions:** The factors associated to overweight who remained in the model are likely to be modifiable through policies directed towards a good quality of life for aged people.

#### PB7 423 UNDERNUTRITION AND NOSOCOMIAL INFECTIONS IN ELDERLY PATIENTS.

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**Introduction:** hospital-acquired infections and malnutrition are two problems in public health in elderly patients. They are a frequent complication of hospitalisation and are associated with high morbidity, mortality rate and costs. This study aims to determine the incidence of nosocomial infections (NI) and its association with malnutrition. **Methods and materials:** 252 inpatients aged 85.2 ± 6 years old admitted in acute geriatric unit or rehabilitation unit during two years were included consecutively in the study. The nutritional assessment was based on evaluation of dietary intake, several anthropometric indices, MiniNutritionalAssessment (MNA), NutritionalRiskIndex-Geriatrics (NRI-G), and biological markers (serum nutritional proteins, CRP, vitamins A, E, C, Zinc, Selenium). The definition of malnutrition from the HAS (French high authority on health care) includes: weight loss > 10% in 6 months, BodyMassIndex (BMI)<21, MNA<17, serum Albumin<35g/l. During hospitalisation patients' progress was closely monitored, particularly for the detection of nosocomial infections. **Results:** the incidence rate of NI was 38.4%. One hundred and thirty six infections were recorded. The most frequent infection sites were pulmonary (n=64; 47%) and urinary tracts (n=54; 40%). The nutritional status of the population, the comorbid conditions [MiniMentalStatusExamination(MMSE), ActivitiesDailyLiving(ADL), CumulativeIllnessRatingScale(CIRS-G)] and the risk factors were studied by comparing two groups defined according to the absence (group I, n=155) or presence of one or more NI (group II, n= 97). The patients of group II versus group I were older with higher morbidity rate (CIRS-Ger p = 0.0001) and more discharge placement. They showed an altered nutritional status with a higher proportion of patients with deficit in vitamin C ( p= 0.005), zinc ( p= 0.02), selenium ( p= 0.01), also a greater loss of autonomy (ADL p =0.0002) and cognitive decline (MMSE p=0.03). **Conclusion:** The malnutrition, the deficit in Vitamin C, Zinc, Selenium are associated with high infectious risk in the elderly inpatients.

#### PB7 424 TASTE PERCEPTION AND NUTRITIONAL STATUS IN GERIATRIC PATIENTS – IS THERE AN ASSOCIATION WITH MEDICATION?

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**Introduction:** Sarcopenia and disease-associated malnutrition are typical phenomena in the elderly. In a prospective study we analyzed the nutritional status as well as the sensitivity of taste perception of geriatric patients in comparison to healthy controls; furthermore a potential association between disease related medication and sensitivity of taste. **Methods:** 265 (81 men) patients of a geriatric hospital, average age 83 (range 60-100) years, were evaluated. 169 of them (group 1: average age 82; range 61-100 years) have been treated with drugs which can potentially cause alterations of taste perception. The other 96 patients (mean: 84 years; range 60-95) with no taste affecting medication were taken as group 2. A series of three-alternative-forced-choice procedures was used to determine the detection thresholds for the five basic taste qualities: sweet, salty, sour, bitter

and umami. Additionally, the nutritional status was measured using the Mini Nutritional Assessment (MNA™) protocol. Data were statistically compared to those of 150 (61 men) healthy controls aged from 49 to 71 (mean: 60) years. (Mann Whitney U-Test;  $p < 0.01$ ) **Results:** In the nutritional assessment, the geriatric patients scored with a median index of 17 (3-26) points. The prevalence of severe malnutrition (MNA™ < 17) was 49.1 %. The controls reached a significantly higher median index of 25.5 (17-29) points. In comparison with the controls, the geriatric patients of both groups showed significantly increased detection thresholds for all basic taste qualities. Between groups 1 and 2 no difference in taste perception was observed. **Discussion:** The nutritional status of geriatric patients was significantly lower than that of controls. The patients also showed impaired taste perception for all five basic qualities. These alterations have to be more attributed to age and disease per se, than to the intake of drugs considered to have taste affecting side effects.

#### PB7 425 INTERVENTIONS TO MAINTAIN OR IMPROVE THE NUTRITIONAL STATUS OF MALNOURISHED ELDERLY IN-PATIENTS

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**Introduction:** Many elderly patients refuse food or eat very little in the peri-hospitalisation period. Whilst a nutritional screen in the integrated nursing record provides a quick assessment of nutritional risk, malnutrition remains poorly diagnosed, and treatment interventions are inconsistent, and poorly sustained. **Methods and Materials:** Using clinical practice improvement programme (CPIP) and Deming's plan-do-check-act (PDCA) methodology, a multidisciplinary team was configured, comprising doctors, nurses, dieticians and speech therapists, to review the nutritional issues of orally fed malnourished elderly patients admitted to a 38 bed geriatric ward in Changi General Hospital. Over a 9 month period a ward survey was carried out, work processes and documentation reviewed, and issues discussed using cause-effect (fish-bone) structure and charting, embracing the Pareto principle. Small interventions were introduced and systematically fine tuned to implement sustainable changes. **Results:** Initial screening found that the nutritional trigger in nursing documentation was inaccurate. Using the improved form, 24/31 patients (77%) on oral feeding were reviewed: 8/24 (33%) were found to be screen positive, of which 3/8 (38%) were not referred to the dietician, and 4/8 (50%) were not weighed. Among all patients, only 11/31 (29%) were weighed (the rest considered unfit). Among the cause-and effect discussions, the most important factors were in nursing screening, with poor appetite and dislike of hospital food not being documented and communicated. Nutrition alert triggers and colour codes were introduced and food palatability, charting of consumed food portions and supplements improved. Nutritional issues were highlighted at weekly team meetings and interventions reviewed through repeated PDCA cycles. Weighing of patients, referral to dieticians, nutrition alert charting and counselling on admission and discharge improved from initial rates of 0-30% to rates of 80-100%. **Conclusion:** CPIP methodology can successfully change the unstructured interventions for elderly malnourished patients, resulting in better measurements, documentation, communication and improved feeding interventions.

#### PB7 426 RELATIONSHIP BETWEEN THE CONSUMPTION OF DIETARY PHOTOPROTECTIVE FOODS WITH THE SKIN REACTION TO UV RADIATION DUE TO SUN EXPOSURE OF A VACATIONING POPULATION OF THE SOUTHERN COASTLINE OF BRAZIL

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**Introduction:** Skin aging is a continuous process that affects skin functioning as well as its appearance. Intrinsic and life style related factors contribute to cutaneous aging. The hazardous effects of chronic exposure to ultra-violet (UV) radiation can be responsible for some of these effects (Chung et al, 2001). Certain micronutrients commonly found in the diet, such as carotenoids, tocopherols, ascorbic acid, flavonoids and some fatty acids have protective capacities against UV radiation. **Methods.** Transversal study. The population consisted of adults vacationing in Xangrilá beach (southern Brazil). The Fitzpatrick Classification Scale was used to evaluate the skin photo type (Kawada, 2000). The nutritional status was classified through the Body Mass Index (BMI) (WHO, 1995). To determine the consumption of photoprotective nutrients a food frequency questionnaire was used (Fisberg, 2008). The statistics analysis was performed using SPSS Software. The T of Student Test was applied for the association analysis. **Results.** 86 individuals were studied. Among them, n=48 (55.8%) presented a normal BMI and n=34 (39.5%) were overweight ( $BMI > 25 \text{ kg/m}^2$ ). N=61 (70.9 %) were among photo types I to III; and n=25 (29.1%) between photo types IV and V. The frequency of regular dietary intake (consumption > 5 times/ week) of photoprotective nutrients was respectively: Vitamin E n= 73 (84.9%); Vitamin C n=42 (48.8%); Carotenoids n=68 (79.1%); Polyphenols n=35 (40.7%) e; Selenium n=16 (18.6%). The relationship between the regular intake of dietary sources of photoprotective nutrients with the skin photo type presented a positive association for Vitamin E ( $p=0.017$ ) and Selenium ( $p=0.049$ ). There was no significant association between regular consumption of photo protective nutrients with the gender, age and BMI variables. **Conclusion:** There was a high prevalence of individuals with a skin

photo type more sensitive to UV radiation that did not present a regular adequate consumption of photoprotective nutrients.

**PB7 427 SENSORY CHANGES AFFECT APPETITE IN THE OLD**

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Introduction Aging is associated with decreased appetite and food intake. This study examines risk factors for impaired appetite in the old age. Including, a detailed taste and smell measurement. Methods: Subjects: Independent living elders aged 70+ years were recruited. We collected data on nutritional and medical status, sociodemographics and functional abilities. Tests for taste and smell sensitivity were performed. Impaired appetite was defined by the SNAQ questionnaire. Results: Seventy elderly people with mean age of 80 participated in the study; 20% had impaired appetite. Participants with impaired appetite had lower BMI [24.7 vs. 28, p=0.05] and Mini Nutritional Assessment (MNA) score [28 vs. 30, p=0.03] compared to participants with normal appetite. Among participants with impaired appetite 36% consumed meat, fish or poultry daily compared with 79% among participants with normal appetite [p=0.002], 36% had lower fruits and vegetables intake compare with 5% among the normal appetite group [p=0.001]. No difference was detected between the groups in medical status, family-status, smoking, eating-habits, oral health and the number of full meals. A decrease in the sensitivity to the smell of coffee was associated with impaired appetite [p=0.007]. All the participants with impaired appetite were highly sensitive to the bitter taste, compared with 50% among participants with normal appetite [p=0.048]. Conclusions: Impaired appetite increases the risk for nutritional and health deterioration as well as for lower diet quality. Regarding the impact of gustatory and olfactory alterations on appetite, we show that impaired appetite is associated with changes in the senses of taste and smell. Follow up researches are needed to investigate the temporal sequence between the time at which a change in the senses of taste and smell occurs, and the observed decrease in appetite.

**PB7 428 EFFECT OF AGE ON GLUCOSE AND CHOLESTEROL CONCENTRATION DIABETES DISEASE**

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Introduction: It has shown that receptor of glucose slowly change in cell membrane and its concentration be increased in ECF (extra cellular fluid). Age is important factor affected in glucose concentration. Methods of materials: Thirty patient (women) diabetes were selected and divided into two groups of its age: first group <50 year and second >50year. Samples of blood were analyzed for Fasting blood sugar (FBS) and Total cholesterol (TC). Result: In first group FBS and TC were  $200.25 \pm 69.66$  mg/ml and  $203 \pm 55.7$  mmol/ml respectively. In second group FBS and TC were  $179.61 \pm 38.97$  mg/ml and  $211.5 \pm 63.7$  mmol/ml respectively. Result: In young group, concentration of FBS and TC was greater than of old group. Conclusion: Unfortunately, the younger group doesn't keep to the roles of ration but them organisms could be suffer high concentration on cholesterol and glucose. In old group tolerance threshold is low and it seems that receptor of glucose were decrease, so in second group sugar concentration in ECF is very dangerous. Key word: Diabetes, FBS, TC.

**PB7 429 NORMAL BODY MASS INDEX RATHER THEN OBESITY PREDICTS INCREASED MORTALITY IN THE ELDERLY**

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Introduction: To examine the impact of body mass index (BMI) on all cause mortality in the elderly. Methods and materials: Data was drawn from the Jerusalem Longitudinal Cohort study (1990-2008) which has followed a randomly chosen, representative sample of Jerusalem dwelling older people, drawn from the cohort born 1920-1921. Comprehensive assessment was performed in 1990, 1998, and 2005, with subjects aged 70 (n=450), age 78 (n=877), and age 85 (n=1096) respectively. The study sample was augmented at follow up with additional randomly chosen subjects from the original birth cohort. All cause mortality was collected from the National death registry during the period 1990-2008. Results: An adjusted Cox proportional hazard analysis in women found that a unit increase in BMI resulted in a mortality hazard ratio(HR) at age 70 of 0.95, 95% confidence interval (CI) 0.90-0.99; at age 78 the HR was 0.95, 95%CI 0.91-0.98, and at age 85 the HR was 0.91, 95%CI 0.85-0.97. Similarly, among men at age 70 the HR was 1.002 95%CI 0.95-1.05, at age 78, HR 0.94 95%CI 0.9-0.99, and at age 85 (HR 0.92 95%CI 0.85-1.0). A time dependent analysis of the 450 subjects followed up for 18 years confirmed the above findings: among women a unit increase in BMI resulted in a mortality HR of 0.93, 95% CI 0.87-0.99, and among men the HR was 0.94, 95% CI 0.89-0.98. Dependence in activities of daily living, diagnoses of cancer and diabetes mellitus were predictive in most models. Elimination of the first third of follow-up mortality to account for possibility of reverse

causality did not change the results. Conclusions: In the elderly higher BMI appears to protect from mortality.

**PB7 430 THE MEANING OF QUALITY OF LIFE ACCORDING TO THE EXPERIENCES OF ELDERLY INDIVIDUALS WITH TYPE-II DIABETES MELLITUS**

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INTRODUCTION: Type-II diabetes mellitus (DM-II), is a very important clinical condition for the elderly population due to the frequency of its occurrence and to the fact that it causes micro and macrovascular complications that may lead to dependence and disability. In addition to possible complications, continuous treatment may significantly affect these individuals' lifestyle. OBJECTIVES: To evaluate the effects of DM-II on the quality of life of elderly individuals. METHODOLOGY: This is a qualitative study with a phenomenological approach. Twelve elderly individuals with DM-II, age ranged from 60 to 90 years, ( $X=75$  years old). The period of development of the disease ranged from one to 40 years, ( $X=10$  years). The patients were attended to at the Geriatrics and Gerontology Outpatient Unit of the Botucatu School of Medicine. A taped interview was conducted during which the following guiding question was answered: "What does quality of life mean to you?" RESULTS AND DISCUSSION: Quality of life was essentially related to physical, emotional and financial independence. Affective relationships with relatives and friends as well as affection for household pets were highly valued. Another relevant aspect was mental and spiritual well-being. Living well, not doing harm to others, not having debts, not being disturbed and being in peace with God were requirements for good quality of life. They reported to live well and that diabetes was a limiting aspect, as it restricted diet and other good things. They classified the disease as being silent and difficult to control over time. CONCLUSION: Independence, affective relationships constructed over one's lifetime and spiritual belief were reported as factors that can promote quality of life. Diet restriction was the major negative aspect in such quality. They classified diabetes as a silent disease, and indicated that it was difficult to control over time, which requires, from health care professionals, continuing and accessible orientation concerning the disease. Key words: Elderly, Diabetes Mellitus, Quality of Life

**PB7 431 NUTRITION RISK AND LIVING TO ADVANCED AGE**

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Introduction Poor nutrition in older people may hasten or amplify poor health. The population of very old people is growing rapidly in New Zealand and is expected to increase by 50% between 2006 and 2051. Data on the nutrition risk profile of older New Zealanders remains scarce. This study investigated the association between living arrangement and nutrition risk among a purposive sample of those in advanced aged. Methods and materials A cross-sectional feasibility study was conducted among 112 participants (57% women and 43% men) aged 85 years (75- 79 for Maori) living in three North Island locations (urban and rural). Nutrition risk was assessed by questionnaire items from Seniors in the Community: Risk Evaluation for Eating and Nutrition (SCREEN II) validated for use in the community. Results Half (52%) of the participants in this study were found to be at nutrition risk (SCREEN II score <50; range 29-58; out of maximum score 64). The mean score for SCREEN II was higher for older people who lived with others ( $50.3 \pm 5.1$ ) compared to those who lived alone ( $46.4 \pm 5.8$ ) p=0.001. Those in a shared living situation tended to eat foods from the meat group more often (70%) (i.e. at least two or more times a day) versus those living alone (30%) p=0.006. Consumption of the recommended five serves of fruit and vegetables per day did not differ by living arrangement. Conclusion In this sample those who live alone and do not have the opportunity to share meals with others appear to be at higher nutrition risk. Health and well being may be compromised as eating alone is known to lead to altered food procurement, preparation, cooking and eating of meals. Factors affecting nutritional well being will be investigated in a longitudinal cohort study of the top 1% of the older population.

**PB7 432 BODY MASS INDEX AND PERCEIVED BARRIERS TO PHYSICAL ACTIVITY AMONG OLDER PEOPLE**

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Introduction: Older people with higher body weight are often more sedentary than those with normal weight. This study examined factors underlying the association between body mass index and physical activity among older people. Material and methods: 619 community living people aged 75-81 years who had their weight and height measured, took part in face-to-face interviews and filled in a questionnaire about physical activity and barriers to physical activity. Based on body mass index, participants were categorized as non-obese (BMI 20-29.9; n=436), moderately obese (BMI 30-34.9; n=127) or severely obese (BMI 35 or more; n=56). Results: Compared to the non-obese group, moderate

obesity associated with two times (OR 1.97, 95%CI 1.26-3.09) and severe obesity over four times greater odds of physical inactivity (OR 4.59, 95%CI 2.55-8.26). Higher prevalence of pain, chronic diseases, tiredness, fear of falling and injuries, feelings of insecurity when exercising outdoors, feeling uncomfortable when exercising and having no interest to exercise was observed among those categorized as obese as well as among those categorized as physically inactive. In the multivariate regression model, higher prevalence of tiredness explained 22%, fear of falling 18%, pain 15%, feelings of insecurity when exercising outdoors 8%, chronic diseases 7% and fear of injuries 7% of the increased risk of inactivity among severely obese people. However, even after including all the potential barriers to physical activity in the model, the excess risk of physical inactivity among those with severe or moderate obesity was not fully accounted for. Conclusions: Part of the increased inactivity among severely obese people was explained by their higher prevalence of known barriers to physical activity. The complexity of obesity-related inactivity should be taken into account when planning physical activity programs for older obese individuals.

#### **PB7 433 SOY FOOD AND ISOFLAVONE INTAKE AND PHYSICAL DISABILITY IN OLDER WOMEN**

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Introduction: Soy food and its constituents may protect against functional disability, but previous reports on the association between soy intake and decreased level of disability have been inconsistent. We evaluated the relationship between disability and the dietary intake of soy food and isoflavone in older women. Methods and materials: Data are from the 2005 Korean National Health and Nutrition Examination Survey (KNHANES). Subjects were women aged 65 and older (n=432) living in the community. Information on soy food intake was obtained using a 24-hour dietary recall, and physical disability was assessed using the activities of daily living (ADLs) and instrumental ADLs (IADLs) scales. Logistic regression analyses were used to ascertain the association of soy food and isoflavone intake with ADLs and IADLs, adjusting for potential confounders, including sociodemographics, health behaviors, chronic diseases, and other nutrient intake. Results: The dietary intake of soy food and isoflavone tended to be higher among those not impaired compared with the impaired in physical function, with significant difference observed for soy isoflavone (mean [SD]: 25.5 [27.4] mg/day vs. 19.8 [22.5] mg/day, p=0.02). Adjusting for covariates, an inverse association between quartiles of soy food and isoflavone intake and physical disability was observed (P for trend<0.05). Respondents with the highest soy food intake had the lowest odds of having IADL disability (OR [95% CI]=0.40 [0.20-0.79]). Persons in the highest quartile of soy isoflavone had 52% lower odds of having IADL disability, than those in the lowest quartile. Soy food and isoflavone intake also tended to correlate inversely with impaired ADLs, but were not statistically significant. Conclusion: Increased soy food and isoflavone intake may be protective against functional limitations and disability in older women. Further research is needed to ascertain the effect of diet on functional limitations and disability in older persons.

#### **PB7 434 UNIVERSAL PROVISION OF DIABETIC DIET IN A CARE HOME: DOES IT HELP IN DIABETES CARE?**

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Introduction: Diet control in diabetes care is of great importance. Systemic implementation of diabetes diet in the care homes may improve diabetes control for diabetic residents. The main purpose of this study was to evaluate the clinical effectiveness of systemic implementation of diabetic diet in the long-term care settings. Methods and materials: All residents living in Banciao Veterans Care Home who participated in the annual health examination in 2008 were invited for study and they were enrolled after they were fully consented. Serial anthropometric and laboratory examinations were performed for each participant. Results: In total, 957 residents participated in this study and 225 of them (23.5%) were diabetic by medical records. Among the 225 diabetic residents (mean age=81.2±4.8 years, all males), 44 were provided universal diabetic diet (case group) and remaining 181 participants were provided conventional diet (control group) in the care home. Overall, subjects provided with universal diabetic diet were not better in hemoglobin A1c (7.6±1.5 vs. 7.3±1.5 %, P=0.32), but fasting plasma glucose (128.4±39.9 vs. 139.2±59.9 mg/dl, P=0.26), total cholesterol (168.4±34.2 vs. 176.0±37.3 mg/dl, P=0.22), triglycerides (140.5±74.2 vs. 150.5±107.3 mg/dl, P=0.56), and BMI (24.7±3.3 vs. 24.9±3.4 kg/m<sup>2</sup>, P=0.73) were slightly better, but not statistically significant. However, the serum levels of creatinine (1.8±1.6 vs. 1.5±0.5 mg/dl, P=0.02) were significantly higher in case group and the mean systolic pressure was significantly lower in case group (132.5±17.2 vs. 139.2±20.3 mmHg, P=0.03). Conclusion: The benefit of universal provision of diabetic diet was marginal. However, the possible benefit of universal diabetic diet provision in assisting blood pressure control was significant (possibly related to low

salt intake). Further study is needed to clarify the role of universal diet provision in diabetic control in long-term care settings.

#### **PB7 435 TOTAL ENERGY EXPENDITURE OF INDEPENDENT OLDER BRAZILIANS LIVING IN AN URBAN COMMUNITY: A DOUBLY LABELED WATER STUDY.**

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Introduction: Data on the energy expenditure of older populations in developing countries is scarce and usually the energy needs are derived from studies in younger adults. It is well known that aging is related to a reduction in total energy expenditure, partially explained by the loss of lean body mass but also related to changes in physical activity, diet and other factors, some of which could be different in developing countries. The objective of this study was to assess the total energy expenditure of healthy older people free-living in an urban community. Methods and material: Thirty-one subjects aged from 60 to 75 years participated in this study, 19 women. Most of the participants were sedentary. Total energy expenditure (TEE) was measured through the doubly labeled water technique, two points method (Schoeller and colleagues). Resting energy expenditure (REE) of 24 volunteers was also assessed by indirect calorimetry and the physical activity level (PAL) was calculated as TEE/REE. Results: The mean total energy expenditure 770 kcal in± 653 kcal in men and 2004 ± 752 kcal, 2576 ± was 2186 160 kcal in women. The± 156 kcal in men and 1415±women. REE was 1607 mean physical activity level was 1.6 in men and 1.4 in women. Conclusions: In this study, the total energy expenditure of sedentary independent older volunteers was close to the present estimated energy requirements (EER) for the ages of 51 to 70 years, although the EER of men is 370 kcal below the measured expenditure. PAL showed the same levels as described in other studies for sedentary older adults.

#### **PB7 436 PATIENT EDUCATION IN AN ACUTE CARE SETTING. FEASABILITY AND MEDIUM-TIME EFFECTS OF A SHORT PARTICIPATORY PATIENT-EDUCATION FOCUSING ON HYPERTENSION IN ELDERLY PATIENTS WITH NON-INSULIN-DEPENDENT DIABETES**

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Patient education is crucial in preventive medicine to achieve and maintain a healthy and appropriate lifestyle and hereby minimize the burden of morbidity due to chronic disease. The framework concept of shared decision making encourage health care professionals to apply a participatory approach in patient education. Feasability and effects of such an approach has already been described in ambulatory settings but little is known about implementation in acute care. Also participatory approaches are often referred as less appropriate in the elderly. To examine the feasability and medium-time effects of a participatory educational session offered in an acute care setting a pilot-study was done in elderly patients with diabetes and hypertension. Patients were recruited from a ward for general internal medicine and geriatric wards. They were eligible if acute illness was controlled or partially recovered. Exclusion criteria were dementia, delirium, instable clinical condition and remaining prognosis below 1 year. Patients were randomized to an intervention group consisting of a short (30 minutes) participatory education session focussing on self-management of hypertension. Reassessment of participants by telephone took place 3 months thereafter. 44 patients (29 women and 15 men, age 57-88) took part in the study. After three months in the intervention group (N=20) significantly more participants showed reduced blood pressure values, both systolic (120-160mmHg) and diastolic (70-90mmHg), body weight (50-121kg) and HbA1c (5.8-11.3%). However, only 4 patients in the intervention group achieved blood pressure values of 130/80mmHG or below. Also median weight reduction was limited (2kg). Participatory patient education when applied in an acute care setting is feasible and provides beneficial effects on blood pressure control, weight reduction and metabolic control in elderly but well-functioning patients with diabetes. Therefore this approach may effectively supplement usual ambulatory patient education.

#### **PB7 437 STUDY OF DIABETES AS A RISK FACTOR FOR STROKE FOR ELDERLY PATIENTS IN THE THREE-CITY STUDY**

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Background: Strokes and diabetes are two major public health issues regarding mortality and morbidity associated with them. Numerous studies have shown an association between diabetes and the occurrence of stroke among young subject. Objective: To study whether diabetes is a risk factor for stroke in the elderly over 65 years and if a strict blood sugar control reduces the risk of stroke for this population. Materials and Method: The studied

population was from the Three-City Study. It is a longitudinal cohort study of individuals over 65 years, undertaken to study the relationship between vascular disease and vascular dementia. The individuals whose diabetes status was known were included in our population. The event studied was a stroke. A survival analysis was conducted to study the risk of stroke over time. Results: In our sample population of 8721 people, 897 subjects were diabetic; the number of incident cases of stroke was 137 during the follow-up of 4 years. The diabetes among the elderly over 65 years did not appear as an independent risk factor for stroke in the studied population. The relative risk was 0.21 IC95% [0.03-1.51], p = 0.27 after adjustment on risk factors for stroke. The rise in glycated hemoglobin of 1% in the diabetic is also not associated with the occurrence of stroke with a relative risk of 1.77 IC95% [0.59-5.33], p = 0.3. Age, male, a body mass index greater than 27 and the existence of atrial fibrillation were independent risk factors for stroke. Conclusion: Our study showed no association between diabetes and the occurrence of stroke among the elderly over 65 years within the study of the Three-City study. These preliminary results have to be confirmed after the validation of the follow-up period of 6 and 8 years of the cohort.

**PB7 438 WATER INTAKE IN ELDERLY PATIENTS ON A GERIATRIC WARD**  
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Introduction: Dehydration is common amongst elderly people. Adequate hydration is essential to ensure normal physiological function and electrolyte and fluid balance is maintained. The amount of fluid an elderly person needs varies according to underlying diseases, medications and physical activity. The recommended amount of fluid an elderly person should consume in 24 hours should not be less than 1600 millilitres. Methods: Over a 24 hour period, all patients on a geriatric ward had the volume of water consumed from their bedside jugs measured and recorded just prior to the time of refilling. Water jugs were refilled twice daily, in the morning and late afternoon. Basic demographics, medical comorbidities, presence of diuretic medications, mobility status, use of parenteral fluids, fluid balance charts and cognitive impairments were recorded. Results: Water consumption was measured on a total of 26 patients. All were over 70 years old. More than half (58%) had no fluid balance chart. No patients consumed the recommended minimum of 1600 millilitres of water, and more than 80% consumed less than 1000 millilitres the 24 hour period. More than 60% did not manage half the daily recommended amount. Conclusion: Elderly patients on a geriatric ward appear not to be consuming enough water to meet their daily recommended amount of water intake. Only a small proportion of patients were monitored for fluid balance, despite all patients having inadequate intake. Further studies would be required to assess what possible measures can be instigated in both the community and hospital to improve fluid intake in this population.

**PB7 439 THE COMPARISON IN THE MOTIVATIONS OF FOOD CHOICES BETWEEN ELDERLY JAPANESE LIVING IN THE COMMUNITY AND UNIVERSITY STUDENT**  
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Introduction: The great deal was known about what the elderly people eat and the demographic and life style factors associated with food habits. And there were also known about what foods impacted to the health and about what dietary intakes improved the disease, but little is known about why elderly people choice the foods, especially, effects of the motivations for food choice by elderly Japanese people living in community. We investigated the comparison in the motivations of food choices between elderly Japanese and University student. Methods and materials: A Food Frequency Questionnaire was used to measure the dietary variety and intake. The motivations (Nutrition and Health, Sensory Appeal, Weight Control, Convenience) for food choice were assessed with the Food Choice Questionnaire New Version by 249 elderly (males; n=108, females; n=141) and 424 University students (males; n=136, females; n=288). Multiple logistic regressions were used to examine how the motivations predicted the choice of the foods. Result: The "Nutrition and Health" predicted higher choice of the eggs in young males, sea vegetable in elderly males, and the soybeans products in young females. The "Convenience" predicted higher choice of the noodles in elderly females and young males and the instant products in elderly females. The "Weight Control" predicted lower choice of the rice in young females and the eggs in the elderly. The "Sensory Appeal" predicted higher choice of the milk and the green vegetables in young males. The effects of the motivations for food choice were difference between the elderly and University students. Conclusion: The results of this study suggested that we should understand the perceived individual motivation for food choices by the elderly when developing health promotion programs. And it is necessary to develop a new criterion of motivation for food choice for the elderly.

**PB7 440 USING QUALITATIVE AND QUANTITATIVE RESEARCH METHODS TO UNDERSTAND HEALTHY OLDER CONSUMERS LIKING OF ORAL NUTRITIONAL SUPPLEMENTS (ONS).**  
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Introduction: Oral nutritional supplements (ONS) are frequently wasted; documented reasons for wastage include not liking sip feeds, disliking the taste, texture or sweetness and feeling sick or bloated after drinking them (Gosney, 2003). The aim of this study was to gather both qualitative and quantitative data regarding the acceptability of ONS from healthy older volunteers. Methods and materials: The liking of four commercial vanilla ONS products (Abbott Ensure Plus, Nestle Clinutrin, Nestle Resource and Nutricia Fortisip) was quantified by older consumers (n=32; age range 66-88) using a 9-point hedonic scale. The perceived sweetness of the products was quantified using a 100 mm unstructured line scale. For qualitative data, three focus groups of six to eight volunteers were conducted. A topic list devised from previous literature was used to guide the discussions and various commercial and trial ONS were presented as stimuli. The dialogue was tape-recorded, transcribed verbatim and thematically content analysed. Results: There was a significant difference in perceived sweetness of the four commercial products (p=0.013), with mean sweetness varying from 56 to 79 (0-100 scale) between products. Mean liking also significantly differed between samples (p=0.009), values ranging from 3.8 to 5.2 (1=dislike extremely, 9 = like extremely). Liking and perceived sweetness were not correlated. Themes arising from the focus groups, implied that sensory attributes such as sweetness, mouth-feel & aftertaste negatively impacted on consumers acceptability and willingness to consumer the products. Conclusions: The liking scores of commercial vanilla ONS, by the healthy older volunteers, were considered low although not directly related to perception of sweetness. The focus group discussion corroborated previous studies, where consumers thought that the taste of the products was the most important factor affecting consumption. The affect of flavour and mouth-feel attributes that lingered after consumption was a problem highlighted by a number of volunteers.

**PB7 441 FUNCTIONAL CAPACITY IN POLYMYALGIA RHEUMATICA; BASELINE DATA OF A CLINICAL TRIAL**  
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Introduction: Polymyalgia rheumatica (PMR) is an inflammatory joint disease of the elderly characterized by pain and morning stiffness in the neck and limb girdles often leading to difficulties in activities of daily living (ADL). Long-term corticosteroid therapy has been the corner stone in treatment of PMR. A disease activity score (PMR-AS) based on physician's global assessment (0-10), pain intensity (0-10), C-reactive protein concentration (mg/l), duration of morning stiffness (minutes) and ability to elevate the upper limbs (0-3) has been recently introduced for monitoring PMR activity and managing glucocorticoid tapering. In order to find out whether and to what extent PMR-AS is related to functional capacity 41 PMR patients participating in a blinded 16-week protein supplementation cross-over (with a 4-week wash-out) trial were investigated. Methods and materials: Baseline examinations included among others an evaluation of nutritional status (Mini Nutritional Assessment = MNA), body composition (Body Mass Index = BMI), and functional capacity (Activities of Daily Living = ADL using Health Assessment Questionnaire). PMR-AS was calculated without global assessment. Medical history and current medication were also collected. Results: A total of 41 voluntary PMR patients were recruited ( $70.1 \pm 6.5$  years, 88% women). Patients reporting some difficulties in at least two out of the eight different categories of ADL had higher PMR-AS ( $27 \pm 17$  vs.  $14 \pm 15$ , p=0.013) and BMI ( $29.0 \pm 4.5$  vs.  $25.4 \pm 2.3$  kg/m<sup>2</sup>, p=0.004). However, no significant differences were found in age, MNA, duration of symptoms or use of continuous corticosteroid medication. In linear regression models PMR-AS ( $\beta=0.396$ , 95% CIs 0.038-0.157) and BMI ( $\beta=0.470$ , 95% CIs 0.221-0.683) emerged as significant predictors of ADL-score explaining 36% (adjusted R-square = 0.363) of its variation. Conclusions: Disease activity and body composition have a major impact on functional capacity in PMR patients, whereas age, nutritional status, duration of symptoms and use of continuous corticosteroid medication seem to be less important.

**PB7 442 THE USE OF ICE CREAM AS A NUTRITIONAL SUPPLEMENT FORMAT FOR OLDER PEOPLE**  
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Introduction: Compliance issues with consumption of oral nutritional supplements (ONS) are known to be a problem (1). Previous studies found serving temperature to affect the acceptability of ONS. However, air incorporated into ONS in order to produce ice cream, unacceptably increased consumption volume (2). This study aimed to manufacture ice cream of higher calorie, mineral and vitamin composition by weight, in order to achieve the same calorie content by volume as an ONS drink (typically 150 kcal/100 ml). Methods and materials: Ice cream was manufactured to contain 20 % fat ( 233 kcal/100 ml), 10 % fat (169 kcal/100 ml) or 95% commercial ONS (125 kcal/100ml) The sensory profile of ice cream was evaluated by a trained analytical sensory panel (n= 12) and by patients in the hospital setting at the Royal Berkshire NHS Foundation Trust, who scored liking using a 9-point hedonic scale (1=dislike extremely, 9=like extremely). Results: Thirty attributes differed significantly (p<0.05) between the samples. High fat ice creams were lower in many odours, tastes (except sweet), flavours, mouthfeel attributes and aftertastes compared

to ONS ice cream. Patients (mean age 82) mean liking differed significantly ( $p=0.009$ ); ONS ice cream was liked least (mean 4.2), the 20 % and 10 % fat ice creams were preferred (mean 5.3 and 6.4 respectively). Conclusions: Test ice creams had higher calorific density than ONS ice cream, ensuring a more acceptable consumption volume. They had less negative sensory attributes and were preferred by patients to the ONS ice cream. A high fat, mineral and vitamin supplemented, ice cream should be manufactured commercially. (1) Nolan, A. (1999). Audit of supplement use on care of the elderly and rehabilitation wards. *Journal of Human Nutrition and Dietetics*, 12, 453-458. (2) Methven, L., Kennedy, O.B., Mottram, D.S., Grimble, G.K., Bushell, M., Gray, L. and Gosney, M.A. (2008). Can changing the serving temperature improve the palatability of Oral Nutritional Supplements in older people? *Proceedings of the Nutrition Society*, in press

**PB7 443 NUTRITIONAL STATUS, ENERGY AND NUTRIENT INTAKE OF ELDERLY SERVICE HOUSING CLIENTS**

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Introduction: Nutritional problems are common among elderly individuals in institutions. Adequate energy, protein and nutrient intakes are a part of the good care of the elderly. The aim of this study was to examine nutritional status and energy and nutrient intakes of service housing clients aged 65+ in the metropolitan region of Finland. Methods: In this cross-sectional study we assessed nutritional status of all service housing clients aged 65+ years. Of all the clients, 67% ( $n=1475$ ) participated. In addition, 398 (27% of participated) clients' energy and nutrient intake for one day were calculated from food diaries. Results: The mean age of participants was 83 years, 78% were females. 70% of clients had impaired cognitive function. The nutritional status according to the MNA was good in 22% of the clients, 65% were at risk of malnutrition and 13% malnourished. Body mass index (BMI) was less than 24 in 43%, 24-29.9 in 37% and 30 or more in 20% of clients. The mean energy intake of women was 1681 kcal and men 1927 kcal, protein intake of women 61.3 g and men 69.4 g. Oldest men (age>84 y), not women, had lower ( $p=0.003$ ) energy (1675 kcal) and protein (59 g) intakes than younger men (60-74 y), 2266 kcal/79 g respectively. Ca, Fe and Mg intakes were also lowest in the oldest group of men, but not in women. Only 3% of clients received nutritional supplements. Conclusions: Although many of the studied service housing clients seemed to receive enough energy and nutrients from their food, particularly the oldest men were in the risk of getting not enough energy and protein. Considering that 78% of the elderly clients were at risk of malnutrition or had nutritional problems, the possibilities of nutritional care were underused in the care of clients.

**PB7 444 IMPACT OF THE PRESENCE OF A CLINICAL PHARMACIST IN UNIVERSITY HOSPITAL WARDS ON THE ELDERLY OR POLYMEDICATED PATIENTS CARE**

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Introduction: The recent development of Clinical Pharmacy in Belgium fits into the strategic and organizational objectives established by the University Hospital of Liège in order to increase the quality and efficiency of patient care. The objective of this project was to investigate if a clinical pharmacist could contribute to optimize the medical care of the patient in different wards. Methods and Materials: A pharmaceutical care program has been developed in geriatric, neurologic and emergency units, in the environment of a university hospital, where the objectives of education and training of health personnel (doctors, nurses, pharmacists ...) add to the concern of an optimum quality of care. For 15 months, a clinical pharmacist, or pharmacy students in their final year under the supervision of clinical pharmacist, has participated to the round, carried out medication history and monitored treatment during and after hospitalization. Patients were selected according to age ( $\geq 75$  years) and number of drugs mentioned in the medical record ( $\geq 4$ ). The clinical pharmacist interventions were recorded on standard sheets, and evaluated by a doctor of the medical team who judged the clinical importance of the intervention. Results: 349 interventions were recorded, mainly initiated by the pharmacist (75%). The most important reasons for intervention were: no indication for the drug or not treated indication (23%); changes in route, form, technique or moment of administration (15%); detection of adverse drug effect, interactions ... (16%) and information to the staff (17%). The interventions were generally well accepted by the medical team ( $>90\%$  of full or partial acceptance) and evaluated as of major (37%) or moderate (47%) clinical importance. Conclusion: The added value of the presence of clinical pharmacist in the various services has been demonstrated. The pharmaceutical care program in place is highly valued and claimed by both the medical staff and nursing.

**PB7 445 THE FIRST SYSTEM OF REFERENCE FOR THE MEDICAL PRACTICE OF HOMEOPATHY IN FRANCE**

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Introduction At least 30% of the French population has recourse to homeopathy, with a large proportion of elderly persons. Some 25000 practitioners prescribe homeopathic treatments.

Object: Development of a system of reference for the medical practice of homeopathy in order to meet with the legal obligations of evaluation and training of homeopaths. Method : 1- Creation by the Société Française d'Homéopathie of a working group of expert specialists representative of the medical practice of homeopathy to determine: - a basic methodology: self-evaluation according to the method of practice groups; - the subject: « the homeopathic medical file»; - the aims and requirements of quality; - the standards of evaluation; - the number and content of items or inquiries 2- Verification of the text's form by a reader's group; 3- Verification of acceptability and feasibility by a group test; 4- New meeting of the working group to register the modifications shown necessary by the feasibility study; 5- Presentation of the text to the methodologists approved by the Haute Autorité de la Santé (Health Department); 6- Finalization of the project and transmission to the Haute Autorité de la Santé for validation. Results: Elaboration of a system of analysis with reference to the «homeopathic medical file», according to the method of practice groups. This system of reference includes a questionnaire concerning the symptoms noted in the patient's file: in order to be of homeopathic value, the symptoms must be precisely characterized and organized according to their relative importance. Conclusion This system of reference was validated by the Haute Autorité de la Santé in February 2007. Several practice groups have already used this system of reference to validate the legal obligations of their professional practice. The complete text of this system of reference can be downloaded on web-site: WWW.homeopathie-francaise.fr

**PB7 446 CHALLENGES IN DEVELOPING AN ON-LINE MSC GERONTOLOGY PROGRAMME : AN EU PARTNERSHIP PERSPECTIVE**

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Introduction Demographic changes, advances in technologies and increasing pressure from professional bodies have led higher education institutions to review programme structures and delivery, in particular, developing an innovative curriculum to meet the needs of local, national and European society. This three-year study involving six EU partner countries aims to develop an on-line programme on Gerontology. Methods and materials The study uses a multi-site participatory case study approach. The principles of participatory research have the goal of addressing an innovation with partners; in this case, the development of an on-line programme which underpins its development. A structured questionnaire was designed to scope existing information relating to each of the six partner countries. This information included structures and processes that are in place in order to identify any potential problem(s) relating to the development of the on-line programme. Key foci within the questionnaire included programme structure, modes of delivery, module organisation, number of credits at Master's level, funding and fee structure, marketing and recruitment, entry requirements and the framework for managing the programme and the political and philosophical context of each partner country. Results A descriptive analysis was undertaken. Key themes emerged in relation to both structures and processes which included leadership and management; marketing and recruitment, programme entry requirement, validation processes, resources and assessment and feedback. Conclusion Developing an on-line MSc programme involving six EU countries has its challenges and rewards. It is argued that cross cultural learning within EU partner countries has the potential to enrich learning through innovation and interprofessional learning and working. Important factors such as leadership and management and assessment and feedback are key to ensuring the delivery of an online programme that would meet students' needs.

**PB7 447 TEACHING,SERVICES IN LATIN AMERICA:COSTA RICA CASE**

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Introduction The evolution of Geriatric Medicine in Latin America Brazil has only 20 hospitals with geriatric services and Mexico has a total of 12. The lack of organized services targeting the care of older people means that medical education continues to ignore the training of physicians in geriatric medicine. Costa Rica, Chile, Cuba and Panama are the only countries that have a specialized geriatric hospital; these hospitals vary in the number of services provided and in the degree of complexity that they are able to handle. Costa Rica appears to offer the most comprehensive program Other regional countries do have Geriatric Medicine Units. A survey was carried out through the region: Country Formal University training in Geriatrics Geriatric Unit Geriatric Medicine Department Geriatric Hospital Day Hospital Home care Argentina Yes Yes Yes No Yes Yes Brazil Yes Yes Yes No Yes Yes Costa Rica Yes Yes Yes Yes Yes Yes Colombia Yes Yes Yes No Yes Yes Cuba Yes Yes Yes Yes Yes Yes Chile Yes Yes Yes Yes No Yes Ecuador Yes Yes No No No Yes El Salvador Yes Yes No No No Yes México Yes Yes Yes No Yes Yes Panama Yes Yes Yes Yes No Yes Peru Yes Yes Yes No Yes Yes Uruguay Yes Yes Yes No No Venezuela Yes Yes No No Yes Yes Survey done: Dr. Fernando Morales-Martínez. The Costa Rican Experience The University of Costa Rica offers the Specialty in Geriatrics Medicine and Gerontology after graduating a medical doctor, with a 5 years duration. At present there are 60 geriatricians and 48 medical residents. The program graduates 10 geriatricians every year and admitted 10 new medical

residents every year. Conclusion: The teaching of geriatrics has to be included as an integral part of the training of general physicians.

**PB7 448 THE PATIENT'S PERSPECTIVE OF QUALITY IN AN AGED HEALTHCARE PROGRAM**

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Introduction: Including the patient's perspectives in defining and measuring aged healthcare quality is emerging as an important factor to understanding the service outcome. Yet there is comparatively little work investigating patient perceptions of the quality of their service. Aged healthcare services continue to develop in type and complexity, and hence the need for a specific validated tool to assess the patient's perspective. Methods: A synthesis of the patient and health service quality literature was undertaken to examine: the existing measurement of quality in healthcare; the patient's role and impact on the quality of the service and its outcome; and the documented problems associated with employing satisfaction as an indicator of the patient's view of quality. A validated approach to measuring the patient's perception of the quality of their service is identified. To understand the factors influencing a patient's assessment of service quality, an exploratory qualitative study of patients aged over 80 receiving publicly funded community-based aged healthcare services was conducted. Results: The investigations established that Patient Orientation; Patient Involvement; and Service Provider and Patient Empowerment influenced a patient's perception of the quality of their service. The resultant conceptual model depicts: these four antecedents to perceived service quality; the global, dimensional and sub-dimensional components of perceived service quality, where each influences perceptions of the component above; and that this summated perception then triggers the health related behaviour adopted by the patient. An argument for the holistic measurement of healthcare quality to include the use of a validated and reliable patient specific instrument is made and a multi-dimensional hierarchical tool and measurement scale is presented. Conclusion: Evaluating the determinants of the aged patient's perception of the quality of their service will provide key information for service improvement and an understanding of the health behaviours that are subsequently adopted.

**PB7 449 THE ANALYSIS OF THE ARTICLES PUBLISHED IN JOURNAL OF THE KOREAN GERIATRICS SOCIETY**

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M. CHOI

Introduction: We thought that it is needed to look over the past issues in The Korean Geriatrics Society Articles, in order to assure that it is proper as an academic journal of geriatrics. We scrutinized the articles published in the Journal of The Korean Geriatrics Society. Methods: We analyzed 28 volumes of Journal of The Korean Geriatrics Society, published from 2001 to 2007. We counted the number of review articles, original articles and case reports by year. We classified articles as geriatric principles, basic sciences, and clinical studies, which were classified again by subjects as understanding of geriatric and elderly patients, problem common in elderly people, and clinical trial. We stratified original articles by the research methods, such as descriptive, analytical (cross-sectional, case-control, and cohort study), and investigational study. Results: Journal of The Korean Geriatrics Society was published in every three months. For 7 years, 275 articles were published, which included 32 review articles (11.6%), 182 original articles (66.2%), and 61 case reports (22.2%). They were dealing with the geriatric principles in 68, basic science in 19, and clinical study in 127 articles respectively. By subjects, 86 articles (32.0%) worked on understanding of geriatric and elderly patients, and many original articles were related with the cardiovascular and neurological system. Neurological diseases were most common in case reports. There were 50 descriptive (27.5%), 118 analytical (64.8%; cross-sectional 45.0%, case-control 18.7%, cohort 1.1%), and 14 investigational studies (7.7%). Conclusions: The proportion of original articles was highest in Journal of The Korean Geriatrics Society. A third of all articles were relevant to geriatric principles, and two thirds were analytical, which were thought to be proper as an academic journal of geriatrics.

**PB7 450 GERIATRIC CARES IN NORTH WESTERN EUROPE : WHAT ARE THE REGIONAL DIFFERENCES ?**

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Background : a health and demography project is supported by European regional fund in INTERREG IVb Northern West Europe. Seven regions taking part in this cooperation are all faced with the same demographic problem. After evaluating and comparing their experience, the participants have to propose medium and long term solutions to answer to crucial human medical and social problems and their economic impact on territorial development, arising from the ageing of the population. Material and methods: to compare

different types of care given to old ill persons in accordance with different health politics and legislation and to verify appropriateness between the patients need and the qualification of caregivers. Five geriatric situations (Delirium, psychological handicap, somatic dependency, poly pathologies, social complexity) were described, at home, in resting home or in hospital, both within or outside geriatric wards. A standardised questionnaire was completed by each region and a glossary was created to standardize definitions. Results: each northern west European region have developed their own specific approach in order with the detection of geriatric profiles, health channels, geriatric interventions, and cares in or outside health institutions. However, there are no clear definitions of the aged person, the geriatric profile, caregivers and place of care; institution and organization are quite different in term of their type of financing health systems; usefulness of geriatric validated scales is well known but there is no consensus on which scales should be used. Conclusion: the creation of a transnational center of excellence in northern west Europe is necessary to respond to the demographic changes due to aging; but a lot of barriers should be eliminated, especially in the definition, financing and organization of health care, in the training of the caregivers and in the assessment tools used for the geriatric population.

**PB7 451 INCREASING THE PERCENTAGE OF APPROPRIATE REFERRALS BY A GERIATRIC MOBILE TEAM, AS A MARKER OF IT EFFICIENCY.**

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Introduction Geriatric Mobile Teams (GMT) are emerging in recent years in emergency, medical and surgical units. Their aim is to improve the care of elderly patients, to optimize their referral to appropriate units and to encourage their return home with adequate aid. GMT have difficulties to define the criteria enabling them to reflect their activity. Our objective was to make a retrospective study of the activity of a GMT in an urban hospital, to evaluate the percentage of appropriate referrals. Methods and materials We analysed the 1044 records of the patients seen in 2007 and identified the initial reasons for the intervention of the GMT. The various reasons were: to define an adequate orientation, to transfer the patient in geriatric acute or sub acute cares, to evaluate the opportunities to return home, to make a cognitive evaluation or a counselling support. When the reason for the intervention was a request to transfer the patient in geriatric units, we analyzed the adequacy of the solution proposed by the GMT. Results The main reason to call the GMT was a request to transfer the patient in geriatric units (34%). Only 60% of these initial requests led to an effective transfer. Twenty per cent of patients whose initial request was a transfer in geriatric units were able to directly return home after the intervention of the GMT, 2% were admitted in an institution rather than a geriatric ward and 8% were hospitalized in private clinics. Conclusion The GMT seems to prevent a large number of non appropriate geriatric hospitalizations by promoting the home return or by shifting towards a more appropriate project. This is a way to improve, with a GMT, the fluidity of elderly patients' flow in spite of a limited access to beds in a tertiary university hospital.

**PB7 452 MEDICATION RECONCILIATION: IDENTIFYING MEDICATION DISCREPANCIES IN ACUTELY ILL HOSPITALIZED OLDER ADULTS**

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Introduction: Medication discrepancies are prone to occur during transitions from community to acute care hospitals. The elderly are at risk for such discrepancies due to multiple co-morbidities and complex medication regimens. Medication reconciliation involves verifying medication use, identifying discrepancies, and rectifying them. Our objective was to describe the prevalence and type of medication discrepancies in acutely ill older patients. Methods: We prospectively enrolled patients 70 years or older, admitted to 3 acute care for elders units (ACE) over two months in 2008. Medication discrepancies were classified as intentional, undocumented intentional and unintentional. Unintentional medication discrepancies were graded by a blinded rater for potential to harm. Results: Sixty-seven subjects (42 women; mean [SD] age 84.0 [6.5] years) were enrolled. There were 37 unintentional prescription medication discrepancies in 27 (40%) subjects and 43 unintentional over-the-counter (OTC) medication discrepancies in 19 (28%) subjects. This translates to Medication Reconciliation Success Index (MRSI) of 89% for prescription medications and 59% for OTC medications. The overall MRSI was 83%. Over half of the prescription medication discrepancies (57%) could potentially cause moderate/severe discomfort or clinical deterioration. Conclusion: Despite a fairly high overall MRSI in ACE patients, a substantial proportion of the prescription medication discrepancies were associated with potential harm. Future studies are needed to investigate the effectiveness of a robust medication reconciliation program in acutely ill older adults.

**PB7 453 THE GERONTONET FEASIBILITY STUDY. A DESCRIPTION OF 414 EUROPEAN OLDER PEOPLE.**

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**Introduction:** The aim of GerontoNet (expert panel of 40 European Academic Medical Centres) is to enhance European research and overcome under-representation of older people in RCTs. The present study reports the feasibility of a Geriatric Minimum Data Set (GMDS). This dataset is a composite tool of different validated scales used in usual Comprehensive Geriatric Assessment and has been developed with the aim of standardisation of assessment tools. **Methods and materials:** The feasibility criteria were established prior to the study: • Each centres had to include > 10 participants during a 4-months inclusion period • At least 80% of the centres had to participate • For each assessment tool, no more than 20% of missing values were permitted • Respect of inclusion and exclusion criteria **Results:** Results of the feasibility were discussed in the annual GerontoNet meeting. Of the 40 centres, 27 participated at the study (67.5%), 24 centres (60%) fulfilled the criteria of including at least 10 participants. Ten assessment tools presented more than 20% of missing values and were rejected in the final composite GMDS. 414 older persons were included mainly from the outpatient consultation (19.3%) and the day hospital (28.7%). The mean age of the sample was  $80.7 \pm 6.8$ ; 252 (61.3%) were female; 168 were living with spouse (40.6%); 300 (72.5%) presented mild or no degree of ADL impairment; 233 (57.4%) presented no cognitive impairment; the mean number of comorbidities were  $4.1 \pm 1.7$ ; 216 (55.1%) had a good nutritional status; and finally 247 (62.2%) had no depressive symptoms. 75 of the included participants (18.1%) met exclusion criteria (MMSE <16 and ADL <3). **Conclusion:** The GerontoNet meeting concluded on the acceptance of the GMDS in a broad range of older people and countries and obtained a preliminary database in order to scope future European research.

**PB7 454 TRIGGER TOOL METHODOLOGY TO ASSESS ADVERSE DRUG EVENT MEASUREMENT IN A GERIATRIC HOSPITAL.**

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**Introduction** Monitoring the quality of medication care is important. We adapted the IHI (Institute for Healthcare Improvement) Medication Trigger Tool to identify adverse drug events (ADE) in a Swiss geriatric hospital and to quantify the harm they cause. **Methods** In 200 medical records, the last 30 days of hospitalization were retrospectively reviewed for the presence of 38 « triggers » or « clues » that an ADE may have happened. All triggers and ADE were defined explicitly, to ensure inter-investigators consistency. Example: Trigger is INR>6, ADE is bleeding in an anticoagulated patient. The severity of each ADE was also recorded. **Results** Mean review time per record was 25 minutes. Patients were on average 84 years-old, were exposed to a mean of 14 different drugs per stay, and took on average 11 drug doses/day. Median length of stay was 29 days. 207 ADE were identified and 14% of these were related to a drug interaction. 13% of the identified ADE led to prolongation of the hospital stay. Three were life-threatening and one lethal. The 12 triggers with the best “power” to detect an ADE were: Abrupt stop of drug therapy, “lethargy-somnolence or falls”, INR>6, digoxinemia  $> 2.6 \text{ nmol/l}$ , hyponatremia, hyperkalemia, white blood cells  $< 3 \text{ G/l}$ , hypoglycemia, sodium polystyrene (for hyperkalemia), antiemetics or anti diarrheal agents, and more than 4 psychotropic agents. **Conclusion** Potentially, 7.7 ADE per 100 drug doses and about 9 ADE per day may occur amongst the heavily medicated elderly patients in our 300 beds geriatric acute care center. Regular chart reviews using the 12 best performing triggers may suggest ways to improve medication care. It provides a means of monitoring the effects of corrective measures implemented on the basis of previous results. Automated data collection using our integrated hospital information system may speed the review process, but has not yet been studied.

**PB7 455 PERCEPTIONS OF ORAL HEALTH ADEQUACY IN LONG-TERM CARE FACILITIES IN TOKYO**

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**Introduction:** Literature has described the oral health needs of nursing home residents. Oral health in long-term care facilities has been repeatedly documented as less than ideal. The purpose of this study was to determine perceptions of oral health care and practices related to oral health care by surveying administrator of long-term care facilities in Tokyo. **Methods and materials:** A 17-item questionnaire exploring oral health care was mailed to all 389 long-term care facilities in Tokyo. The questionnaire consisted of closed-ended questions and Likert-type scales. **Results:** Facility response rate was 39.3% (n=153). Dentists as part-time staff served in 18 per cent of nursing facilities. Staff dental hygienists, full-time or part-time, served in 14 per cent of nursing facilities. Three per cent of

respondents strongly satisfied with oral health care for residents and 40 per cent satisfied with oral health care for residents. Nineteen per cent reported dissatisfaction and five per cent reported strong dissatisfaction. Thirty-three per cent were undecided. Twenty-seven per cent stated an examination by a dentist was provided to new residents. Forty-two per cent stated regular dental check-ups were provided to residents. Sixty-one per cent stated an oral observation by nursing staff was provided to new residents. Sixty-eight per cent of facilities had an oral health care manual for nursing staff. Sixty-two per cent made an assessment of oral hygiene by nursing staff. Administrators' satisfaction with oral health care for nursing home residents significantly related to factors, such as staff dental hygienists, regular dental check-ups, a dental observation by nursing staff, an oral health care manual and an assessment of oral hygiene. **Conclusion:** Participation by dental staff within care teams in nursing homes may help to promote oral health care

**PB7 456 INFECTION AND ITS CONTROL IN GROUP HOMES FOR THE ELDERLY IN JAPAN**

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Group homes, which are small-scale facilities as the alternative to traditional larger-scale long-term care facilities for elderly demented people, are rapidly proliferating across Japan. Recently, spreading and mass outbreaks of influenza and norovirus in senior care facilities have been reported in many regions. Small-scale facilities paid less attention to infection control than large-scale ones. Therefore, we examined the actual conditions of infection and the systems of infection control in small-scale care facilities in Japan. Questionnaires were sent to 1,899 care facilities registered with the National Association of Dementia Group Homes throughout Japan to investigate infection control measures at each facility. 684 facilities (36%) completed the questionnaires. 26% of facilities had residents who had been infected with influenza, 14.5% with scabies, 12% with norovirus and 8.2% with MRSA. The mass outbreaks reported in these facilities were norovirus (9.8%), influenza (7.9%) and scabies (4.7%). Regarding the response following norovirus infection, 90.1% of facilities used gloves but only 60.1% used masks when disposing of vomit. 26.9% of facilities kept pets, 11.6% kept dogs, 4.7% kept cats and 0.3% kept reptiles that are considered carriers of salmonella bacteria. Although most facilities had policies addressing the collection of bodily fluids, blood, and feces for disposal, they did not have any standardized policies outlining final disposal methods. 60% of facilities disposed of them as general refuse. We conclude that improvement in the actual conditions of infectious disease control in small-scale facilities for elderly people in Japan is needed. The problems highlighted in this research show the need for developing standardized infectious disease control strategies and creating a manual, outlining detailed measures designed to specifically meet the needs of small-scale group homes in Japan.

**PB7 457 ASSESSING QUALITY IN AUSTRALIAN RESIDENTIAL CARE FACILITIES MADE EASY: THE RESCAREQA.**

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**INTRODUCTION** Residential aged care in Australia does not have a standardised system of quality assessment related to clinical outcomes. Consequently, an assessment based on resident outcomes was developed and evaluated in collaboration with care providers. This paper will present an overview of the instrument - the ResCareQA (Residential Care Quality Assessment). As criteria and standards are necessary for making judgements about quality, preliminary benchmarks developed for use with the ResCareQA will also be discussed. **METHODS & MATERIALS** Nominal Groups allowed extensive consultation with industry experts, who identified clinical areas necessary for inclusion in an Australian quality assessment. A Delphi study and quantitative survey collected data from 498 residents in 9 residential facilities to confirm face and content validity, as well as reliability, user-friendliness, and concurrent and discriminative validity. An expert panel then participated in a further Delphi survey to deliberate on preliminary benchmarks of quality. **RESULTS** The ResCareQA examines 24 clinical areas within four domains; reflecting care domains from the Australian Residential Accreditation Standards (Resident Health, Personal Care, Resident Lifestyle, Care Environment). It is holistic, providing rich data concerning resident outcomes, while being relatively quick and easy to administer. The ResCareQA consistently demonstrates a mean completion time of 30 minutes/resident, while informal feedback indicates increased familiarity with assessment and residents allows for shorter completion times. Psychometric analyses demonstrated that it has sound reliability and validity, and benchmarks provide tangible measures to allow judgements of quality to be made. **CONCLUSION** Australian residential facilities require a valid and reliable means of monitoring care quality and informing quality improvement. However, rather than adopting another instrument, the ResCareQA was specifically developed for the Australian context, providing a sound and comprehensive approach to quality monitoring.

Its process of development could be readily adopted by anyone wishing to create a quality assessment specific to their needs.

**PB7 458 PRESERVATIVE CARE. ON GOOD DAILY, CONCRETE NURSING CARE FOR VULNERABLE ELDERLY IN NURSING HOMES**

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Introduction Elderly in nursing homes describe their situation often as difficult and hopeless. They face an all-encompassing care dependency, lack of control in daily routines of clothing, washing, eating and socializing, and loneliness. More than that, cases have been reported of residents actually being harmed by a lack of caring by nurses. The aim of this research is to articulate good nursing care in nursing homes. The research question is: 'what is morally good daily nursing care of vulnerable elderly in nursing homes? Methods Within an iterative research process theoretical work (by nurses, philosophers, care ethicists) aided the interpretation of empirical data (participative observations (515 hours) and interviews (n=35) with both elderly and nurses in 9 nursing homes), whereas empirical data helped us to discuss and clarify theoretical insights. Results Personal daily, concrete care is both an expression of personhood and a mean to constitute and continu someone's personhood. Elderly nursing home residents are not longer able to care for themselves. So, they depend to a large extent on nurses in maintaining and continuing their personhood. A nursing home is a moral practice aiming at holding elderly, amongst others, as unique persons within the community. Nurses are morally responsible to provide daily, concrete care which preserves an elder in such a way that he or she is shown to full advantage within a changing context of progressive dependency and permanent stay in a nursing home. Such a quality of care is preservative care. Nurses who are able to care in this particular way are recognised by their attentiveness, modesty, and competence. Conclusion In practices of preservative care, elderly persons remain worthy members of society at large. Preservative care is a relational practice. So, in practices of preservative care nurses are also valued and held as valuable unique persons.

**PB7 459 QUALITY IMPROVEMENT PLAN FOR THREE AGED HOMES IN THE SPECIAL ADMINISTRATIVE REGION OF MACAO, CHINA ("MACAO") IN 2008-2009**

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Introduction Similar to many cities and regions over the globe, Macao is experiencing an era of aging population, when the society becomes acutely concerned of the care of the aged. In 2008, upon the invitation of Macao SAR, the Hong Kong Association of Gerontology ("HKAG") has begun to assist three Aged Homes to implement the Quality Improvement Plan ("Plan") to meet the requisite standard of competence care of residential homes in Macao ("Standard"). Methods and materials By holding Training Workshop, Professional Consultation Sessions, this comprehensive Plan aims to revamp the Human Resources Management System, the Documentation System, and the Care and Management System of the Aged Homes. In the first and second phases of the Plan from August 2008 to January 2009, the HKAG Consultation Team visited the Aged Homes bi-weekly to assist three homes to establish quality management system. Review visits assessing the effectiveness of the Plan are scheduled in April 2009. According to the results of the review visits, the Aged Homes will then have to prepare further improvement plans to reach the mandated Standard for the consultant team to approve. After that, the Aged Homes have to improve the homes according to their resolutions drawn. Results Since the Plan is still running currently, final results will be announced in mid 2009. In the interim, it has been observed that the caring services of the Aged Homes have undergone prominent changes. Conclusion It is important to help the aged home establish an effective system to run the services to care for the elderly. With emphasis on personal coaching and on-site supervision during the whole process, all staff, including the front line carers, the professionals and the management level, appreciate the change and have demonstrated great efforts to contribute to the success of the improvement.

**PB7 460 PHYSICAL ACTIVITY AND RELATED FACTORS AMONG ELDERLY WOMEN**

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Objectives: The purpose of this study was to examine physical activity among the elderly women with Barthel Index (BI) that has been recommended for the functional assessment of older people. Methods: The sample was obtained every women from the entire nursing home population (n = 190) in the city of Kashan, in 2008. Information was eventually collected by interview from persons and nurses. Activity was assessed using the Barthel Index(BI) test . Data analysis was performed with SPSS. Results: The results indicated the following: The More than 30% of the women reported decreased physical activity during their stay in the nursing home. Barthel Index score was>75 in 15%, 51-75 in 24% and < 50 in 61% of women. Age, total number of medical conditions, and presence of cardiovascular were significant with low Barthel Index score( $p < 0.001$ ). Conclusions: The

results suggest that living conditions and factors related to health and functional capacity affect the level of physical activity among nursing home residents. In order to encourage this population to be physically active, attention should be paid not only to physical exercise but also to associated factors, such as satisfaction with everyday life and health

Keywords: Barthel Index, physical activity, elderly women

**PB7 461 THE STANDARD FOR THE PROVISION OF RESIDENTS OF INPATIENT NURSING INSTITUTIONS OF MARSEILLE-KLINIKEN AG WITH NUTRITION AND LIQUIDS**

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Introduction Malnutrition represents a frequent problem in inpatient nursing institutions (Tannen et al. 2008). A standard for the nutrition and supply of liquids has been created for the residents of Marseille-Kliniken AG. The aims were to reduce the incidence of malnutrition, to recognise a risk of malnutrition at an early stage and to initiate specific measures for treating malnutrition. Methods and materials The actual status was recorded in order to create the standard. To this end the nursing documentation was analysed (BMI and other data) and family members, nurses of residential groups for residents with dementia and nursing services were questioned. Almost every tenth resident had a BMI < 18.5 kg/m<sup>2</sup> (Olschewski et al. 2009). Moreover, research was conducted into evidence-based measures for the treatment of malnutrition and dehydration in the care of the elderly. The standard is composed of four main parts: Measures for prophylaxis, a screening in order to identify residents with a risk of malnutrition, an assessment in order to identify the causes of malnutrition and special measures for certain nursing problems and clinical pictures (e.g. nutrition for residents with dementia). Results The evaluation of the standard began in three pilot institutions of Marseille-Kliniken AG in November 2008. The tools (screening, assessment) will be tested, the nutritional status of the residents recorded (pre-post comparisons by analysing the nursing documentation) and the benefit of the standard evaluated (questioning of the residents, nurses, employees of the kitchen, family members and nursing services). Conclusion The evaluation will take until the end of June 2009. The first feedback from the nurses and the nursing services is positive. The standard will be implemented in all inpatient nursing institutions of Marseille-Kliniken AG in July 2009. Nurses and employees of the kitchens will be trained accordingly.

**PB7 462 IMPROVED QUALITY OF CARE USING THE RAI-MDS INSTRUMENT IN AN ITALIAN NURSING HOME BETWEEN 1999-2007**

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AIM To present the benefits of introducing Comprehensive Geriatric Assessment based on the Resident Assessment Instrument- Minimum Data Set (RAI-MDS) instrument in an Italian nursing home (Residenza Protetta "Creusa Brizi Bittoni" di Città della Pieve - Perugia) during a 8 year period. METHODS The use of RAI-MDS was implemented in this nursing home since 1999. The multidisciplinary team evaluates every resident using this instrument on admission and every 6 months afterwards. The data obtained through the assessment are discussed during team meetings and used to produce individualized health care plans. RESULTS The nursing home has a total of 50 beds for disabled older people. Although during these years the nursing home residents became sicker and more disabled, by using the RAI-MDS several measures of the quality of care improved, such as hospitalization rate, falls and fractures incidence, pressure sore prevalence, use of physical restraints and of psychotropic drugs. The main results are reported in table 1. Tab. 1 Main results of the implementation of the RAI-MDS instrument in the period between 1999 and 2007 1999 2007 Death rate 26% 26% Hospitalization rate (based on the local population) 0,09/00 0,014/00 Falls 162% 28% Hip fractures 4% 0% Pressure sores 24% 12% Physical restraints 35,3% 14% Use of psychotropic drugs 90% 62% DISCUSSION The use of comprehensive geriatric assessment based on the RAI-MDS instrument determined a significant improvement of the quality of care.

**PB7 463 PRACTICE GUIDELINE ON PHYSICAL RESTRAINTS - THE GUIDELINE GROUP MEMBERS' PERSPECTIVE**

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Introduction: Currently, we are developing the first evidence-based guideline on physical restraints in nursing homes in Germany. The multidisciplinary guideline group, including representatives from nursing science/practice/advisory boards and quality assurance, insurance companies, medicine, law, ethics and patients' representatives, held five meetings. Evaluation of the group process during guideline development remains a challenge, though it is widely acknowledged that participation and interaction of patients, their representatives and professionals is of major concern for successful guideline

development and implementation. Therefore the development process was evaluated from the group members' perspective. Methods and materials: Standardised instruments for the evaluation of guideline development processes are not available yet. Thus, a methodologically open approach with qualitative methods was chosen. Process data of the five guideline meetings were collected through unstructured observation and written documentation. Based on the observation protocols problem-centred individual interviews with the multidisciplinary representatives (n=11) were conducted (11/2008). The data analysis according to the method of Grounded Theory relies on interview transcripts, postscripts, memos and observation protocols. Results: From a review of the observation protocols and of the interviews the following sensitizing concepts emerge: role/behaviour of group members/moderator/group leader, understanding of concepts of evidence based medicine, methodological procedure of guideline development, group dynamic and interdisciplinarity. Preliminary results point out the decisive role of a skilled moderator. Also, the group members' understanding of evidence-based medicine and methodological procedures seems to be a critical point as well as a successful integration of an interdisciplinary group. Analysis of the interviews is ongoing. Conclusion: Conclusions can be drawn for future guideline development group processes regarding decisive elements of optimal group process facilitation, like moderation instructions or methodological training of group members.

**PB7 464 WHICH APPLICATION AND WHICH EFFECT OF "SNOEZELEN" FOR DEMENTED PEOPLE LIVING IN NURSING HOME?**

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Introduction Snoezelen, also referred to a multi-sensory stimulation, is an approach which actively stimulates the sense of hearing, touch, vision and smell in a resident-oriented, non threatening environment (Kok et al. 2000). Although Snoezelen has become a popular clinical intervention for people with dementia, its application often varies in form, principles, duration, and subject groups. Such variations in application make the assessment of the therapeutic value of Snoezelen difficult, which in turn undermines the clinical development of this approach. This observational study aimed to specify the application of Snoezelen for demented people living in nursing home and investigate the short-term effects of Snoezelen on physiological and behavioural changes. Methods and materials The Snoezelen sessions were characterized using their duration, frequency, objectives, and sort of stimulation used. During the session, the proposals which hold resident's attention, as well as the posture and the behaviour of resident were documented. Heart rate was recorded just before and just after each session. Results The mean duration of each session is 44 min, and usual frequency is one session / week. Snoezelen sessions are intended to residents who present moderate stage of dementia (CDR = 2.1). The three main objectives of sessions are: relaxation (40%), decrease of agitation (22%), and mood improvement (15%). The first results show that heart rate after the session tends to decrease for each subject, as compared to before the session. Conclusions Until now, most studies used conventional behaviour assessment tools, and there has been limited evidence for the effectiveness of Snoezelen. This study is in process, but our results concerning short-term effects of Snoezelen are promising, they must be verified by a larger sample of subjects.

**PB7 465 ANALYSIS OF INTERNATIONAL GUIDELINES AND STANDARDS ON PHYSICAL RESTRAINT USE IN NURSING HOMES**

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Introduction: An evidence-based practice guideline can be a powerful tool to overcome unnecessary variations in nursing practice and to enhance the quality of care. Currently, a guideline on physical restraints in nursing homes in Germany is developed. Therefore, internationally available guidelines, standards and other recommendations were systematically collected and analysed concerning their content and use of evidence-based guideline development methods. Methods and Materials: The systematic search covered electronic databases (PubMed, CINAHL, Gerotlit, Carelit) and an internet search (google.de/ch/at, metager.de, metacrawler.com), including 34 international health care organisations. It was restricted to German and English documents of the last ten years. According to the AGREE instrument a criteria catalogue was developed and pre-tested in six documents. Two independent researchers analysed the documents applying the 33 criteria addressing formal criteria, scope and purpose, stakeholder involvement, editorial independence, definition and application of physical restraint, development process, recommendations for avoidance of physical restraints and implementation. Results are interpreted according to frequencies and content-analysed categories. Results: The search revealed 29 international (mainly Anglo-American) and 14 German documents, published by professional, national accreditation, nursing, political and educational organisations and ministries. Transparency of the development process was limited: Stakeholder involvement and external review were rarely mentioned (n=4 and n=2) and only two documents base their recommendations on external evidence. Almost all documents advocate for a rather restraint-free policy with a variety of recommendations. Conclusion: Transparency of international guidelines, standards and recommendations on physical restraints in nursing homes is inadequate, lacking rigorous methodological procedures. Therefore, their

recommendations on physical restraints in nursing homes are not suitable to enhance evidence-based nursing practice.

**PB7 466 PREDICTORS OF WHEELED MOBILITY IN INDIVIDUALS IN RESIDENTIAL CARE**

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Introduction: Wheelchairs are the primary means of mobility for the majority of older adults living in North American residential care facilities. Regrettably, the wheelchairs that many residents receive are uncomfortable and difficult to propel. Residents in need of seating intervention have been found to have reduced mobility, but little is known about how other factors influence wheelchair mobility in this population. Methods and materials: To identify predictors of wheelchair mobility among individuals living in residential care a cross-sectional study was undertaken with 268 residents from 11 facilities including 149 competent individuals and 119 residents who required proxy respondents. Standardized personal, wheelchair-related and environmental measures were administered and socio-demographic and wheelchair data were collected. Mobility was measured using the Nursing Home Life Space Diameter measure, which quantifies the frequency, extent, and independence of residents' mobility inside and outside of their facilities. Results: Subjects had a mean age of 84 years (SD=8.6) and 69% were women. Most participants (91%) had manual wheelchairs; 63% of subjects were independently mobile on their units, 40% were independently mobile off their units within the facilities and 20% were independently mobile outdoors. A linear regression model accounted for 48% of variance in mobility scores. In descending order of importance, the significant predictors of mobility were wheelchair skills (including the capacity to engage brakes and manoeuvre), functional independence in activities of daily living, having 4 or more visits per week from friends or family and use of a power wheelchair. Conclusion: Limited independent mobility, especially outdoors, is a common problem among facility residents. To improve mobility residents may benefit from wheelchair skills training, provision of powered mobility or increased visits from others, but the effectiveness of these interventions would need to be evaluated in future experimental research.

**PB7 467 CONSTRUCTIVE STAFF-FAMILY RELATIONSHIPS IN RESIDENTIAL AGED CARE**

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INTRODUCTION Research evidence shows that residents' experience of care is better when staff and family have positive relationships. The objective of this project was to identify and address challenges to the development and maintenance of constructive staff/family relationships in residential aged care by developing, implementing and evaluating an interdisciplinary evidence based guideline for use by staff and families of residents. MATERIALS & METHODS This project used an action research approach to increase the likelihood that staff would 'own' the outcomes and that change would be embedded in practice. The project consisted of a systematic review of the evidence; a survey of staff and families' perceptions of their relationship; development of the guideline incorporating stakeholder feedback and facility staff education; and implementation of the guideline and clinical audit tool. A second survey of staff and families was then conducted to determine any change. Three residential aged care sites in Melbourne, Australia completed the survey. RESULTS Major recommendations from the systematic review included: increase education for both staff and families on relationship development, power and control issues, communication skills, and negotiation techniques. Strong support from administration and management staff was identified as being vital to the success of any interventions. Analyses of survey findings using Mann Whitney revealed significant differences between: staff and family perceptions for both survey 1 and 2; staff perceptions at each site between survey 1 and 2; and family perceptions at each site between survey 1 and 2. CONCLUSION Although staff-family relationships generally improved after the implementation of the guideline, several site specific issues and areas for improvement were identified. These will be further elaborated upon and the implications of these findings discussed.

**PB7 468 PATTERNS OF CHOLINESTERASE-INHIBITOR AND MEMANTINE USE IN NURSING HOMES: A CROSS-SECTIONAL STUDY OF 1975 RESIDENTS.**

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**Introduction:** Dementia is frequently reported in nursing home (NH) residents but only few data are available assessing the factors associated with the use of the treatment of Alzheimer's disease in this population. The aim of this study was to report the factors associated to cholinesterase-inhibitor and memantine use in demented residents. Methods and materials: The "réseau de Recherche en Etablissement d'Hébergement pour Personnes Agées" (REHPA) is a functional network established, between the Geriatric Department of the Toulouse University Hospital and 240 NH, to overcome weak evidence-based recommendations and enhance research. Data presented are part of a cross-sectional observational study that was set up to identify major health problems in NH. Demography, disabilities, comorbidities and specific treatment and diagnosis of dementia in 4896 residents (randomly selected by birth date) was evaluated. Multivariate linear regression models were performed. Results: Among the 1975 dementia affected residents (40.3% of the all sample) 49.11% were specifically treated. The associated non-treatment factors were: an institutional stay over 3 years [OR=0.60 95% CI: 0.48-0.75], a concomitant antipsychotic treatment [OR=0.60 95% CI: 0.55-0.90], an hospitalization before admission [OR=0.70 95% CI: 0.48-0.76], a transfer from another institution [OR=0.49 95% CI: 0.34-0.70], and the presence of polypharmacy [OR=0.95 95% CI: 0.92-0.99]. The associated treatment-factors were: the presence of behavioral disturbances [OR=1.46 95% CI: 1.10-1.94], low disability [OR=2.20 95% CI: 1.62-3.00], and diagnosed by a specialist other than the GP (mainly geriatrician [OR=2.81 95% CI: 1.89-4.18] and neurologist [OR=4.05 95% CI: 2.66-6.16]). Conclusion: The treatment of dementia in NH relies on the number of years in the institution, antipsychotic treatment, hospitalization before admission, transfer from another institution, polypharmacy, presence of behavioural disturbances, level of disability, and specialist involved in the diagnose.

**PB7 469 THE PRACTICE OF SPUTUM ASPIRATION AND TUBE FEEDING BY NURSES AND CAREGIVERS AT SPECIAL NURSING HOMES FOR THE ELDERLY**

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In Japan, it has been hard to place elders who need supervised medical care into special nursing homes for the elderly, but in 2006 these institutions were given directives to cope with seriously ill patients. Providing safe medical care in nursing homes without full-time doctors or night-shift nurses became an urgent topic. Objectives: This study examines the medical care that nurses and caregivers give elderly nursing home patients. Results will be used for materials on care programs. Methodology: We randomly selected 30 of Japan's special nursing homes for the elderly (with 100 or more patients) that perform aspirations and tube feeding. Full-time nurses and caregivers were interviewed using a structured, open-ended format. Survey Topics: Nurse and caregiver demographics; individual implementation and reason for sputum aspiration and feeding tubes; performance levels; and implementation systems. Subjects were respondents at institutions that gave their informed consent. Results: Caregivers usually performed the medical care of sputum aspiration at night when nurses were not on duty. Aspiration was limited to the mouth and was considered to be oral care rather than medical action. Nurses usually performed tube feeding, but some institutions allowed caregivers to perform this under nurse supervision. Nurses made assessments, chose and modified methods, and instructed caregivers. Many institutions trained caregivers for the implementation of aspirations and tube feeding, and by ascertaining nurse and caregiver competence, worked with the capable caregivers. Discussion: Caregivers often perform medical care without fully understanding their actions and responsibilities. Nursing care should be the responsibility of nurses, instructions and information, the conditions and methods of delegation, and what duties may be delegated should be clear. There should be continued assessments. These findings will be incorporated into our care program.

**PB7 470 LEADERSHIP AND ORGANIZATION IN NURSING HOMES: IMPACT ON QUALITY, JOB SATISFACTION AND COST**

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**INTRODUCTION** The purpose of this study is to assess quality, job satisfaction and cost in light of different types of leadership and different types of organization in nursing homes. Are some types of leadership and organization more efficient and effective in creating quality to the patients, job satisfaction and low cost? Although studies have examined both leadership and types of organization in nursing homes, few studies have examined both aspects simultaneously. **METHODS AND MATERIAL** 40 units in 22 nursing homes participate in the study. The nursing homes are randomly selected and are located in large and medium-sized councils in five areas throughout Norway. Leadership (task related, relation related, transformation and laissez faire) is measured by a questionnaire among the staff, organization is measured by interviews and field observations, quality is measured by a questionnaire among the staff, a questionnaire among primary caregivers to the nursing home patients and participation observations, job satisfaction is measured by a questionnaire

among the staff and cost is measured by auditing accounts. **RESULTS** Preliminary results indicate a significant correlation between leadership and quality. The correlation between job satisfaction and leadership, job satisfaction and quality and cost and quality is weaker. Cost varies significantly between the institutions under study. The differences between the two most extreme nursing homes were more than 50 %. **CONCLUSION** The results indicate that some kind of organization and leadership is more suitable in creating quality in care. In order to improve quality, leadership and organization should be in focus.

**PB7 471 ATTITUDES OF NURSING HOME RESIDENTS**

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**Introduction:** Attitudes of nursing home staff, residents and their relatives determine the decision making process about the use of physical restraints. Knowledge on staffs' attitude towards physical restraints is sparse. Even less is known about relatives' attitudes. We conducted a survey on relatives' attitudes and compared the results with a recent survey on nurses' attitudes. **Methods and materials:** The German version of the validated "Maastricht Attitude Questionnaire" was used. Part I contains 22 items of three subscales (reasons, consequences, and appropriateness of restraints), part II contains 14 items evaluating restrictiveness and discomfort of restraint measures. For the survey in relatives the instrument's wording was slightly adapted and piloted with 7 relatives. Data were collected by trained nurses in 13 nursing homes in 2008. The comparison group consists of nurses of 25 homes surveyed in 2007. Mean values and SD were calculated. **Results:** A total of 195 questionnaires were distributed to relatives, 177 answered (91%). Mean age was 62 yrs (SD 12.6); 71% were female; 11% were partners, 71% son/daughter; 59% visited their relative 2-3 times a week. A total of 274 questionnaires were distributed to nurses, 258 (94%) answered. Mean age was 44 yrs (11.4); 82% were female; 54% were registered or practical nurses, 8% charge nurses. Relatives assess restraints slightly more positive compared to nurses with an average of 3.4 (0.6) vs. 3.1 (0.5) on a 5-point scale (5=strongly positive attitude). Relatives and staff both assess restrictiveness with 2.1 (0.3) points and discomfort of restraints with 2.1 (0.4) and 2.1 (0.3) on a 3-point scale (3=very restrictive/discomforting). Both groups consider wrist and ankle belts as measure with highest and sensor mats, infrared systems, and unilateral bedrails with lowest restrictiveness and discomfort. **Conclusion:** Attitudes of nursing home residents' relatives towards restraints are rather positive and comparable to nursing staffs' attitudes.

**PB7 472 PRESSURE ULCER GUIDELINE DEVELOPMENT AND DISSEMINATION IN EUROPE**

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**Introduction:** Pressure ulcers are a persistent problem in nursing homes in Europe with reported prevalence rates varying from 7.9 % up to 83.6 %. Pressure ulcer prevalence rates can be influenced by several factors, which can be divided in structural, process and outcome factors. One of the structural factors is the development and dissemination of pressure ulcer guidelines. These are difficult and complex processes, of which it is not clear whether they differ between European countries. Therefore, the aim of this study is to explore the current state of pressure ulcer guideline development and dissemination, from national to local level (i.e. nursing homes) in six European countries: England, Germany, Italy, the Netherlands, Portugal and Sweden. **Methods and materials:** A literature search and semi-structured interviews, conducted in six countries at national and nursing home level. **Results:** Four countries had national pressure ulcer prevention and treatment guidelines. Portugal had no national guidelines and Sweden had shifted the responsibility to regional level. All participating nursing homes had pressure ulcer guidelines except those in Portugal. Control and monitoring of guideline dissemination was carried out only in Sweden and England. The literature search revealed that attention for pressure ulcer care, like developing a pressure ulcer guideline decreases pressure ulcer prevalence and that nurses' knowledge regarding pressure ulcer prevention and treatment is lacking in some countries. **Conclusions:** All countries studied have national or regional pressure ulcer prevention and treatment guidelines, except Portugal. Portugal is also the only country where none of the nursing homes included had pressure ulcer guidelines. Because the dissemination of such guidelines does not imply actual implementation, further research should focus on the implementation process.

**PB7 473 COMPATIBILITY STUDY OF EFFERVESCENT ANALGESIC TRAMADOL 37.5MG/ PARACETAMOL 325 MG ZALDIAR®) AND AN INSTANT THICKENER (RESOURCE®)**

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**Introduction:** Patients with dysphagia may have problems when taking pills, effervescent or liquid analgesic. In medical treatment, instant thickening agents are used quite

frequently to make it easier to swallow medications. Objective: The objective of this study was to demonstrate that there is no incompatibility between effervescent Zaldiar® and the instant thickening agent (Resource®). Methodology: The test design simulates the use of the product in the practice. Three different types of preparations were used: dissolve 2 effervescent tablets in a glass of water (100 ml), and add 8.5 g of thickening agent (pudding), or 6.4 g of thickening agent (honey) or 4.5 g of thickening agent (nectar). Thermal analysis can be used to study and predict physicochemical alterations. Samples of the medication and the instant thickening agent are analyzed by DSC (Differential scanning calorimetry). To demonstrate the compatibility, an ANOVA test using the actives assay results obtained by HPLC was applied between each of the types of preparations and reference product (for Paracetamol ANOVA and Tramadol ANOVA). Bonferroni's multiple comparison test has been carried out between each type of preparation and reference product. Results: The results of DSC show quite clearly that Zaldiar® effervescent tablets have a melting peak at approximately 240°C. It can, also, be observed that this peak appears at around 220°C in the thickener Resource®. In relation to the binary mixtures (1:1 actual conc.) of Product: Instant thickening agent, it can be observed that the peak always occurs between 220°C and 240 °C (for the 1:1 actual conc. Product : excipient), and the same for (1:10 Product : Instant thickening agent) Regarding to ANOVA analysis, no differences were found between Zaldiar® with and without thickening agent in different concentrations. Conclusion: There is no incompatibility between tramadol 37.5mg/ paracetamol 325 mg (Zaldiar® effervescent tablets) and the thickening agent (Resource®)

**PB7 474 HERPES ZOSTER AND POST-HERPETIC NEURALGIA SERIOUSLY IMPACT PATIENTS' QUALITY OF DAILY LIFE**

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Introduction: Herpes zoster (HZ) and the long-term complication post-herpetic neuralgia (PHN) show increased prevalence with age due to decline in specific immunity against the latent varicella zoster virus. This survey assessed the impact of HZ and PHN on quality of life (QoL), an outcome that remains poorly documented. Methods: In March–May 2008, telephone interviews were conducted in Germany. Patients >=50 years old with painful HZ diagnosed during the last 5 years were identified. Questions adapted to enable evaluation of previous HZ episodes from standard QoL questionnaires assessed pain characteristics and impact of HZ/PHN on QoL. Patients rated pain from 0 ("no pain") to 10 ("pain as bad as you can imagine") and interference from 0 ("does not interfere") to 10 ("completely interferes"). Results: Of >11,000 respondents, 280 met screening criteria, of whom 32 (11%) developed PHN. Mean pain scores were 6.3 on average and 7.2 at worst (compared with 7.1 and 8.2, respectively, for PHN). Three-quarters of patients experienced problems performing daily activities including work, studies, housework, family and leisure activities. Approximately 60% of employed interviewees had to stop work at some time during the disease. Mean pain interference was highest for sleep (5.1), mood (4.6) and normal work (4.6). Pain and QoL outcomes were similar for all patients versus those diagnosed within the last 12 months (n=102) and for patients aged 50–59 years (n=130) versus >=60 years (n=150). By contrast, patients with PHN had considerably worse outcomes on every measure than those with HZ. Conclusion: HZ causes substantial pain, which seriously interferes with many aspects of daily life, particularly sleep, mood and work. The negative impact of HZ on QoL is particularly evident in patients whose pain persists as PHN.

**PB7 475 EFFICACY AND SAFETY OF OXYCODONE AND NALOXONE IN A PROLONGED RELEASE (PR) FIXED COMBINATION TABLET IN ELDERLY (> 65 YEARS) PATIENTS WITH MODERATE TO SEVERE CHRONIC PAIN**

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Introduction: Oxycodone is highly effective for the treatment of severe chronic pain. Opioid-induced constipation is an adverse event that limits the continuous treatment of pain patients. Orally administered naloxone can reduce opioid-induced constipation due to its local opioid antagonistic effect in the gastro-intestine. As elderly are prone for constipation it is of relevance to assess the efficacy and safety of the combination oxycodone/naloxone PR (OXN PR) in elderly patients. Methods: A post-hoc subgroup-analysis of elderly patients (> 65 years) of three pivotal, randomised, double-blind Phase 3 studies (OXN3401, OXN3001, OXN3006) was performed on the primary endpoints pain (OXN3401) using pain intensity (NRS), analgesic rescue intake and bowel function (OXN3001, OXN3006) using the Bowel Function Index (BFI) and laxative intake. Results: In the subgroup analysis of study OXN3401 it could be demonstrated that there was no significant treatment by age effect with respect to pain values ( $p=0.9207$ ) and to the frequency of rescue medication intake ( $p=0.8079$ ) as indicated by the ANOVA. Based on studies OXN3001 and OXN3006 the subgroup analysis showed that treatment with OXN PR leads to a significant improvement in bowel function compared to OxyPR and that the

number of subjects taking laxatives (oral bisacodyl) was lower in the OXN PR group compared to subjects receiving OxyPR alone in elderly patients. There was no statistical significant difference ( $p=0.2668$ ) between elderly and younger subjects in the OXN PR treatment group with respect to the BFI values. OXN PR has no different safety profile in elderly patients. Conclusions: OXN PR has a comparable analgesic efficacy to OxyPR, leads to an improvement in bowel function compared with OxyPR and is well tolerated in both age groups. Acknowledgments: Supported by Mundipharma Research GmbH & Co. KG, Limburg (Lahn), Germany.

**PB7 476 SLEEP APNEA AND PAIN IN THE ELDERLY**

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Introduction: Patients with painful conditions often suffer from sleep disturbances. However, changes in sleep pattern could also influence pain tolerance. We assessed whether continuous positive airway pressure (CPAP) treatment in elderly patients with obstructive sleep apnea (OSA) would result in improved pain tolerance. Methods: Randomized, double blind crossover study. A total of 13 consecutive OSA patients aged 70 and over randomly assigned CPAP treatment (low-CPAP versus high-CPAP pressure). Eleven patients completed the study. Overnight polygraphy for respiratory parameters, electrical pain tolerance assessment, visual analogic scale for sleep quality were performed. Results: Both low and high-CPAP treatment significantly improved respiratory parameters. However, compared to baseline, the electrical pain tolerance score was significantly enhanced (analgesic effect) only under high-CPAP treatment ( $21.1 \pm 10.9$  versus  $28.3 \pm 15.9$ ;  $p=0.03$ ). Conclusion: The treatment of OSA with CPAP would have an analgesic effect. Our findings suggest that appropriate management of OSA in the elderly may be an important treatment objective with possible benefits beyond the improvement in sleep.

**PB7 477 EVALUATION OF A MULTIFACETED PAIN MANAGEMENT PROGRAM FOR SENIORS WITH DEMENTIA LIVING IN LONG-TERM CARE INSTITUTIONS**

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Introduction : Chronic pain is highly prevalent in older persons, but frequently under-diagnosed and under-treated, particularly in seniors with severe dementia and serious limitations in ability to communicate. Methods: The objective of the study was to assess the effectiveness of a multifaceted pain management program for seniors with dementia in two publicly funded long-term care (LTC) institutions in Quebec City, Canada. All residents with dementia unable to communicate and all personnel directly involved in their daily care in the 2 participating institutions (approximately 80 staff members and 75 seniors in each institution) participated in the study. The intervention program included awareness sessions for administrators, directors and care teams focusing on the importance of the problem of pain in LTC, involvement of a pain resource nurse to act as a change agent and a role model for the care teams, a 10-hour training program for all staff members on knowledge, attitudes and beliefs regarding pain and its treatment in the elderly; daily monitoring of pain using a pain observational instrument (PACSLAC) and implementation of an individualized care plan for residents showing increased pain scores. Outcome measures include: (1) compliance with the program by staff; (2) for residents: pain, agitation and sleep; (3) for staff: knowledge, attitudes, beliefs, satisfaction regarding the program, impact on work organization on care units; (4) for families: satisfaction with the program. The program has been implemented and a one-year follow-up is underway. Anticipated results: Results will provide information on the feasibility to implement, in long-term care institutions, a pain management program for seniors with dementia, and its impact on patients and their family, as well as on the care team and their work environment. Conclusion: There is a need to improve pain management in long-term care.

**PB7 478 TREATMENT OF CARPAL TUNNEL SYNDROME IN ELDERLY PATIENTS**

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Review article. Authors show actual opinions on treatment of carpal tunnel syndrome in elderly patients. Authors show enormous meaning of the clinical examination and verify indications for the auxiliary investigations. In modern orthopedic approach, for elderly patients minimal invasive technics is preferred. This allows swift postoperative mobilization. Minimally invasive methods in treatment of carpal tunnel syndrome allows the achievement of good results especially in subjective perspective relieving the symptoms.

**PB7 479 PAIN AND INTERVENTIONS IN GERMAN NURSING HOMES**

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Introduction Pain is the most common complaint in old age. Nevertheless in 45% to 80% of nursing home (NH) residents pain therapy is assumed to be inappropriate. Despite its significance knowledge is lacking on the quality of analgesic drug therapy and appropriateness of prescribing practices for pain management in NH. The main objective of this study is to determine the factors influencing the pain prevalence and pain therapy in German nursing home residents and to clarify how pain is associated with resident's autonomy. The ultimate goal is to identify therapeutic interventions and structural measures likely to increase or maintain autonomy despite pain. Methods and Materials In a representative survey design, different data sources will be used. To gain a thorough insight into pain and pain related factors primary data will be collected for a cluster randomized sample of 1000 NH residents in two German states. The primary data source is a structured resident interview, supplemented by psychological and physical assessments as well as an analysis of resident records, using well established instruments. Since a large number of residents with cognitive deficits are expected, assessment instruments are adjusted accordingly. Results As a result of the study a comprehensive characterization of pain in residents of German NHs is expected. First data will be presented about pain prevalence, etiological factors, pain related interventions, analgesics and associations with other diseases, subjective health, and personal and social factors. Methodological issues concerning empirical studies and pain assessment in nursing home populations with cognitively impaired individuals will be discussed. Conclusion Pain is a very relevant health problem in Nursing Homes that impacts resident's autonomy. Recommendations for physicians and nurses will be given to improve pain management practice.

**PB7 480 INTEREST OF A PROCEDURE FOR HELPING PRACTITIONERS IN PRESCRIPTION OF MORPHINE WITH PATIENT CONTROLLED ANALGESIA PUMP IN ELDERLY**

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Introduction: The "Patient Controlled Analgesia" (PCA) concept was first used to control acute post-surgery pains. Currently the PCA pump is recommended in prevention of pains during nursing, for chronic pains and in palliative care. It can be used in geriatrics centers, even if patients are unable to understand or control by themselves the pump. In this case, the nurse realizes the intermediate injections. Methods: It's an observational study of professional practices concerning prescription of morphine's PCA. Results: In the geriatric center, we observed that the PCA pump was usually used in the palliative care unit. From July 2001 to August 2004, the hospital's "Committee against pain" observed that among 105 patients have been treated with PCA pump: 84% were in palliative care unit, 6% in acute units, 8% in rehabilitation units and 2% in home care units. Morphine was used in 62% cases. From January 2007 to June 2008, the committee realised a new study, and observed the same results. The hospital's "Mobile unit against pain", observed how difficult it was for their colleague to realize the appropriate prescription of morphine, such as the adaptation and setting of the pump. In order to initiate the prescription of a PCA pump, the committee has elaborated a procedure for help prescription. Initial dose of morphine per day, intermediate doses, quantity of morphine necessary in syringe, refractory period have been tabulated. Procedure and boards will be explained. Conclusion: Medical staff training has been organised in the hospital. The mobile unit is on charge to teach the nurses and improve the use of the PCA pump: boards, pump's programmation and monitoring. An internal audit will be realized in 2009 among the nurses, in order to evaluate the using of PCA pump in their daily use.

**PB7 481 VALIDITY AND CLINICAL USEFULNESS OF A PAIN ASSESSMENT INSTRUMENT FOR SENIORS WITH DEMENTIA AND INABILITY TO COMMUNICATE**

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Introduction : Chronic pain is highly prevalent in older persons, but frequently under-diagnosed and under-treated. This situation is even more problematic for seniors with severe dementia because self-report pain scales cannot be used due to serious limitations in ability to communicate. Methods: The objective of the present study was to assess the validity and clinical usefulness of the French version of the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC-F). The PACSLAC-F is an observational 60-item checklist used by the LTC staff to provide a pain score in residents with severe dementia. First, a pilot study was conducted with 86 older residents in two long-term care (LTC) settings to assess test-retest reproducibility, inter-observer variability and internal consistency of the PACSLAC-F. The PACSLAC-F was then used in a (still on-going) larger longitudinal project about the evaluation of a multifaceted pain management program for seniors with dementia living in LTC institutions. For this study, the PACSLAC-F is being used twice daily for 12 months in 80 residents with severe dementia and unable to communicate. Results: The pilot study showed excellent test-retest ( $r=.80$ ;  $p<.0001$ ) and inter-observer ( $r=.94$ ;  $p<.0001$ ) reliability for the PACSLAC-F. Correlation between the PACSLAC-F and Doloplus-2 scores was .80 ( $p<.0001$ ). In the longitudinal study, 9,928 PACSLAC-F global scores have been recorded so far among 80 residents, with an mean ( $\pm S.D.$ ) of 4.74 ( $\pm 3.85$ ) and a median of 4. Distributions of scores by domains of pain manifestations will be discussed. The PACSLAC-F was found easy to use by the staff and useful for the daily monitoring of pain using a pain diary readily available in the medical chart. Conclusion: The PACSLAC-F has shown good psychometric properties and was found by the staff easy to use and clinically useful in LTC settings.

**PB7 482 COMPARISON OF ALGOPLUS PAIN EVALUATIONS IN DIFFERENT SETTINGS**

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Introduction The elderly often experience Acute Pain (AP). Patients with limited ability to communicate verbally (LAC) are unfortunately under treated because of lack of assessment. Thus, the Doloplus Collectif developed and validated in different settings an easy-to-use behavioral scale Algoplus® specifically designed to assess AP in elderly with LAC. Method A multicentre cross-sectional study examined Algoplus pain evaluations in emergency departments, acute settings and long term care facilities. The mean Algoplus score was compared between elderly patients (65 years old and over) in pain (based on a composite criteria) or not in pain. Same comparisons were done between LAC (MMSE < 15, delirium, aphasia...) and non LAC patients. Interrater reliability was also tested. Results Algoplus score (mean  $\pm$  SD) differed significantly between patients in pain or not in pain: respectively, in emergency departments:  $2.8 \pm 1.1$ ,  $1.0 \pm 1.0$  ( $p < 0.001$ ), in acute settings  $3.2 \pm 1.2$ ,  $0.6 \pm 0.7$  ( $p < 0.001$ ) and in long term care facilities  $2.6 \pm 1.7$ ,  $0.5 \pm 0.7$  ( $p < 0.001$ ). An excellent correlation was established in each setting between the total Algoplus mean score and the total self-report or behavioral assessment scales mean score. The interrater reliability was in acute care settings: 0.86 and in long term care facilities: 0.76. At last, an Algoplus ROC analysis at a threshold of 2 showed that Algoplus specificity to discriminate AP situations was excellent respectively 0.71 in ED, 0.93 in acute care settings and 0.86 in long term care facilities. Sensitivity was respectively 0.88, 0.92 and 0.67. Conclusion Algoplus exhibited good discriminant and convergent properties and an excellent interrater reliability. At a threshold of 2, the best sensitivity and specificity were found in emergency departments and acute care settings which corresponds fully to the care-givers' request for an easy tool to assess AP in elderly patients.

**PB7 483 GOODMOOD - PROMOTION OF MENTAL WELLBEING IN OLDER PEOPLE**

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The aim of the 3-year GoodMood-project is to develop and to evaluate the impact of early intervention on mood, loneliness and participation in older people who are at increased risk of decline in mental wellbeing. The object of this report is to describe the design and the general methodology of the study, the screening process of the study group, and selected

baseline results concerning need for intervention. The project started in September 2008 and consists of two parts: the screening and the intervention parts. First, an information letter was sent to all the 75-79-year-old community-living residents in the City of Jyväskylä, central Finland (N=1167). Of these people 985 persons participated in the phone interview with the aim of finding the subjects who reported feeling, loneliness, melancholy or depressive mood. Of the 475 subjects regarded suitable for the study 296 persons agreed to participate in a face-to-face interview. After that additional 4 persons were excluded due to memory impairment (MMSE < 22) and 22 persons refused further examinations. Thus, 270 persons took part in the personal counseling in health centre. The final study group included 257 persons who were randomized into intervention (n=129) and control (n=128) groups. The intervention group members participated in a 6-month intervention including either a physical activity group, social activity group, or face-to-face counseling sessions. The study outcomes include loneliness, depressive mood, quality of life, and participation. The intervention continued until May 2009 when the follow-up interviews at home were arranged for both the intervention and control groups. The surveillance of changes in feelings of loneliness, melancholy or depressive mood and participation is carried out through telephone interviews at 3, 6 and 12 months in both the intervention and control group.

**PB7 484 PREVENTION OF ASPIRATION PNEUMONIA IN THE ELDERLY BY CELL-SENSING**

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[Introduction]Dysphagia is a crucial problem in the elderly. The current study in Japan reported that 86.7% of hospital-acquired pneumonia was induced by aspiration. Heretofore, we showed the relationship between the transient receptor potential on the sensory nerve and the swallowing reflex that was responsible important factor for aspiration pneumonia. Concretely, thermal stimulation, the application of capsaicin (TRPV1 agonist) or menthol (TRPM8 agonist)can improve the deteriorated swallowing reflex. We also showed the improvement of sensory- and motor swallowing movement via insular cortex by olfactory stimulation. Therefore, we attempted to devise a safe remedial strategy by cell-sensing for oral feeding in dysphagic patients which would enable them to eat or feed orally without or with muchless aspiration before the start of tube feeding. [Methods] During these 2 years,17 elderly inpatients with pneumonia, were cross-over applied 2 type protocols after the recovery from pneumonia in each admission phase. The 1st phase was provided the standard low- or high-intensity swallowing treatment(appropriate dietary modification). The 2nd phase was provided the cell-sensing stimulated low- or high-intensity treatment. Both were provided oral care and specific swallowing exercise by speech pathologist. The incidence of pneumonia, the number of fibril days, the ability of eating or oral-feeding, and the ability of intaking necessary calorie were examined. [Result]The cell-sensing stimulated diet inhibited the incidence of pneumonia, the fibril days ( $P<0.01$ ). The number of patients in the 2nd phase who were able to eat or be orally fed were greater than those in the 1st phase( $p=0.2$ ). Patients in both phase did not take enough calorie.[Conclusion]Our remedy for eating or orally feeding using cell-sensing may be effective to prevention for aspiration pneumonia.

**PB7 485 RISK FACTORS FOR ADVERSE DRUG EVENTS IN ELDERLY HOSPITALIZED PATIENTS: A GERIATRIC SCORE**

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Introduction: Adverse drug events (ADEs) are common in the elderly and a major public health issue. As strategies for reducing ADEs in the elderly are developed (i.e Beers criteria), an important component will be the identification of patients at special risk. We proposed a specific score to evaluate the risk of ADEs in the elderly. Methods and materials: The score was elaborated on the base of the IMEPAG study (article submits for publication). This study was conducted in France, around Paris, in 16 rehabilitation geriatrics centres of APHP. Possible drug-related incidents were detected using a standardized check list and by week review of all charts by investigators. Cases included all individuals aged of 65 years or older who experienced an ADE during the 4 weeks of the study period. Separate multivariable models were constructed using all ADEs as the outcome with stepwise logistic regression using SAS. Variables that were significantly associated with a P value < 0.05 and with prevalence at least 5% were considered for inclusion. Results: During the 4 weeks of observation, 152 patients with at minimum one imputable ADE over 576 patients in the study (26%) were included for the elaboration of the score. The risk factors included in the final score were: age  $\geq$  85 years, weight  $\geq$  76 kg for male or  $\geq$  65 kg for female, number of medication (if  $\geq$  7), and the presence of anticoagulant treatment. The final score was between zero and 34, with a risk of ADE at 10% for a score < 7, at 19% for a score of 7-13, at 31% for a score of 14-21 and at 48% for

a score  $\geq$  21. Conclusion: This score is simple and practice to detect risk of ADEs in elderly hospitalized patients and to propose prevention.

**PB7 486 ASSESSMENT OF QUALITY OF LIFE AMONG ELDERLY INCLUDED IN ORGANIZED RECREATIONAL ACTIVITIES: A CASE-CONTROL STUDY**

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Introduction. With a view to promote and implement active, productive and healthy aging, a senior club was established within institution for home nursing care in Osijek, Croatia. Club offers wide variety of recreational activities tailored to elderly, from exercise programs to arts and crafts activities. The aim of this study was to investigate difference in perceived health status and quality of life between club members and elderly members of general population from the same geographic region. Methods and subjects. The final sample comprises 104 club members and 104 age and gender matched controls. Controls were drafted from the Croatian Adult Health Survey, which included approximately 1700 examinees from the same geographic region. Health related quality of life was measured using the Short Form Health Status Questionnaire (SF-36). Self-perception of quality of life in general was measured on a visual analogue scale. All scores were recoded and transformed into a scale ranging from 0 (poor health) to 100 percent (excellent health). Results. More than a half club members (61.5%) are included in more than one activity. Club members scored significantly higher than control on 6 out of 8 health dimensions ( $P<0.001$  for all). Median score was over 60 in all eight health dimensions in a club members group, while controls exceed score of 60 only in two, role emotional and social functioning. Club members rated their quality of life in general higher than controls (median 80 vs 50,  $P<0.001$ ). Conclusion. Club members in general showed better health-related functioning than general elderly population on almost all health dimensions. Self-perception of quality of life in general was also much better among club members than in general population of elderly people. Recreational activities for the elderly are essential for maintaining good physical and mental health.

**PB7 487 PHYSICAL ACTIVITY, AT THE AGE OF 65, AS A PREDICTIVE FACTOR OF WELL BEING 7 YEARS LATER. THE PROOF STUDY**

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Background: Physical activity has a pleiotropic effect and is a significant factor of successful aging. This study aims to quantify the relationship between physical activity of a 65 years old cohort and the level of well-being and self-estimated health status seven years later. Methods: 988 questionnaires were sent by mail to a representative sample of healthy pensioner (Proof cohort, Neuroepidemiology, 2007). Well-being and health status were estimated on two analogical scales (graded from 0 to 10), using answers from the following questions: 1) how do you estimate your health status? 2) are you basically satisfied with your life? The level of physical activity was estimated with the POPAQ questionnaire (Garet et al. Eur J Heart Failure. 2004) enabling us to calculate: 1) daily Energy Expenditure(DEE), 2) Physical activity energy expenditure (PAEE), 3) DEE higher than 5 METs (DEQ>5METs), 4) activity index (PAEE/DEE), and 5) VO2peak. Results: 686 responses were validated. The average age was 72.9+/-1.2 years old for 279 men (40.7%) and 407 women (59.3%). Amongst the sample, 98% (n=672) lived at home and 24.7% (n=168) lived alone. Mean DEE was 10365+/-1964 kJ/24h, mean PAEE was 44794+/-1170 kJ/24h, mean activity index was 0.42+/-0.05 and mean estimated VO2peak was 22.5+/-1.6mL/min/kg. Individuals with a DEQ>5MET represented 57.6% (n=395). Activity index and VO2peak were the variables the more significantly correlated with self-estimated health status ( $p=0.0032$  and  $p=0.0011$ ) and perception of well-being ( $p=0.0117$  and  $p=0.0053$ ). Conclusion: Energy spent in activity and VO2peak estimated on DEE, measured at the age of 65, appear to be strong predictors of well-being, seven years later.

**PB7 488 RISK FACTORS ASSOCIATED WITH MORTALITY IN HOSPITALIZED PATIENTS WITH PRESSURE ULCERS**

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Introduction Pressure ulcers (PU) are common in elderly hospitalized patients and associated with prolonged stays, increased costs and adverse outcomes. Many studies have addressed PU prevention and management. This study examines patient, ulcer and treatment characteristics associated with mortality among patients with established PU. Methods This was a retrospective cohort study of Olmsted County, Minnesota adult residents hospitalized at Mayo Clinic with a diagnosis of PU from January 2000 through December 2005. The outcome was all cause mortality within 6 months post-hospitalization. Logistic regression analysis was conducted to estimate the magnitude of association between patient demographics, functional status, medical comorbidity, Braden score, wound characteristics and treatment and 6 month post-hospitalization mortality. Results 317 hospitalized PU patients met inclusion criteria. Mean age was 70.7 years and

52% were male. 117 (36.9%) patients died within 6 months post-hospitalization. On univariate analysis, increasing age, Braden score <18, elevated creatinine, Charlson comorbidity index (CCI)>5, ulcer stage >2, presence of wound odor and being married were significant mortality risk factors. On multivariable testing, increasing age, CCI > 5, and Braden score <18 were associated with higher post-hospitalization mortality. Conclusions Hospitalized PU patients are at high risk of death within 6 months following discharge. Higher staged ulcers and wound odor as univariate risks likely reflect severe disease and infection. A low Braden score, indicating functional/nutritional impairment and suboptimal skin environment, advanced age and higher comorbidity were associated with high mortality risk in multivariable analysis. An aging population and increasing PU prevalence among hospitalized patients herald the need to proactively detect patients at high risk for complications and mortality. These results identify potential patient and ulcer factors that should be further explored for utility in stratifying prophylactic and therapeutic interventions towards avoidance of mortality in the hospitalized patient with PU.

**PB7 489** FACTORS OF RISK ASSOCIATED WITH FALLS IN THE MAJOR HOSPITALIZED ADULT K. DONOSO, C. SALAZAR, S.CASTRO.

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The fall of the major hospitalized adult is a multifactorial problem, which physical, psychological and socioeconomic consequences compromise his or her quality of life, increasing the demand in hospitals. A multidisciplinary intervention can prevent these falls. Objective: to identify frequent parameters associated with falls in the major hospitalized adult, which can be used to elaborate a preventive program. Materials and methods: a guideline was applied to 97 60-year-old major patients who suffered falls of a whole of 1089 hospitalized patients in the year 2008. Results: Age  $78.6 \pm 8.0$  years. In the admission 78.3 % presented neurological diagnosis, 65.9 % had sustained previous falls, 89.7 % presented unstable walking. During the hospitalization in 69.1 % the fall was diurnal, 60.8 % was in treatment with psychoactive drugs. The 78.4 % presented alteration in the scale of Yessavage and 83.5 % in the Barthel's scale. Conclusions: A complete anamnesis of the patient in the hospital admission allows finding out the risk of falling down. Many of them have a history of previous falls and unstable walking; for this reason it is necessary to provide a safe environment to avoid maladjustment to environmental factors, especially when he or she develops activities during the day. Due to the high frequency of falls in the major adult with neurological pathology and with deterioration of his or her self-valency according to Barthel's scale, the precocious rehabilitation is necessary to favor his or her level of independence and to minimize the risk of falling down. There is a relevant relationship between those that present falls and those that have some characteristics that guide the diagnosis of depression according to Yessavage's scale. It is also very important the valuation of the pharmacological treatment, especially in elderly treated with psychoactive drugs.

**PB7 490** IS SUBOPTIMAL PRESCRIBING A RISK FACTOR FOR POOR HEALTH OUTCOMES IN UNSELECTED ELTERS? THE ICARE DICOMANO STUDY

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Introduction. Mostly because of comorbidity, drugs consumption increases with advancing age. Older persons are often exposed to an increased risk of sub-optimal prescribing, defined as use of an excessive number of drugs (polypharmacy), prescription of inappropriate drugs, or of potentially interacting drugs. At present, no such studies have investigated the association between sub-optimal prescription and long-term health outcomes in Italy. We aimed at investigating the relation between suboptimal prescribing (SP) and the risk of mortality and hospitalization in Italian older community-dwellers. Methods. In a cohort study enrolling the entire population aged >65 years living in Dicomano, Italy, use of >5 drugs (polypharmacy), prescription of inappropriate drugs (ID), defined according to Beers' criteria, and of potentially interacting drugs (PID), based on Drug Reax-Micromedex, were evaluated in 1995 and 1999 and considered as forms of SP. Vital status and hospital admissions through 2003 were recorded. The three forms of SP were entered as time-dependent exposures into Cox regression analysis model, adjusting for age, sex, and comorbidity and disability as time-dependent covariates. Results. Of 1022 participants (mean age  $73.0 \pm 6.8$ , 57% women), 220 were evaluated in 1995, 234 in 1999 and 568 in both waves. In univariate analysis, mortality was twofold higher in participants with polypharmacy (73.4 per 1000 person-years, 95% CI 58.2-92.4 vs. 34.1, 95% CI 29.7-39.2;  $p < 0.001$ ) or PID (72.7 per 1000 person-years, 95% CI 46.3-113.9 vs. 38.0, 95% CI 33.5-43.1;  $p < 0.001$ ), whereas it was unrelated to the presence of ID. Hospitalization rates

were independent of any form of SP. In multivariable models, ID and PID were no longer associated with an increased risk of death, and ID predicted a

**PB7 491** CHANGES IN LEVELS OF DINAMIC STRENGTH IN WOMEN ABOVE THE AGE OF 55 SEDENTARY AND PHYSICALLY ACTIVE SUBMITTED TO A PROGRAM OF RESISTANCE EXERCISES

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The aim of this study was to determine the dynamic changes of maximum strength in women aged over 55 years, undergo a training program resisted. We evaluated 16 women with a mean age of  $59.11 \pm 5.42$  years, the women were divided into 2 groups according to level of physical activity prior to the study (group of sedentary=GS and group of Physically Active=GFA). The participants in the study were subjected to maximum dynamic strength evaluation using the protocol for prediction of maximum strength of 2 to 10 repetitions to fatigue, the exercises were the supine and Leg Press. The assessed the exercises done with the maximum possible charge, in addition to causing a state of fatigue prior to the tenth execution, if the estimated 1reps make the attempt is ignored and the test reapplied after 5 minutes of recovery. To check the difference between the groups using the Test "T" of Student for independent samples, assuming a rate of less than 0.05 significance ( $p < 0.05$ ). The intervention program was comprised of 3 sessions per week, with duration of 60 minutes, for 16 weeks. There were significant changes in both groups both in the financial year as in the supine leg press, in general the average in the supine position rose from  $23.84 \pm 6.30$ kg to  $31.88 \pm 4.69$ kg, now in the leg press results changed from  $69.97 \pm 12.10$ kg to  $94.00 \pm 14.97$ kg, however no differences were observed when comparing the groups in any of the tests. It was concluded that a program of resistance exercises training can promote the gain of strength in women aged over 55 years regardless of the level of physical activity prior to the period of intervention.

**PB7 492** SOCIO-ECONOMIC STATUS AND HEALTH BEHAVIOUR OF ACCIDENT AND FALL VICTIMS: RESULTS FROM A SAMPLE STUDY IN FRANCE

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Introduction: Although the prevalence of accidental injury and trauma caused by falls is relatively well-documented in France, the process of identifying the profiles of victims of these accidents is still in its very early stages. This work describes the socio-economic characteristics and health behaviours of people who reported having suffered from a fall within the last year. Method: The study was based on the use of data from the Baromètre Santé 2005, an on-going transversal national survey which focuses on various health behaviours of the French population. The sample is composed of more than 30,000 people aged from 12 to 75 years old of which 14,790 individuals responded to a series of questions related to falls and accidents. Exploratory and inferential analyses were used to investigate the socio-economic characteristics (sex, age, profession, level of education) and health behaviours (Body Mass Index, alcohol consumption, psychotropic drug use, chronic disease) of fall victims. Results: Nearly one in four people (23.1%) aged 40 to 75 reported having fallen within the past year; half of them had several accidents. Women are more susceptible to falls than men. The frequency of falls decreases in men with age, while it increases in women. Obesity, psychotropic drug use and the existence of a chronic disease are risk factors for falls among women. The consequences resulting from falls (such as doctor's visits, fear of falling, problems with equilibrium) are more distinctive in the older-aged group of the sample. Discussion: These self-reported data on falls are valuable for the adaptation and implementation of injury prevention programmes. They provide an image which contrasts that of the current analysis of accident victims according to age and sex, and therefore they imply the need for the development of targeted prevention strategies.

**PB7 493** DIABETICS PREVALENCE AND HEALTH FACTORS IN ELDERLY THAT LIVES IN MANAUS, AMAZONAS-BRASIL

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Introduction: diabetes mellitus (DM2) is a large problem of crescent importance to public health of several countries of the world. Based in DM higher epidemiologic impact the objective of the present study was to analyze the DM2 prevalence and socioeconomic, life style, health and quality of life indicators associated with this disease. Methods and materials: a cross-seccional, observational study was performed associated to Programa de Pesquisa Idoso da Floresta started in 2007, October that included 1509 elderly subjects and its associated with sex, age and life style, health and life quality variables. Results: DM2 prevalence was estimated in 25, 5% (377). Multivariate analysis showed association between DM2 and obesity in males (odds ratio 1,919 (1,243-2,964) and DM2 and hypertrigliceridemia (>150 mg/dL) in women [odds ratio 1,704 (1,203-2,412)]. DM2 and co-morbidities association was observed in both genera. The number of diabetics without

controlled glycemia was higher and Macro region Health associated. Conclusion: the study confirm the higher prevalence of DM2 in Manaus and suggest that health policies related to primary prevention, diagnosis and glycemic control of diabetic patients need to be designed and implanted in the ESF-SUS, Manaus-AM.

**PB7 494 MASTICATORY PROBLEMS IN ELDERLY THA LIVES IN MANAUS, AMAZONAS-BRASIL: PREVALENCE AND MORBIDITIES ASSOCIATION**  
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Introduction: clinical studies suggest that masticatory dysfunctions are related to dietary intake with malnutrition and morbidities. In elderly this conditions could be dramatic to maintain your health conditions. However, few studies were performed in Brazil about the epidemiological impact of this condition in elderly population. For this reason we performed here an exploratory study to evaluate the association between self-report of masticatory problems, health and life quality factors in an elderly population that lives in a urban Brazilian tropical region. Methods and materials: a cross-seccional study was performed associated to Elderly's Amazon Forest Region Research Project that included 1482 elderly subjects. Self-report of masticatory difficulty to eating was asked to elderly. The prevalence of this conditions and its association between health and life quality variables were compared and described here. Results: From subjects analyzed, 364 (24.6%) self-reported masticatory problems (MP) whereas 1118 (75.4%) did not report this problem. We did no find association between MP, age and genera. However, we found a significant association between MP, sarcopenia ( $p=0.05$ ), multiple morbidities ( $> 4$ ) ( $p=0.0001$ ), elderly dependence using Barthel index ( $p=0.001$ ) and hospitalization in the last year ( $p=0.001$ ). Life quality factors (self-report of health and life conditions) were poorest in MP. Conclusion: several investigations reported association between masticatory conditions and diseases such as hypertension, stroke, sarcopenia in elderly population. Our results corroborate these previous studies and suggest the importance of elderly's oral care programs as a prevention mechanism of diseases that increase the mortality and morbidity risk.

**PB7 495 NEW POLITICS FOR GLOBAL HEALTH AND LONGEVITY: COMPLEMENTARITY OF ANTI-AGING MEDICINE WITH MENTAL HEALTH**  
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Introduction "The common trunk" of anti-aging medicine (AAM) and mental health (MH) is represented by sanogenesis (at individual level) and public health (at societal level). Methods Both are branches of preventive medicine (prophylaxis and hygiene) and also of integrative medicine (bio-psycho-social human concept). Therefore, AAM and MH have common principles and methods: cognitive construction-development and continuity-permanence at individual level, and health assessment programmes and improvement strategies at societal level. Results Cognitive construction-development (1st stage of sanogenesis pattern implementation) comprises the processes of knowledge, understanding, acceptance, learning, programing and education. Continuity-permanence (2nd stage of maintaining and improvement of sanogenesis pattern) includes the processes of practicing, progressiveness, activation, training, perfecting and performance. Programmes of health assessment and improvement must become national planes and a permanent concern of society. Studies of AAM-MH strategies at individual-societal levels emphasize useful data and facts: - AAM-MH complementarity is evident as binomial: the construction of one of them meaning the development of the other one and vice versa; - AAM-MH superposition is total in the last life cycles: mature adult  $\rightarrow$  old adult  $\rightarrow$  3rd age (65-85 years)  $\rightarrow$  4th age (over 85 years); - dependence of AAM-MH couple from (human and social) ecology manifests antagonistically: •in negative register: etio-pathogenic and morbiogenesis factors, ways and processes; •in positive register: resources, strategies and therapies for longevity and mental health. In prophylactic and medical practice, the phenomenologic tetrads/cascades must be known and respectively applied: •etio-pathogenic, entropic tetrad: distress/stress-dependent disorders  $\rightarrow$  wear and tear/impairment  $\rightarrow$  premature/accelerated aging  $\rightarrow$  polypathology; •therapeutic, anti-entropic tetrad: anti-stress/eu-stress/adaptation  $\rightarrow$  anti-impairment/vitality/ resistance  $\rightarrow$  anti-aging/healty longevity  $\rightarrow$  anti-illnesses/anti-diseases. Conclusion AAM and MH represent medicine of the future and will be included into common health politics of globalization.

**PB7 496 HEALTH IN ELDERLY PEOPLE WHO LIVE IN SITUATION OF POVERTY**  
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In 2000, the elderly population in Mexico was 7.1 %, but for the year 2050 the percentage will increases to 21 % (National Institute of Statistics, Geography and Computer, 2002). Wong (2002), found that men report a better health than women; in self-evaluation on health, 32 % of women consider her health is good, unlike 42 % than men. This study has as aim knows as the elderly population perceives his health. Method: Subjects 201 elderly, 47.8 % men and 52.2 % women, average of age 77.6 years. Instruments: Health and Well-being and Aging in Latin America and the Caribbean - Survey and National Study of the Health and Aging in Mexico - Survey. Results: The major percentages that it reports this population as for her perception of the health is "regular", so much in men (21.9 %) as women (23.4 %). As for the levels of "very good" health the percentages are very low in groups, men (5.5 %) and women (3.3 %). If we consider the levels of "bad health" and "very bad health", it shows that women has a percentage (9.5 %) lightly higher than men (6.5 %). Differences of gender exist in the diseases that reported. The women shows significantly more problems of memory and attention (57.3 %) than men (37.2 %) ( $\chi^2 = 9.0$ ;  $p < .01$ ). Also, the arterial pressure was higher in women (62.5 %) than men (43.6 %) ( $\chi^2 = 7.8$ ;  $p < .01$ ). Conclusions: This study reported that men have better perception of his health than women. The diseases that the elderly reported were: problems of arterial pressure, problems of bones, problems of vision, problems of the stomach, but especially problems of memory and attention.

**PB7 497 A SIX YEAR FOLLOW-UP STUDY ON MORTALITY: DEPRESSION AND SELF REPORTED HEALTH AS RISK FACTORS**

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INTRODUCTION. Self reported health (SRH), a subjective assessment of health, is known as a predictive variable for mortality. Gender differences in SRH are also documented, as well as its association with depressive symptoms. Researches on SRH and mortality in old ages are important to bring better understanding of the issues involved, and to the designing of policies focused in preventive medicine. OBJECTIVES: To study the association of SRH with mortality, controlling for depression, age and sex. METHODS AND MATERIALS. Data came from two rounds of a longitudinal survey : ESTUDO SABE – São Paulo (Brazil). The 2000 sample included population aged 60+, living in São Paulo, Brasil (n= 2143). To these data was added the information on survival at the 2006 round: Found living (59.1%), Dead (22.2%), Institutionalized (0.3%), Other (Moved, not found, refused to answer – 18.4%). Independent variables: SRH(Good, Fair, Poor), Depressive symptoms in 2000 (GDS-15 scale: Normal, Mild, Severe), Sex and Age (taken as continuous). Dependent variable: Survival at 2006. Analysis: A multinomial logistic regression was fitted with robust estimates of errors, Relative Risk Ratios (RRR) taken as elements of comparison. Found living was the reference for the dependent variable. RESULTS- DEATHS: SRH "fair" increases death Risk Ratio by a factor of 1.4 and "poor" by 3.34. Males have a Risk Ratio increased by 2.2 and each year of age increases RRR by 9%. INSTITUTIONALIZATION: Severe depression multiplies the Risk Ratio by a factor of 6.7, each year of age raises the Risk Ratio by 14%. CONCLUSIONS: SRH predicted death, when controlled by age and sex. Moving out, not being found or refusing to answer were not associated with the independent variables. Severe depression and age are associated with the risk of being in an institution 6 years after the first interview.

**PB7 498 A NOVEL PROGRAM FOR IMPROVING FUNCTIONAL BALANCE AND LIFESTYLE PARTICIPATION IN ADULTS AS THEY AGE.**

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Introduction: Decline in balance and functional mobility has been demonstrated by our research team to become significant between the ages of 40 and 60 in both men and women. In many older adults particularly those who are sedentary, obese or who have arthritis this decline limits lifestyle options. Empowering older people with these problems to sustain participation in physical activity after completion of a program to prolong beneficial effects is of major importance. Therefore the intervention needs to be attractive to these non-physically active people. This study will evaluate the effect of an attractive exercise program that targets the impairments underpinning balance and functional decline in men and women aged over 40. Methods and materials: Study design is a clinical trial. Participants aged 40 and over are volunteers from the community who were required to be sedentary, have self-perceived poor balance, osteoarthritis or be obese or overweight. Intervention involves a one hour exercise session each week for 10 weeks. The exercises can be translated to home practice and are adaptable to all ages and abilities. They include specific balance strategy training, multiple tasking and functional strengthening. Pre and post-intervention measurements include strength, power, proprioception, functional balance and the patient specific functional scale [PSFS]. Results: 60 subjects (with a 1:8 ratio of men to women), have been enrolled to date with 20 completions [more imminent]. Ages ranged from 40 to 78. Preliminary analyses show improvements across all measurements with significance reached at  $p < 0.05$  in functional balance and mobility measures, proprioception, muscle power, quadriceps strength and two PSFS activities.

**Conclusion:** This approach to exercise shows a positive response in sensorimotor and central processing aspects of balance that are reflected in improved functional balance and mobility which has translated to activities identified by subjects as problematic.

**PB7 499 THYROID SELF- EXAMINATION IN THE ELDERLY: THE IMPORTANCE OF HEALTH EDUCATION**

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**Introduction:** Thyroid cancer is the more prevalent endocrine cancer in the world, although only represents nearly 1 % of total malignant cancers. Usually occurs in women around fourth to sixty and has good evolution. Unfortunately, poor prognosis with non-differentiated cancer tends to increase with age, specially on elderly persons with previously thyroid nodules. Sistematic thyroid self-examination helps early detection of thyroid abnormalities, including cancer, which increases cure possibilities and reduces related mortality, increasing life expectancy and quality. The objective of this study was verify in one elderly group the knowlegdment on thyroid self-examination. Methods and materials: For thyroid cancer screening we evaluated 51 patients (50 women and 1 men, mean age: 69.53 years ± 9.77) of the Geriatric and Gerontology Service of Universidade Federal Fluminense- Campus Mequinho- Brazil. They were questioned about thyroid diseases (hypothyroidism, hyperthyroidism, nodules or previous surgery), neck radiation exposition and familiar thyroid cancer. Thyroid self-examination was explained. We asked if they have listen about it before and if they have this self-practice. Neck evaluation includes inspection and palpation of thyroid topography and lymph nodes. Results: Nobody had listen before about thyroid self-examination, consequently none had this self-practice. Although we detected in this group nearly 10 % (5/51) with thyroid diseases, 23.5% (12/51) with neck radiation exposition historical and one case with familiar cancer history. By the screening, one patient had suspicious thyroid cancer (the one with familiar history) and was submitted an additional investigation and follow-up. Conclusions: Thyroid self-examination seems to be negletable by the health professionals. It is useful for screening cancer and certainly stimulate elderly self-care. The lack of knowlegdment from this elderly group on thyroid self-examination shows the importance of conscious geriatrics and gerontology professionals on thyroid self-examination education.

**PB7 500 INTRADERMAL INFLUENZA VACCINE FOR OLDER ADULTS: IMMUNOGENICITY OF CONSECUTIVE ANNUAL VACCINATIONS**

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**Introduction:** Older adults are at greatest risk from influenza, yet conventional influenza vaccines are less effective in this population than in younger individuals. Intradermal vaccination is a promising, immunogenic alternative to the intramuscular route. A trivalent inactivated intradermal influenza vaccine has been designed specifically for adults older than 60yrs using a new intradermal microinjection system. Methods: Multicentre, randomized, controlled phase 3 trial: adults (60–94yrs) were vaccinated in three consecutive years with investigational intradermal vaccine (Intanza®) or licensed intramuscular control (Vaxigrip®). Both contained 15mcg of haemagglutinin per influenza strain. Primary objective: to demonstrate whether intradermal vaccination was more immunogenic than the control based on seroprotection rate (SPR: % with haemagglutination inhibition titre >=40) 21 days after vaccination in year 1. Immunogenicity of vaccination in years 2 and 3 was described in a random subset of participants. Results: Primary analyses on all subjects in year 1 (intradermal: N=2612; intramuscular: N=1089), confirmed that intradermal vaccination was more immunogenic: SPR in the intradermal and intramuscular groups were, respectively: 77 and 71 (p=0.0003) for influenza A/H1N1, 93 and 88 (p<0.0001) for A/H3N2, and 56 and 49 (p=0.0003) for B. SPR after year-2 vaccination (intradermal: N=262, intramuscular: N=143) followed the same pattern: 93 and 82 for H1N1, 98 and 96 for H3N2 and 60 and 53 for B. Geometric mean titres were also consistently higher after intradermal vaccination: 82 vs 69, 298 vs 181, and 40 vs 35 in year 1, and 204 vs 137, 382 vs 293, and 46 vs 37 in year 2. Year-3 results are under analysis. Conclusion: This intradermal influenza elicited significantly and consistently higher immune responses than the reference intramuscular vaccine in older adults. Higher immune responses are expected to result in increased protection for this population.

**PB7 501 LABORIOUS PHYSICAL ACTIVITY AND HEALTH-RELATED QUALITY OF LIFE IN OLDER JAPANESE ADULTS**

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**Introduction:** The purpose of this study was to determine whether laborious physical activity is associated with health-related quality of life (HRQOL) in older adults. Methods

and materials: Subjects were a sample of 734 male and 906 female healthy Japanese adults, aged 65–85 years. The Physical Activity Questionnaire for Elderly Japanese (PAQ-EJ) was used to assess total and four domains of habitual physical activity: personal transportation, exercise/sports, housework, and labor. HRQOL was assessed using the Japanese version of the Medical Outcome Study 36-Item Short-Form Health Survey (SF-36). We dichotomized data based on the PAQ-EJ score for labor. We labeled those who did laborious activity as "worker" and those who did not any laborious activities as "nonworker". Results: Total and all subtotal PAQ-EJ scores were significantly ( $P < 0.05$ ) greater in subjects in the worker group than subjects in the nonworker group for both men and women. In both men and women, subjects in the worker group also showed significantly ( $P < 0.05$ ) greater physical component summary score (PCS) and mental component summary score (MCS) from the SF-36 and significantly ( $P < 0.05$ ) greater scores in eight SF-36 categories: physical function (PF), role physical (RP), bodily pain (BP), social functioning (SF), general health (GH), vitality (VT), role emotional (RE), and mental health (MH). Subjects in the worker group had statistically significant ( $P < 0.05$ ) and positive correlations between PAQ-EJ score for labor and RP, SF, RE, and MH in men and RP and GH in women after controlling for age. Conclusion: Our results suggest that working may associate with physical and mental health in elderly people. Working may contribute to prevent a decline in physical and mental health status.

**PB7 502 BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD) : DO YOU THINK THERE MAY BE A RELATED BIPOLAR SPECTRUM?**

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We report the case of a 84-year old patient hospitalized for psychomotor restlessness with excitation, irritability, escape of ideas, mood exaltation, logorrhea, sleep disorders in a context of Alzheimer's disease at a moderate stage. Clinical and paraclinical valuations: In admission, somatic exam was without specificity. All biological exams were normal, notably TSH and calcemia. No previous psychiatric history was found. But, the exploration of the pre-morbid personality showed a probable cyclothymic personality according to the criteria by Akiskal [J Affect Disord 1998]. A treatment by FLUOXETINE had newly been introduced for a depressive syndrome. Medical management and evolution: The stopping of FLUOXETINE and the introduction of OXACARBAZEPINE allowed the disappearing of the behavioural and psychological symptoms. Discussion: The management of BPSD is often complex. Here, the introduction of a mood stabilizer treatment, OXAZEPINE, proved to be effective on symptoms. Although without known previous psychiatric history, a diagnosis of bipolar spectrum disorders occurring in co-morbidity with the Alzheimer's disease was suggested for several reasons: symptomatic maniac syndrome, worsening of symptoms under SSRI, existence of a probable premorbid cyclothymic temperament. BPSD find a multifactorial origin and the research of a psychiatric component can allow to orient the therapeutic strategies, even for patients without known previous psychiatric history. The bipolar spectrum disorders are frequent, with a prevalence going up to 8,4% in the general population, but most are no diagnosed [J Affect Disord 1998]. Under the influence of cognitive decline, the disorders of bipolar spectrum can appear and be mistaken for the behavioural and psychological symptoms. The systematic research of marker of thymic vulnerability, as affective temperaments described by Akiskal, could help to identify the bipolar spectrum disorders and to better target the management of the behavioural and psychological symptoms.

**PB7 503 SCREENING TOOL OF OLDER PERSON'S PRESCRIPTIONS (STOPP) AND SCREENING TOOL TO ALERT DOCTORS TO RIGHT TREATMENT (START): APPLICATION TO HOSPITALIZED GERIATRIC PATIENTS.**

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**Introduction:** Older people often experience multiple co-morbidities for which they are prescribed multiple medications. Prescription of such drugs is potentially inappropriate where safer alternatives exist (STOPP criteria) and they are often denied clinically indicated medications without a valid reason (START criteria). We aimed to apply the STOPP and START valid screening tool to detect inappropriate treatments in geriatrics hospitalized patients. Methods and Materials: A prospective, observational study of 100 consecutive admissions to the Geriatric Department was performed. Demographic data; comorbidity; geriatric syndromes; mental, functional and social status; laboratory test and concurrent medications were recorded. STOPP and START criteria were applied. Results: Mean patient age was 85.1 years, 50% female, 87% comorbidity and 73% ADL dependent. Most common geriatrics syndromes were polypharmacy (more 6 drugs) 93%, sensory loss 69% and dementia 57%. Length hospital stay was 14.7 days. Average medications during hospitalization were 10.6 drugs/patient, reduce to 6.6 at discharge. According to STOPP criteria, inappropriate drugs were prescribed in 67 patients, 28 of them had related side effects. Potential beneficial drugs were denied in 48 patients based on START criteria. Most frequent STOPP criteria were drugs that adversely affect fallers (30%). Most common START criteria were avoiding statin therapy in diabetes mellitus coexisting with other major cardiovascular risk factors (14%). Variables statistically associated with inappropriate drugs prescriptions were length hospital stay ( $P < 0.04$ ) and polypharmacy at

admission ( $P<0.01$ ). Underuse potential beneficial drugs were associated with renal failure ( $P<0.01$ ), delirium ( $P<0.01$ ), dementia ( $P<0.03$ ), immobility ( $P<0.01$ ), insomnia ( $P<0.01$ ) and comorbidity ( $P<0.05$ ). Conclusion: This study identifies high rates of inappropriate treatments in hospitalized elderly frail patients. It's necessary to adjust both STOPP and START criteria and clinical practice to specific geriatrics features.

**PB7 504 SENIORS HEALTH EDUCATION PROGRAM IMPROVES POSITIVE BEHAVIOR AND MODIFIES MEDICAL RESOURCES CONSUMPTION**

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Introduction. The aim of most health promotion programs for elderly is to maintain or improve autonomy, quality of life, physical condition and social interaction. We wondered if such health promotion program does improve health behavior and changes medical resource consumption of men and women over 55. Methods. Eight hundred and twelve subjects mostly living in rural areas of France participated to the health program. From those, 306 affiliated to the Mutualité Sociale Agricole (MSA), a health insurance for the rural population, were matched to 244 control subjects for life area, age and sex. The program, entitled « Les Ateliers du Bien Vieillir », was sponsored by the MSA. It was provided to groups of 10 to 15 individuals in six weekly half-day meetings. The main topics covered were aging processes, nutrition, physical activity and falls, sleep, sight and hearing, bone and calcium, medical resource consumption and its alternatives. Health behavior was recorded at the beginning of the program, 3 and 12 months later, with questionnaires. Medical resource consumption was compared the year before and the year after the program, from the health insurance electronic database. Results. Participants and controls were comparable at inclusion for demographic and socioeconomic characteristics, retirement status, body mass index, living arrangement subjective health and food habits. Mean age was 70 years and women represented 82% of the cohort. Mean body mass index was rather high, close to 26 for both genders. Time devoted to physical activity was larger than 30 minutes per day for 2/3 of this population. Fruits and vegetable consumption was less than 4 per day for 74%. Conclusion. Preliminary results showed that participation in the program resulted in increased consumption of fruits and vegetables, calcium intake and physical activity. Medical resource consumption was also modified, depending on individual baseline levels.

**PB7 505 APPROPRIATE PRESCRIBING IN OLDER PEOPLE**

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Introduction: Older people tend to be prescribed more medications and are at higher risk of adverse drug events, drug-drug interactions and drug-disease interactions. We audited an acute medical unit to identify inappropriate prescribing in older people using the STOPP/START tool (Gallagher P RC, et al). Method: We performed a retrospective case note review of patients aged 70+ admitted to the AMU. 74 sets of notes were examined between June-July 2008. Gold Standards were set at 3% for inappropriate prescriptions, 27% for the proportion of patients with one inappropriate prescription and 15% for underuse of appropriate medication. These gold standards were derived from a RCT of pharmacist led optimisation of prescribing for hospitalised older people (Spinewine A SC, Dhillon S et al). Results: The mean age of the participants was 80.6 (95% CI, 79.1-82.0) years, 58% were female. The mean number of drugs per patient was 6.8 (6.0-7.5), with 55/74 (73%) taking four or more medications. On admission 34/74 (46%) of individuals had at least one inappropriate medication, this increased to 49% at discharge. Of all individual prescriptions, 64/500 (13%) were inappropriate at admission, falling to 5% at discharge. Omissions were high on admission (34%) and at discharge (30%), with omissions being mostly related to secondary prevention of fractures and cardiovascular disease. Conclusion: This audit suggests inappropriate prescriptions pre-admission and at discharge are below published gold standards, although the total number of inappropriate prescriptions were reduced. Under prescribing of appropriate medications was common, with rates twice that seen in published gold standards. There maybe a number of reasons why prescribing did not reach target levels including; no medication review taking place, missing medical history and a lack of awareness of prescribing in older people. We suggest making STOPP/START criteria readily available and educating health professionals in its use.

**PB7 506 ASSESSMENT OF A NURSE EDUCATION COURSE FOR THE ORAL HEALTH OF THE INSTITUTIONALISED ELDERLY PEOPLE.**

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**INTRODUCTION.** Oral health of elderly people is altered with age and medical conditions especially among institutionalised elderly. The reasons reported in the literature are poor oral hygiene, poor medical conditions or complicated access to dental care. Another important point is the inadequate care-givers practice and knowledges. The aim of the study was to assess the clinical impact of a continuous training of nursing staff on institutionalised elderly's oral health. We pay a special attention to the pedagogical structure of the course. **METHODS AND MATERIALS.** We conducted a baseline ( $n=333$ ), 6 months ( $n=304$ ) and 1 year ( $n=297$ ) clinical assessment on two groups of institutionalised aged 65 and over. We have randomly ascribe the 11 settings to the education (6) and control group (5). In each place, elderly people were randomly selected on the basis of 40% of the setting's population. We had, at baseline, 133 valid observations for the education group and 159 for the control group. The observations included : medical, cognitive and social conditions, interview on hygiene practices, nutritional assessment, an oral health related quality of life scale, and a clinical examination. **RESULTS.** At 6 months, we observed less dental plaque and calculus, a lower progress in caries, less severity of periodontal diseases, cleaner and better tolerated prosthodontics. At 1 year, we only observed less progress in dental caries and a better prosthodontics hygiene. **CONCLUSIONS.** The educational program has partially improved the oral health of elderly institutionalised people. The effect are better at 6 months than at 1 year. The educational program should be supported and established in a long term and continuous perspective. Education relay are needed to widespread this program. Beside, our study revealed important treatment needs. We argue for the settlement of dental care units under the responsibility of medical staff including a trained dentist.

**PB7 507 EVALUATION OF OVERLOAD AND QUALITY OF LIFE: CAREGIVERS OF INSTITUTIONALIZED ELDERLY WITH FUNCTIONAL LOSS**  
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Introduction: The demographic and epidemiological transition in Brazil and also the aging of the population has caused a higher prevalence and incidence of chronic diseases, which demand continuous monitoring, emphasizing therefore the role of the caregiver. It is known that the caregivers emotional overload can interfere directly to the assisted elderly. The identification of predictors of stress situations is crucial for effective approaches that are taken to prevent, diagnose and treat this condition. The objective is to assess the quality of life on formal caregivers of the elderly with functional loss and dependency that are residents in long-stay institutions and related it to a degree of burden and level of functional independence. Material and method: 25 were female formal caregivers (100%), with an average age of 35.12 years, average schooling of 9.45 years and time average of professional activity with the elderly assessed in 32.35 months. Instruments used: Quality of Life Questionnaire of WHOQOL-brief, Burden Scale (Zarit Burden Interview) and Functional Independence Measure. Results: We found that older people that are fully dependant do not overload the caregivers (Zarit total = 32), as much as those with a modified dependency in need of supervision of their daily activities (Zarit total = 40). The scale of overload was shown to be related to the overall quality of life. Conclusion: Taking care of a modified dependency of the elderly which requires assistance to up to 50% of their tasks creates a greater burden than cases in which the dependence is total. And the noticed burden related to quality of life of caregivers indicated that the lower the scores in the areas of WHOQOL-brief, the higher the burden. These findings emphasize the need to adopt measures to promote health among these professionals ensuring a consequent improvement of assistance to the elderly.

**PB7 508 MEDICINAL DISTRIBUTED IN POSTS OF INDIGENOUS HEALTH BONFIM/ RR THAT CAN CAUSE IATROGENY**  
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Introduction: In Brazil live around 460 thousand Indians, in 225 societies indigenous, representing 0.25% of the brazilian population. In the state of Roraima concentrates the second largest indigenous population of Brazil: 30,715 Indians divided into nine ethnies: ingaricô, macuxi, patamona, taurepang, waimiri-atroari, wapixana, waiwai, yanomami and ye'kuana (IBGE, 2002). In the municipality of Bonfim are ethnic macuxi and wapixana, with 2.200 Indians and 243 elderly. The current study presents an overview of drugs available in health centers indigenous Bonfim - RR provided by Family Health Program Indigenous / Brazil, and that can cause iatrogenia in the elderly. Methods and materials: It was used for research of this paper books, magazines, newspapers and specific sites, which helped to identify the indigenous population and the incidence of iatrogenic causes. This is a cross-sectional study, observational, based on literature reviews. Conducting the medical activities in indigenous communities in the municipality of Bonfim, it was possible to observe a number of elderly people seeking medical attention. The greatest interest was to discuss how these drugs work and what are its advantages over the side effects that can cause iatrogenia in elderly patients and avoid undesirable reactions that can bring or cause more suffering to our patients. Results: According to this review, the drug less suitable for the elderly that are available are: acetylsalicylic acid, amiodarone, cinnarizine, dexchlorpheniramine, diazepam, diclofenac sodium and potassium, scopolamine,

aluminum hydroxide, methyldopa, metoclopramide, nifedipine, nimesulide, propranolol and promethazine, which, in general, in certain diseases or conditions, may cause iatrogenia. Conclusion: We should always be careful when prescribing the medication, especially for our elderly, with a basic knowledge of both (drug/patient), because none of the drugs that were mentioned is completely free to cause reactions mild, moderate or severe, with her, putting at risk the very life of the patient.

**PB7 509 PROFILE OF OLDER PATIENTS IN A SINGAPORE HOSPITAL, IMPACT OF AGEING-IMPLICATIONS ON PROVISION, ORGANISATION OF CARE**  
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Introduction KK Women's and Children's Hospital is Singapore's only dedicated Women-Maternal and Children Hospital. The care for adult women was primarily geared towards the provision of Obstetrics and Gynaecology services. Singapore is one of the fastest ageing populations in the world. By 2030, 1 in 5 Singaporeans will be 65 years and above. In tandem with the ageing of our population, the average age our patients has also increased and hence, the co-morbidity profile of our patients has also changed with chronic diseases e.g. hypertension, diabetes common. Methods and Materials To achieve holistic patient centred care, a pilot project was conducted whereby all women above 70 years old who were admitted to the hospital were assessed by the geriatric resource nurse with the support of the geriatricians, family medicine disciplines. Patients were assessed not just for the primary reason for admission, but also for co-morbidity, functional, social and post discharge care needs. Results A total of 191 patients out of the total 213 admissions (70 years and above) were assessed. Results: Hypertension- 64%, Diabetes Mellitus-30% , Hyperlipidaemia-38%. Impaired Abbreviated Mental Test-7%, Moderate to High risk for osteoporosis (based on OSTA- Osteoporosis Self-Assessment Tool)-97%, ADL ( Activities of Daily Living- Modified Barthel) Impairment, moderate to severe- 20%, Moderate to High Fall Risks (Berg Balance Scale)-61%. The prevalence of the cohort assessed having 3 comorbidities was 47%. Conclusion As a result of this pilot, KKH has embarked on a hospital wide programme to holistically assess and manage all older inpatients. A collaborative patient centred model of care is in place with the medical disciplines working together with the primary surgical team to optimize patient care, proactively identify health and care issues and integrate with the community services. Capability building of all staff including doctors, nurses and allied health e.g. physiotherapists, occupational therapists, and social workers through lectures, teaching ward rounds and specialty consults is also underway.

**PB7 510 EFFECTS OF &ALPHA;-CYCLODEXTRIN ON BLOOD PRESSURE, GASTRIC EMPTYING AND GLYCAEMIA IN THE ELDERLY**  
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Introduction: In healthy older subjects the hypotensive and glycaemic responses to carbohydrate-containing meals are dependent on gastric emptying (GE) and intestinal absorption-when the latter are slowed, the magnitude of the fall in blood pressure (BP) and rise in glucose are attenuated. The oligosaccharide,  $\alpha$ -cyclodextrin, is inexpensive, and diminishes the glycaemic response to starch in young adults, possibly by slowing GE and/or carbohydrate absorption. Accordingly,  $\alpha$ -cyclodextrin may prove useful in the management of postprandial hypotension and type 2 diabetes, which occur frequently in the elderly. The aims of this study were to determine the effects of  $\alpha$ -cyclodextrin on BP, GE and glycaemic responses to oral sucrose in older subjects. Methods and Materials: Eight healthy subjects (6M, 2F; age 68-76 yr) were studied on two separate days, after an overnight fast. BP (automated), GE (scintigraphy) and blood glucose (glucometer) were measured between t=0-300min following a 300ml drink containing 100g sucrose labelled with 20MBq  $^{99m}$ Tc-sulphur colloid, with or without 10g  $\alpha$ -cyclodextrin. Results:  $\alpha$ -cyclodextrin had no effect on GE initially, but caused slowing after ~120min (eg intragastric retention at t=180min; control: 11 $\pm$ 2.2% vs  $\alpha$ -cyclodextrin: 18 $\pm$ 2.3%; P=0.04). Blood glucose concentrations between t=60-75min were slightly less (eg at t=60min; control: 9.9 $\pm$ 0.9mmol/L vs  $\alpha$ -cyclodextrin: 8.7 $\pm$ 0.8mmol/L; P<0.001), and between t=180-240min slightly greater (eg at t=180min; control: 5.0 $\pm$ 0.2mmol/L vs  $\alpha$ -cyclodextrin: 6.3 $\pm$ 0.6mmol/L; P<0.05), with  $\alpha$ -cyclodextrin.  $\alpha$ -cyclodextrin had no effect on systolic or diastolic BP. Conclusion: In a dose of 10g,  $\alpha$ -cyclodextrin has no effect on the BP response to oral sucrose in healthy older subjects, but attenuates the initial rise in glycaemia and slows GE. The latter effects are modest and attributable to delayed intestinal carbohydrate absorption, so that glucose is absorbed more distally. These observations argue against a therapeutic role for  $\alpha$ -cyclodextrin in patients with postprandial hypotension and/or type 2 diabetes.

**PB7 511 EFFECTS OF GLUCOSE LOAD ON BLOOD PRESSURE, HEART RATE AND SPLANCHNIC BLOOD FLOW IN HEALTHY ELDERLY**  
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Introduction: Postprandial hypotension, defined as a fall in systolic blood pressure (BP) of  $\geq$ 20mmHg, sustained for at least 30min within two hours of a meal is an important clinical problem, particularly in the elderly. The magnitude of the fall in BP is related to the rate of small intestinal nutrient delivery. We aimed to determine whether the fall in BP and rises in heart rate (HR) and superior mesenteric artery (SMA) flow, in response to intraduodenal (ID) glucose are load-dependent in the healthy elderly. Methods and materials: Nine subjects (5M,4F; age 65-76yr) had simultaneous measurements of BP, HR (DINAMAP) and SMA flow (ultrasound), on four separate occasion, in a double-blind, randomised order. On each day, subjects were intubated via an anaesthetised nostril into the stomach, with a nasoduodenal catheter, incorporating a duodenal infusion port. Following a recovery period (30min), subjects received an ID infusion (5ml/min) of either saline (S) (0.9%) or glucose at a rate of 1, 2 or 3 kcal/min (G1, G2, G3, respectively), for 60min (t=0-60 min), followed by ID saline for a further 60min (t=60-120min). Results: Between t=0-60min, there was a significant fall in BP and rise in HR following G2 and G3 compared to S (P<0.05 for all) but not during G1; there was no significant difference between G2 and G3. Between t=0-120 min, there was a significant increase in SMA flow following G2 and G3 compared to S (P<0.01 for all) but not during G1; the magnitude of increase in SMA flow was greater after G3 than G2 (P<0.05). Conclusion: The cardiovascular response to ID glucose reaches a maximum between 2-3kcal/min, however, the rise in SMA flow appears to be a load-dependent phenomenon.

**PB7 512 DEFINING PROFILES OF FUNCTIONAL LIMITATIONS IN GROUPS OF OLDER PERSONS: HOW AND WHY?**  
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Introduction Accessibility to the society at large is a prioritized political goal. For older people, who often have more than one functional limitation, it is crucial that the environment is designed to meet demands posed by reduced functional capacity, as manifested in combinations of limitations. This study aimed at identifying specific combinations of functional limitations as type profiles, in order to support physical planning procedures and decisions. Methods and materials We utilized a database comprising data from older persons (75-89 years) in four European countries (N=1,542), both on their functional limitations and the environmental barriers in their housings. Data were collected using the Housing Enabler instrument. We tested which combinations of functional limitations that occurred more or less often than by chance, by means of Configuration Frequency Analyses. Combinations that came out as significant were identified as type profiles and used in simulations in order to predict accessibility problems. The type profiles were checked with regard to all environmental barriers listed by the Housing Enabler. Barriers were ranked according to severity of predicted accessibility problems. Results Out of 64 theoretically possible combinations of functional limitations, eleven occurred more often than expected by chance and eight occurred less often than expected (p<0.05). For further analyses we selected the five positively significant profiles with highest observed frequencies and the five negatively significant profiles with highest observed frequencies. The occurrence of these ten profiles ranged from 2.0% to 26.7%. Simulations of accessibility problems showed varied patterns of barrier ranking between the type profiles. Conclusion By means of Configuration Frequency Analyses we were able to identify combinations of functional limitations as type profiles, representing groups of older people. With such type profiles defined, simulations can be used in order to improve planning procedures and different sets of priorities can be identified for different groups.

**PB7 513 EVALUATION OF NON-INFERIORITY OF INTRADERMAL VERSUS ADJUVANTED INFLUENZA VACCINE WITH TWO SEROLOGICAL TECHNIQUES**  
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Introduction: INTANZA® 15 $\mu$ g is the first licensed intradermal influenza vaccine for elderly subjects containing 15 $\mu$ g of haemagglutinin (HA) of each of the seasons three strains. We report the results from the first comparison of the intradermal vaccine with an adjuvanted vaccine. The primary objective of this study was to demonstrate that INTANZA 15 $\mu$ g is at least as immunogenic as an intramuscular adjuvanted influenza vaccine (FLUAD®/ADDIGRIP® 15 $\mu$ g) for the three strains. Methods and materials: 795 adults aged at least 65 years old were randomised to receive either INTANZA or ADDIGRIP during the 2007-2008 influenza season. Antibody titres were measured 21 $\pm$ 3 days post-vaccination using the haemagglutination inhibition (HI) method (primary endpoint) and the single-radial haemolysis (SRH) method (secondary endpoint). Both techniques are recognised by the European Medicines Agency (EMEA). Non-inferiority was demonstrated if the upper bound of the 95% confidence interval (CI) of the

ADDIGRIP/INTANZA ratio for the post-vaccination GMT was less than 1.5. Safety was assessed throughout the study. Results: Non-inferiority of INTANZA was demonstrated with the SRH method for the 3 strains and with the HI method for the H1N1 and B strains. For the H3N2 strain with the HI method the upper bound of the 95% CI was 1.53. Both vaccine groups complied with the same EMEA criteria (seroprotection, post-/pre-vaccination titres ratio and seroconversion) with each assay. Injection-site reactions were generally mild and transient; erythema, but not pain, were more frequent in the INTANZA group as could be expected with the intradermal route of administration. The systemic safety profile was comparable between groups. Conclusion: The results obtained for both vaccine groups were consistent for each assay. The non-inferiority of INTANZA when compared with ADDIGRIP was demonstrated with the SRH method for the 3 strains and for 2 strains with the HI method. Both vaccines were well-tolerated.

#### **PB7 514 COLLECTIVE AND PRODUCTIVE SOCIAL ACTIVITIES REDUCE MORTALITY RISK IN OLDER PEOPLE**

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Introduction: Although earlier studies have shown an association between social inactivity and mortality, less is known about how different dimensions of social activity affect health in old age. The purpose of this study was to investigate how collective and productive social activity effect on mortality risk in old age. Material and methods: As part of the Evergreen project 1224 people aged 64-84 years at the baseline were interviewed face-to-face in 1988. Mortality was followed up for 17 years. Collective social activity was based on questions concerning cultural hobbies, travelling and other hobbies pursued in groups, and productive social activity on questions concerning paid work, participation in organisations and helping relatives, friends and neighbours. Results: After follow-up 871 persons (71 %) had died. Results of Cox regression models indicated that those with two or more collective social activities had a 39 % (HR = 0.72; CI = 0.59 - 0.87) lower risk for mortality compared to those with no social activities even when controlled for sociodemographics, physical health and functioning, memory, and intensity of physical exercise. Subjects with at least one productive social activity, had a 31 % (HR = 0.76; CI = 0.66 - 0.89) lower risk for mortality than those with no social activities when controlled for similar confounders. Conclusion: The results show that both collective and productive social activity are protective for the health of older people. On a societal level, promoting social activity can maintain and enhance the health and autonomy in old age.

#### **PB7 515 LEGITIMACY OF A REMINISCENCE THERAPY GROUP CALLED "HISTOIRE DE VIE" FEELING OF IDENTITY AND SELF-AWARENESS IN ALZHEIMER'S DISEASE**

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Even if identity and self-awareness in patients suffering from Alzheimer's disease seem to be called into question, quest of the self has been always led. OBJECTIVES We wish 1/ know cognitive and emotional processes mobilized by a therapy based on reminiscence about experimentation of an original group 2/ show that the specific group "Histoire de vie" ameliorates patient's capacity for maintain their autonomy of thinking and update their self-awareness, vital for their identity; 3/ acknowledge relevance of a quantitative and qualitative valuation tool. METHOD It's a retrospective study falls on two hundred patients' files diagnosed suffering from Alzheimer's disease 'their results from MMS vary between sixteen and twenty-five points' hospitalized in neuro-psychogeriatric department. All subjects took part in reminiscence therapy group; each group made up five to six patients who participated in two or four sessions during their hospitalization. Findings of this study are based on use of a specific scale developed from an original mediation (a family tree leant on memories) and which studies some components like chapters of life, episodic or semantic components... RESULTS Subjects are able to speak about themselves. They told on more of personal semantic data than events and more of generic events than episodic events. We notice a Ribot's gradient with a peak of reminiscence when subjects were between ten and thirty years old. Some subjects can give data about their current life, especially emotional data. At the moment, the most part of our data hasn't been processed. Thanks to these objective data supported by twenty years of practice, we can say that feeling of identity and self-awareness continue in Alzheimer's disease and can be explored in reminiscence therapy group based on story of life.

#### **PB7 516 FACTOR ANALYSIS OF COMPLICATIONS FOLLOWING VITREOUS SURGERY AND CONSIDERATION OF PREDICTIVE NURSING**

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INTRODUCTION: Vitreous surgery is conducted on many elderly patients who are often affected by not only ophthalmic disease but also concomitant complications such as heart disease or cerebral infarction. Therefore, the role of nurses is paramount in providing predictive nursing care to prevent postoperative retinal break or vitreous hemorrhage. To

accomplish this, an accurate needs assessment including information regarding postoperative rest and physical restrictions is essential in addition to pre- and intraoperative reports. This study focused on elucidating the causes of postoperative retinal break and vitreous hemorrhage, complications often leading to serious conditions such as visual degradation. METHODS AND MATERIALS: Subjects comprised 64 patients admitted to the ophthalmology ward of a university hospital in Tokyo for vitreous surgery and who had suffered no intraoperative complications. Medical and nursing records obtained during their hospitalization were grouped into those with and without postoperative complications. These were retrospectively studied using multiple logistic regression analysis of variables shown by univariate analysis to have a significant difference. RESULTS: The complication group comprised 7 patients (10.9%) while the non-complication group comprised 57 patients (89.1%). Differences in background factors between the two groups comprised a significantly higher value for "period of hospitalization" and "serum creatinine" in the complication group along with significant differences in "intraocular pressure abnormalities" and the use of the operative procedures "air tamponade or scleral buckling". The three factors related to the onset of postoperative complications (multiple logistic regression analysis,  $p < 0.05$ ) were intraocular pressure (odds ratio, 14.4; 95% confidence interval, 1.38 – 238.02), serum creatinine (odds ratio, 1.4; 95% confidence interval 1.03 – 8.33) and vitreous surgery involving air tamponade or scleral buckling (odds ratio 10.1, 95% confidence interval 2.12 – 103.95). CONCLUSION: These findings suggest that when intraocular pressure is abnormal and serum creatinine levels high, patients who additionally undergo vitreous surgery using air tamponade or scleral buckling are more likely to develop postoperative complications.

#### **PB7 517 COLONOSCOPY IN THE OVER 80'S IS SAFE AND AN EFFECTIVE USE OF RESOURCES**

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Introduction: Colonoscopy is still the gold standard investigation for investigation of lower gastrointestinal symptoms allowing high resolution views of the colonic mucosa and the potential for therapeutic intervention. However concerns have been raised over the safety of colonoscopy in the elderly, both in terms of the procedure itself and the sedation required. We assess the safety and efficacy of colonoscopy in patients aged 80years and over Methods: 51 consecutive patients over 80years of age referred for colonoscopy were recruited. Data recorded prospectively into a database included age, sex, indication, ASA grade, grade of colonoscopist, sedation, caecal intubation rates, reasons for failure to intubate, pathology and complications. Results: 51 procedures were performed. 29 patients were female. Median age 84 years (range 80-92). All endoscopists were senior trainees, associate specialists or consultants. Patients were ASA grade 2 (22) and 3 (29). Sedation with midazolam (median dose 2mg (range 500mcg-3mg)) was given in all. No reversal agents were required. The caecum was intubated in 41 patients (80%). Reasons for failure were pathology encountered (5), poor prep (1) and procedure not tolerated (4). 38 patients (75%) had pathology with 17 (33%) requiring biopsy or polypectomy. There were no major complications. One mucosal tear resolved with conservative management. Conclusions: Colonoscopy with sedation is safe and well tolerated in this age group. The diagnostic yield and intervention rate is high with no significant complications.

#### **PB7 518 ARE JUNIOR DOCTORS AWARE OF THE CATHETER STATUS OF THEIR ELDERLY PATIENTS**

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Aims: The urinary tract is the commonest site for hospital acquired infection. Indwelling catheters are a well known risk for urinary sepsis which can cause considerable morbidity and even mortality, especially in the elderly. We aim to assess junior doctor's awareness of the catheterization status of elderly patients. Methods: 10 junior doctors at FY1 to ST2 level were asked "does patient x currently have an indwelling urinary catheter?" with respect to their current inpatients aged 65 and over. A ward round of patients was then conducted and all were checked for the presence of an indwelling urinary catheter. Data including patient age, sex, catheterisation status, junior doctor's response and accuracy were recorded prospectively into a database. Results: There were 87doctor-patient contacts. 51 patients were female. Median age was 83 years (range 65-97). 22 (25%) patients had indwelling urinary catheters (10 female). Junior Doctors only answered correctly in 11 (50%) of these patients. Overall 35 (40%) of answers given were incorrect including 28 (32%) were the catheterisation status was unknown and 2 (2%) false positives and 5 (6%) false negatives. Conclusions: Junior Doctors have poor knowledge concerning the catheterisation status of their patients. This may lead to unnecessarily prolonged periods of catheterisation with the concomitant increase in morbidity and mortality. This may also have adverse financial implications

#### **PB7 519 ISAR FOR OLDER HOSPITALIZED PATIENTS, A BRIEF INSTRUMENT TO PREDICT FUNCTIONAL DECLINE**

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**Introduction** Post hospitalisation loss of function is seen in 30-60% of older patients resulting in increased length of stay, decreased quality of life and autonomy, increased risk for nursing home admission and increased need for homecare. The first step in preventing functional decline is to identify patients at risk. The Identification Seniors At Risk (ISAR) was developed as a prognostic tool for morbidity in ER patients. We studied this instrument in a cohort of acute admissions in general medicine with promising results, however modification is needed. The aim of this study is to improve the ISAR for use in a hospital setting. **Methods and materials** In a multicenter prospective cohort study data were collected of 639 patients, acutely admitted to the internal wards. Within 48 hours after admission demographic data, physical, psychological and functional status was measured by trained research nurses. Three months after admission outcome data were collected by telephone interview. The Katz index (6 activities) was used to measure functional status. Functional decline was defined as at least one point decline. Single imputation was done to derive an optimal dataset. The ISAR was improved by excluding some and including new predictors, based on univariate analysis and logistic regression. Discrimination and calibration of the new model were assessed and internal validity was assessed by bootstrapping. Results Mean age was 77.8 years and 44.3% were male, 33.8% showed functional decline. Mortality rate was 20.0%. The AUC of the unmodified ISAR was .627 (95% CI .576-.678). After modification the AUC was .708 (95% CI .661-.755) Best predictors: Need of help on a regular basis before admission, using a walking device, ability to travel independently, and numbers of years of education. Conclusion The discriminative ability of this ISAR for Hospitalized Patients is promising and it will be easy to use in clinical practice.

**PB7 520 HIV IN ELDERLY: IS THERE ANY DIFFERENCE BETWEEN MEN AND WOMEN ?**

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**Background:** The acquired immunodeficiency syndrome in recent decades showed an increase in the number of notifications among patients over 60 years. Recently in Brazil, the number of reported cases among men and women is 9x and 18x greater than the 80s respectively. **Objectives:** Compare the epidemiological profile of elderly HIV+ men and women, in a reference hospital in Rio de Janeiro, Brazil. **Methods:** Prospective study with patients aged 60 or more being treated at HIV Clinics of the Hospital Universitário Gaffrée e Guinle, until January 2008. Split the sample into 2 groups according to sex (male = G.I and female = G.II). **Results:** Our sample comprised 140 patients, 64 women. The age (65.04 ± 5.07 x 63.40 ± 5.28 years), age at diagnosis and education level were similar between groups. Among the categories of possible HIV infection in G.I 31.58% of the patients were bisexual, 21.05% gay, 15.79% heterosexuals with multiple partners (MP), 7.89% heterosexual partner with known HIV + (KHP) and 19.74% unknown. In G. II, 23.44% KHP , 25% were partners with risk behavior, 12.5% MP and 25% unknown. There were significant difference between the frequency of lipodystrophy (19.72% vs. 35.48%, p = 0.0031), past history of syphilis (39.66% vs. 9.80%, p = 0.0009) and dyslipidemia (25.00% x 55.88%, p = 0.0016). No difference in the frequency of hepatitis B, hepatitis C, smoking, hypertension, diabetes and obesity were observed. **Conclusions:** HIV+ elderly showed important differences. Men had higher risk of infection because of their own behavior while the older women showed greater risk because of sexual behavior / HIV status of their partners. Women showed higher prevalence of lipodystrophy and dyslipidemia while men showed higher frequency of sexually transmitted diseases, especially syphilis.

**PB7 521 INCIDENCE AND RISK FACTORS FOR EARLY READMISSION OF PATIENTS DISCHARGED FROM AN ACUTE GERIATRIC UNIT**

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**Introduction:** Geriatric care network is faced with the increase in the elderly population and with it, the increase in the needs of hospital care. Thus, emergency departments must take care of a growing number of elderly patients. In this context, post-acute geriatric units have been created in France since 2003. The one of the hospital of Pau, in the South-West of France opened in June 2006. It offers to patients a global management, on a short length of stay ; its aim is the return at home. The main purpose of this study was to identify factors influencing early readmissions in patients discharged from a post-acute geriatric unit. **Methods and materials:** This prospective study conducted in 2007, measured the incidence of unplanned readmissions within thirty days of discharge and the factors likely to have an effect on them. We studied the following factors : age, length of stay, principal diagnosis, cognitive state, autonomy, comorbidities, mode of discharge, presence of a caregiver at home. A monovariate followed by a multivariate analysis using a logistic regression model was carried out. **Results :** 822 patients had been hospitalised during one year. The rate of

unplanned early readmission was 11.5 %. In multivariate analysis the two identified risk factors were an age older than 90 (OR=3.90[1.39-10.90], p<0.01) and living alone at home (OR=2.17[1.10-4.26], p<0.05). Conclusion : the rate of readmission is similar to those found in the literature for acute geriatric units. Patients who are very old and living alone must be particularly surrounded after their discharge. A global assessment of the elderly patient is essential to identify patients at risk of early readmission.

**PB7 522 PREVALENCE OF BACTERIOLOGICAL SAMPLES AND PATHOGENS IN A GERIATRIC INSTITUTION**

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The aim of this study was the prevalence of bacteriological samples during a one-year period in a primary care unit. The different microorganisms were characterized by type, site of infection and antibiotic resistance. The results were adjusted for bed-occupancy. We retrospectively studied the bacteriological samples sent to the laboratory from January 1 st to December 31 2007 in hospitalized patients in a geriatric 26-beds unit (mean-age : 79 years ; mean hospitalization time : 31 days). We expressed the positive samples as percentages ,adjusting them for hospital-days and admitted patients and we studied the microorganisms following antibiotic resistance. During the year 2007, 235 admissions and 7999 patient-days were notified : 175 bacteriological isolates were studied from urine (101 ; 58%), sputum (13 ; 8%), stool (19 ; 11%), blood (4 ; 3%), skin (16 ; 9%), and others (19 ; 11%), corresponding to 22 samples/1000 patient-days and 74 /100 admissions ; 109 samples (62%) showed a predominant morphotype, 20 (11%) many organisms and 46 (27%) were negative. The prevalence of MRSA was 0.5 /1000 patient-days. Among staphylococci, 17% were methicillin-resistant. BLSE was found in two samples. In urine isolates ,bacteria Gram positive were found in 27% cases mainly enterococcus (59%). Escherichia Coli exhibited a resistant phenotype in 2/3 cases (Ampicillin-resistance: 60%, Quinolone-resistance : 40%) which is the usual feature for geriatric inpatients. Sputum culture was positive in 92% cases (12/13) confirming in this study its value, which is controversial. Stool culture revealed Clostridium difficile in 1 case (5%), yeasts in 6 cases (32%) ; blood cultures were positive twice (50%), among operative wounds, ulcers or sore, staphylococcus was predominant with 23% This study confirms the high prevalence of infection in geriatric inpatient population ; adjustment for bed-occupancy could improve the cost-efficacy of bacteriological diagnosis.

**PB7 523 DISTRIBUTION OF HOME CARE PERSONNEL'S WORKING HOURS**  
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The goal of elderly services is that aged people can live in their own homes. In order to make the home care services correspond to the needs of the population we need continuous development of work processes. The aim of this study was to describe the distribution of the nursing personnel's working hours in home care services. The target group consisted of registered nurses (RN) and licensed practical nurses (LPN) (N=110) of one Finnish municipality. The data, consisting of two sub-data, were collected during two weeks in 2008. Firstly, five nursing students observed home care personnel's work activities during five days. They collected data by filling a structured data collection instrument, which divided the work into two major categories: direct and indirect care. The observers followed one nurse in a day reporting work activities in minutes. Secondly, home care personnel self-assessed the distribution of their work hours by web based questionnaire. The results of the observation showed that the nursing personnel's working hours consisted of average 40 % direct care and 60 % indirect care activities of the total one day working time. According to the self-assessment the percentage of direct care activities was 51 %. However, there were differences between RNs and LPNs, whose proportion of direct care was higher (52 %) than RNs' (38%). The most time-consuming direct care activities were taking care of the clients' daily activities and medication care. Respectively, the most time-consuming indirect care consisted of documentation and work planning and meetings. The proportion of personal time was 11% and periods of transition between clients took 12% of the total working time. More attention should be paid to deliver direct care in order to improve client-oriented care and to make services more efficient. Key words: Work sampling, home care

**PB7 524 SERTRALINE-INDUCED RHABDOMYOLYSIS IN AN ELDERLY PATIENT WITH DEMENTIA AND COMORBIDITIES: A CASE REPORT**

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Rhabdomyolysis is a life-threatening event often caused by drugs; we describe a case of sertraline-induced rhabdomyolysis in an elderly demented patient with comorbidities. A 71-year-old woman performed a psychiatric visit for her depressed mood in September

2007; she was affected with senile dementia, depression, arterial hypertension, heart failure. She had started amysulpride 50 mg/day six months earlier with poor relief. After a psychiatric consultation, sertraline 50 mg/day was added for depression treatment. A geriatric visit in October confirmed the same treatment. Her mood improved significantly. From 18-24th December 2007 she was admitted to a Cardiologic Unit to undergo cardiac pacemaker substitution. Laboratory evaluations showed elevated serum markers of rhabdomyolysis. Treatment with amysulpride and sertraline was interrupted. On December 24th serum levels of CPK and myoglobin were decreased and she was discharged. On January 22nd, laboratory tests showed normal values of CPK, CPK-MB, myoglobin. Sertraline was prescribed again for persistent depressed mood. Fifteen days later, she performed blood tests showing increased CPK and myoglobin. Therefore, the drug was interrupted and blood tests normalized a week later. Two months later escitalopram was started. Until today, no increase in rhabdomyolysis markers was found. This is a case report of sertraline-induced rhabdomyolysis. The Naranjo probability scale indicated a probable relationship between sertraline treatment and the onset of rhabdomyolysis. In fact, it is supposed no relationship between amysulpride and rhabdomyolysis because it was started six months earlier without causing any changes in serum markers of rhabdomyolysis. Furthermore, rechallenge with sertraline caused a new increase in CPK and myoglobin, which was reversed following sertraline interruption. No significant interactions were described between sertraline and drugs administered to our patient. Genetic defects of sertraline demethylation and/or to P-gp binding or concurrent circumstances might explain the onset of rhabdomyolysis.

#### **PB7 525 SURGICAL TREATMENT OF PRESSURE SORES IN ELDERLY PATIENTS**

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The plastic surgeon knows that the pressure treatment needs two actions: resection and reconstruction. The surgical treatment concerns the pressure sores with a minimal height of 5cm for the diameter, located in area with bone protrusion, essentially pressure sores of the pelvic area. The surgical treatment requires three stages: 1) preparation stage with information of the patient for the surgical imperatives and wound bed preparation 2) surgery stage with the choice of a secure technique which needs to preserve the maximum of skin and muscle, useful in case of recurrence; 3) post-operative stage requiring cooperation and responsibility of the patient and rehabilitative treatment. The techniques are multiple from the most simple such as grafts , local plasty, to the most sophisticated such as distal flaps cutaneous, muscular, mainly musculo cutaneous or expanded flaps. An imperative condition: thick tissue cover, well vascularised, occasionally sensitive, overall bringing a durable mattress on the bone protrusion area. Elderly patients frequently are affected by pressure sores if long term bedded . Quality of life ,costs of treatments and bad prediction of life , associated to comorbidity ,could orientate the choice of surgical treatment to obtain a faster healing of sores and reduce the delay of hospitalisation. Conclusion: Surgery is the solution which can heals the most rapidly possible to the elderly patient with pressure sores to avoid the worsening of general conditions that can be cause of death. In every patient with some expectative of life surgery is imperative. the reduction of plasmatic and blood loss from sores is extremely effectiveness to improve the conditions of patients. in many cases if the pathologic state allows, patients can recovery orthostatism and deambulation after surgery. and this means an effective improvement of quality of life.

#### **PB7 526 THE EFFECTS COMPREHENSIVE GERIATRIC ASSESSMENT ON MORTALITY OF PATIENTS IN PRIMARY CARE SETTING SIRPA HARTIKAINEN, HANNU KAUTIAINEN, RAIMO SULKAVA KUOPIO UNIVERSITY, FINLAND**

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Introduction The effects comprehensive geriatric assessment (CGA) on mortality vary depending on the setting and expertise of CGA team members. The aim of this study was to evaluate effects of CGA in primary health care setting on mortality of elderly persons. Methods and material The GeMS Study is a population-based geriatric health intervention study in people aged 75 years or more. A random sample of 1000 persons aged 75+ was drawn from the census data of the city of Kuopio in eastern Finland on November 1, 2003. The subjects were randomized into intervention (n=500) and control (n=500) groups. Participation rate was 78.1% in whole study population, 81% (n=404) in the intervention and 75.2% (n=377) in the control group. CGA was performed to the subjects in the intervention group yearly during years 2004-2006, whereas only limited activities took place in the control group. Results Mean age of participants at the date of first examination was 81.7 years and two in three (70%, n=584) were female. At baseline the intervention and control group were alike in age, sex, residential status as well in ADL and IADL capabilities and in cognitive functioning. From the date of first examination in 2004 to the end of 2007 one in five (n=179, 22.9%) participant died, 96 persons (23.8%) in intervention group and 83 (22.0%) in control group. Four year survival did not differ between groups and standardized mortality rate was for all men 0.83 (95% CI 0.62 to 1.07)

and for all women 1.00 (95%CI 0.83 to 1.19). Conclusion Comprehensive geriatric assessment in primary health care setting did not effect on mortality of patients.

#### **PB7 527 GERIATRIC MULTIDIMENSIONAL APPROACH IN THE EMERGENCY DEPARTMENT**

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Introduction. The use of hospital care increases significantly with age. Older people visiting the emergency department have three to seven times higher rate of hospitalization than younger people. The multidimensional geriatric approach could represent a valid help for elderly people even in the emergency department. Methods and materials. Randomized controlled trial evaluating over eighty five patients visiting the Emergency Department of San Giovanni Battista Hospital for acute illnesses not requiring hospital admission. All patients underwent a multidimensional evaluation including demographic characteristics, clinical data, quality of life, functional, nutritional and cognitive status at baseline and at 6-month follow up. The control group was discharged normally while a specific protocol was activated for the study group, aimed to reduce clinical and social problems and indirectly to reduce hospital accesses. The protocol was made with the aim of characterize clinical and social problems often misunderstood. A dedicated phone line was activated for patients and their caregivers. Results. Thirty four patients gave the consensus to participate: 17 for each group. One third of patients was married and was living with the consort. Main admission's diagnoses were: cardiovascular illnesses (29.4%), urinary infections (14.7%), respiratory infections (11.7%) and pain (8.8%). There were not differences in demographic characteristics, comorbidity, functional and cognitive impairment, nutritional status and quality of life between two groups. The multidimensional approach showed many social problems: loneliness (61.7%), old caregiver (20.6%) and hard relationships with relatives (5.8%). At 3-month follow up there were not differences in terms of hospital readmissions nor mortality. Only caregiver's stress was significantly reduced in the study group ( $p=0.05$ ). Conclusion. The geriatric multidimensional approach could be considered a strategy for optimising the needs of old people and reducing caregivers stress.

#### **PB7 528 OLDER PEOPLE**

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Introduction Research was carried out to explore and therefore increase understanding of the social construction of patient centred health and social care for vulnerable older people in the community. The National Service Framework (NSF) for Older People (Department of Health, 2001) provided the background for this study, as although it placed person centred care at the heart of care for older people, it failed to provide adequate detail for its application in every day practice, apart from in relation to assessment. Research on person centred care has focused on dementia care (Kitwood, 1997) and hospital settings (McCormack, 2003), with some studies relating to general practice (Mead and Bower, 2000). None relate specifically to health and social care in the community and incorporate the views of older people. Methods Data collection was via focus groups and individual interviews with older people and health and social care professionals. Purposive sampling was used. Data analysis was based on the constant comparative method described originally by Glaser (1965), but also informed by the approaches of Wolcott (1994) and Dey (1993). A qualitative data analysis software package (NVIVO) was used to assist with data management. Results and conclusions A key finding was that older people who feel vulnerable do not consider their care to be patient centred and those that view their care as patient centred do not feel vulnerable. These apparent links between feelings of vulnerability and patient centred care highlight the importance of asking older people whether they feel vulnerable and intervening in ways that aim to reduce these feelings. The research suggests that asking older people whether they feel vulnerable should be integral to the work of community health and social care teams. Decisions should not be based solely on professional perspectives of vulnerability.

#### **PB7 529 OBESITY IN ELDERLY WOMEN AND ASSOCIATED FACTORS**

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Epidemiological, demographic, and nutritional transitions are taking place in Brazil in the last decades. The elderly population is already the fastest growing group and the concomitance of malnutrition and obesity has been reported in a very low-income population in Northeast Brazil. Obesity is now recognized as a major risk factor for coronary heart disease. It also harms more than just the heart and blood vessels system. It is a major cause of gall stones and can worse degenerative joint disease. Obesity is associated with significant morbidity including hypertension, type 2 diabetes and some forms of cancer, diseases with high prevalence in elderly. The aim of this study is to

analyses the prevalence of obesity in elderly women and its association with socio-demographic, biochemical and hypertension variables. Methods and Material: By means of a cross sectional study, 188 women outpatients, 60 to 89 years-old were assessed. Obesity was defined by the Body Mass Index  $\geq 30 \text{ Kg/m}^2$  (WHO, 1998). The parameters examined were: age, education, marital status, fasting glycemia, total cholesterol, high and low density cholesterol lipoproteins, triglycerides and presence or absence of blood hypertension. Data analysis was performed by Pearson's Chi-square or ExactTest of Fisher and Multivariate Analysis of Logistic Regression, estimating the probability of obesity. Results /conclusions: Among elderly women, 25,6% were obese. Obesity was present in the first age ranges (60 to 69 and 70 to 79 years old), and positively associated ( $p=0.050$ ) to fasting glycemia  $\geq 126 \text{ mg/dL}$ , with increased risk (Odds =1,76) for elder diabetic, compared to non-diabetics women. The highest probability of obesity, around 18%, was observed in women younger than 70 years-old, triglycerides  $\geq 200 \text{ m/dL}$ , diabetic and hypertensive, emphasizing the role of associated morbidity.

#### **PB7 530 GENERAL PRACTITIONER ATTITUDES TO DEMENTIA: A RURAL/URBAN COMPARISON**

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**INTRODUCTION** The ageing of the population has led to a significant increase in the prevalence of dementia in Australia and indeed worldwide. Our current inability to prevent dementia from occurring and the lack of a cure for dementia makes it essential that the disease is detected as early in its course as possible. General Practitioners (GPs) are often the first point of contact for people with memory problems or symptoms of cognitive impairment and they are responsible for diagnosing the cause of the problem or impairment. A study is currently being undertaken in Australia to explore the detection and management of dementia by GPs compared to established best practice. This presentation will focus on GPs confidence and attitudes towards the detection and management of dementia and will explore the differences between rural and urban GP perception. **METHODS** GPs participating in the study were asked to complete a "GP Attitudes and Confidence Survey". The 24-item questionnaire was based on a 49-item self administered questionnaire developed by a team of German researchers and used with their permission. GPs from four urban centres in three different Australian States and one regional centre (that includes three rural towns) participated in the survey. **RESULTS** Results from the preliminary analysis of the questionnaires will highlight differences in attitudes and confidence of rural and urban GPs in relation to dementia detection and management. **CONCLUSION** The relevance of results will be discussed in relation to the impact of GP attitudes and confidence in making a dementia diagnosis and in disclosing this diagnosis to the patient and/or their carer. GP attitudes toward management guidelines for dementia are also examined. The discussion will consider these issues from a rural versus urban perspective.

#### **PB7 531 AGE PATTERNS IN ALCOHOL-RELATED CARE IN STOCKHOLM 1997-2007**

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**Introduction.** This study describes age patterns in alcohol and drug related health care. **Methods.** Based on Stockholm County registers covering inpatient and outpatient care, the proportion of people with at least one care episode during a year was estimated by age. Included inpatients were people with an alcohol or drug related first, second, and third diagnosis, and outpatients in two clinics (Beroendecentrum Stockholm and Maria Beroendecentrum AB) where it was not possible to separate alcohol from drug related care. **Results.** The distribution over age could be described as curvilinear with two peaks. There is a first peak for age group 15-24, which is followed by a lower percentage for age group 25-34. The percentage then increases until next peak in middle age, for age group 45-54, where after the percentage decreases with age. This pattern was similar for inpatient and outpatient care. The age distribution was also similar among men and women, but women's estimates were about half compared to men's. The distribution varied by diagnosis. Alcohol intoxication was the most common diagnosis in age group 15-24, while alcohol dependence was the most common diagnosis among older ages. Alcohol dependence, harmful use, alcoholic liver disease all showed a peak in middle age and a following decrease with increasing age. When the age distribution in 2007 for all inpatient care was compared to the corresponding distribution in 1997, it peaked in an older age group than before – in age group 55-64 rather than in age group 45-54. While the percentage in younger age groups decreased, the percentage in older age groups had increased. **Conclusion.** This change in age patterns suggests inpatient care may be cohort dependent. If so, alcohol related care may increase among older people when later born cohorts reach older ages.

#### **PB7 532 MAJOR DIGESTIVE SURGERY IN ELDERLY PATIENTS. RISK FACTORS OF MORTALITY. A FRENCH MULTICENTER PROSPECTIVE STUDY.**

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The aging population in France results in an increasing number of major digestive surgical operations. The purpose of the present study was to highlight the specific risk factors of mortality following this type of surgery in elderly patients. Patients and methods. From January 1, 2002 to December 31, 2004, 3,322 patients undergoing a major digestive operation were prospectively enrolled. 1,796 (54%) were  $\geq 65$  years old (mean age 75 $\pm$ 6.5). The end point was the postoperative 30 days mortality. Twenty-six items (16 preoperative conditions, 6 intraoperative observations or procedures and 4 postoperative outcomes) were considered through a prevalence report, a univariate as well as a multivariate analysis. Results. The global mortality of the  $\geq 65$ -year-old patients was 10.6% and significantly increased with age from the 65-75 years group. Age 65 was an independent factor of mortality (OR 2.21 CI95% 1.36-3.59 p<0.001). In the  $\geq 65$ -year-olds, the other specific independent factors of mortality were: emergency (OR 5.18 CI95% 3.13-8.56 p<0.001), anemia (OR 1.92 CI95% 1.19-3.10 p<0.001), ASA III class (American Society of Anesthesiologists) (OR 1.85 CI95% 1.12-3.04 p<0.001) and a palliative cancer operation (OR 4.05 CI95% 2.31-7.09 p<0.001). Conclusion. Even if age itself remains a risk factor of mortality in elderly patients, this study reveals opportunities for improving the results of major digestive operations in  $\geq 65$ -year-old patients: preoperative geriatric assessment to optimize preoperative conditions (e.g. anemia) and screening of preoperative diseases (e.g. colon cancer) to increase rate of elective and curative operations.

#### **PB7 533 AN ALGORITHM TO DIAGNOSIS EPILEPTIC SEIZURES IN THE ELDERLY**

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**Introduction:** Epidemiological studies have demonstrated high frequency of seizures and epilepsy in the elderly. However, diagnosis remains difficult. A panel of experts (neurologists and geriatricians) elaborated an algorithm based on 29 clinical, electroencephalographical or radiological criteria to facilitate the diagnosis of seizures. The objective of this study was to validate this algorithm. **Methods and materials:** The algorithm was applied to the data of patients ( $> 65$  years) referred for various symptoms evoking epilepsy (delirium, falls, weakness...) in a multicentric retrospective study. All patients underwent EEG and brain CT scan or MRI. The diagnosis of the experts participating in this study was considered as the gold standard. **Results:** Data of 269 patients (mean age: 79.3  $\pm$  7.2) were analyzed: 138 epileptic (E+) versus 131 non epileptic (E-). Patients were mainly referred for neurological deficit (40%), delirium (38%), loss of consciousness (27%), impaired consciousness (26%), falls (23%). The results of the algorithm for classification of certain and probable epileptic seizures versus possible and improbable epileptic seizures were: specificity 67% and sensitivity 86%; PPV 74% and NPV 82%. With a logistic regression, 2 new models are proposed: the first with 13 criteria (Sp 90%, Se 86% and PPV 90% and NPV 86%; prediction by roc curve 0.94) and the second with 8 criteria (Sp 82%, Se 84% and PPV 83% and NPV 83%; prediction by roc curve 0.87). **Conclusion:** The present study validates the use of the algorithm to facilitate the diagnosis of epileptic seizures in the elderly. We plan to test the different models of algorithm in a prospective study.

#### **PB7 534 POLYPHARMACY AND DRUG INTERACTIONS IN ELDERLY IN- AND OUTPATIENTS**

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**Introduction** Polypharmacy is a major risk factor for functional decline and secondary morbidity in elderly patients. Little data are available about prescription routine of doctors treating elderly patients in the setting of a department of internal medicine not especially trained in geriatric medicine. **Methods** Data were collected from patients older than 65 yrs attending the Emergency Clinic of the Department of Internal Medicine at the Medical University Graz for 2-months (n= 723). Collection of data focused on drug therapy at time of admission and at the end of ambulatory (n= 323, age 76.7 $\pm$ 8.0 yr) or inpatient (n= 400, age 79.8 $\pm$ 7.5 yr) treatment. Potential drug interactions were evaluated electronically. **Results** The mean number of drugs on admission was significantly lower in patients further treated on outpatient (OP) basis (6.50 $\pm$ 4.17) compared to the inpatient (IP) group (7.64 $\pm$ 3.61) (p<0.001). On discharge the mean number of drugs was significantly increased to 7.00 $\pm$ 4.12 in OP group (p<0.001). Overall change in mean number of drugs in IP group to 7.78 $\pm$ 3.17 was not statistically significant. Significant increase was found in the age group between 65-74 years (p<0.005), while significant decrease was found only in the oldest old above 85 years (p<0.05) in IP group. Significant decrease of drug groups was only found in IP group for benzodiazepines, NSAIDs and tricyclic antidepressants. The mean number of potential drug interactions increased significantly in OP group, while change in IP group was not significant. **Conclusions** Short term visits at emergency clinics

not employing doctors trained in the special needs of elderly patients may contribute to polypharmacy. An increase of number of drugs prescribed per patient also raises the potential for drug interactions.

**PB7 535 BARRIERS TO ASSESSING FITNESS TO DRIVE IN DEMENTIA IN NOVA SCOTIA: INFORMING STRATEGIES FOR KNOWLEDGE TRANSLATION**

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**Introduction:** Information regarding provincial barriers to assessing driving safety in dementia is scarce. Information regarding primary care physicians' (PCPs) attitudes and practices regarding driving and dementia will assist in the design a novel online resource for Nova Scotian PCPs to aid in the discussion of fitness to drive in dementia. **Methods and Results:** We randomly surveyed 64 Nova Scotian PCPs who currently care for older adults with dementia, 38.3% of whom practice in rural areas. 63.8% of respondents indicated that they sometimes avoid discussions about driving cessation, most commonly due to lack of comfort in decision making. 55.3% of respondents indicated that discussions about driving cessation had a negative impact upon the therapeutic relationship. 78.7% of respondents indicated that concerns about personal/corporate liability factored in their decision to report unsafe drivers to provincial authorities. 87.2 % of respondents used the MMSE, 53.2% used the clock drawing test, 14.9% used the MoCA, and 12.8% used the TrailsB test. 40.0% of respondents use the current national guidelines assessing fitness to drive in dementia. Approximately 57.4% of patients assessed in primary care are referred on for on-road assessment of driving while 59.6% are referred to specialists, most commonly geriatricians (46.8%). 89.4% of respondents indicated that they would be interested using an online resource for assessing fitness to drive in dementia. **Conclusions:** Barriers to the assessment of fitness to drive in dementia in primary care include lack of comfort with decision making, incomplete use of national guidelines, lack of consistency in assessment tools between physicians, and concern regarding negative impact to the physician patient relationship. These barriers will be used to design an online resource for knowledge translation.

**PB7 536 A GERIATRIC MEDICINE CURRICULUM IN AN INTERNAL MEDICINE RESIDENCY PROGRAM: DEVELOPMENT AND EVALUATION**

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**Introduction:** The number of older Americans will nearly double when the youngest baby boomers reach retirement age. Geriatric expertise in primary care physicians is desperately needed, but inadequately addressed by training programs. The American Geriatric Society (AGS) has developed guidelines for geriatric training in internal medicine (IM) and the Review Committee-IM (RC-IM) of the Accreditation Council for Graduate Medical Education (ACGME) has had a requirement for geriatric training for many years, most recently stating that IM training programs must have "formal instruction and assigned clinical experience in geriatric medicine." **Methods:** We are a university-affiliated, community-based, teaching program with 36 resident physicians, twelve at each postgraduate level. Based upon a widely recognized need for geriatric training, and a survey of our trainees in October 2000, we increased our geriatric content, both in clinical experience and in didactic instruction. We added a one-month geriatric block rotation for second year residents and a first year experience in residential hospice to a long-standing longitudinal, nursing home rotation for PGY-2 and PGY-3 residents. The written curriculum is organized around the six ACGME competency-based goals with learning objectives. Clinical experiences include direct patient care and bedside teaching rounds, all supervised by a board certified geriatrician, with multidisciplinary input. Didactic teaching includes monthly core conferences and assigned articles. Faculty evaluate residents in the longitudinal and block experiences. Residents evaluate their rotations and faculty. **Results:** Eight of our residents in the past nine years have pursued a geriatric fellowship, four staying in academic medicine and four pursuing primary care. Evaluation comments reflect their appreciation for their geriatric training. **Conclusion:** The culture of our small program is one of continuous quality improvement with continuing modifications of our curricula. We look forward to on-going feedback from our graduates on their preparedness to meet the needs of our aging population.

**PB7 537 COLONIC PSEUDO-OBSTRUCTION ASSOCIATED WITH EMPHYSEMATOUS CYSTITIS IN AN ELDERLY PATIENT**

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**Introduction:** Emphysematous cystitis is an uncommon and life threatening entity, requiring early diagnosis and treatment to improve outcome. We report a case of colonic pseudo-obstruction complicated with emphysematous cystitis. Case report A 84-year-old diabetic woman, with diabetes mellitus, unexplored cognitive impairment and repeated cystitis past history, presented to the emergency department with a bowel obstruction. She

described a three weeks diarrhea, alternating with constipation and vomiting. Biological analysis revealed a severe hypokalemia (2.1 mmol/l), leading to ED admission. Abdominopelvic X rays and CT scan reported a colonic pseudo obstruction and air in the bladder wall, suggesting an emphysematous cystitis, confirmed by the bacteriological analysis revealing a E.Coli urinary infection. The patient received a 6 weeks treatment with ceftriaxone for E.Coli and metronidazole for possible anaerobic bacteria. Outcome was favorable and an abdominal CT scan confirmed the regression of the air in the bladder. Patient went back home after 10 days. **Discussion:** Emphysematous cystitis is an uncommon and life threatening entity, with a 9.4 % mortality rate. Several factors are associated with, such as diabetes mellitus, female, urinary stase conditions, recurrent urinary tract infections and immunosuppressive comorbidities. The gas formation could be related to bacterial fermentation mainly associated with E. coli (50 – 80 %) and Klebsiella pneumonia. Diagnosis is often made incidentally on abdominal radiographs. Treatment consists of broad spectrum antibiotics, bladder drainage and glycaemic control, with a length of treatment varying from 7 days to 6 weeks according to the literature. Outcome can be characterized by emphysematous pyelitis or pyelonephritis, requiring percutaneous drainage, partial or total nephrectomy or cystectomy even hyperbaric oxygen. Conclusion Emphysematous cystitis is an uncommon potential life threatening infection, requiring early diagnosis and treatment.

**PB7 538 WEIGHT LOSS IN THE ELDERLY: A 10 YEAR RETROSPECTIVE ANALYSIS.**

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**Introduction:** Weight loss is a common complaint in elderly people. While in some patients these may be a normal consequence of the aging process, many of them have an underlying disease. Diseases that cause weight loss can be organic, psychiatric or social. There is no consensus on a definition of abnormal weight loss, and little information is available on how these patients should be evaluated. **Methods:** A retrospective analysis was done with patients seen at our institution from January 1999 to December 2008. All patients aged 60 or more with unintentional weight loss were included. Patients who did not complete the follow-up or with insufficient data for analysis were excluded. Logistic regression model was used to evaluate the predictors of organic, psychiatric and malignant disease. **Results:** Of the 248 patients with unintentional weight loss, 220 were included in the study, 121(56%) were men, with a mean (SD) age of 72.5 (8.1) years. Mean weight loss in kilograms was 12.1 (5.9), representing a percentage of 17.1 (8.5), with a median of 6 months of evolution. The first cause of weight loss was organic (57.4%), followed by psychiatric diseases (17.2%). No diagnostic was found after a complete evaluation in 15%. From the organic disease group, the most common diagnostic was benign gastrointestinal pathology (35% of all patients), followed by cancer (22%); 5% of patients had the coexistence of organic and psychiatric disease. Only female gender was found to be related to a diagnostic of psychiatric disease with an OR (95%CI): 2.57 (1.021-6.47). The final diagnostic was coincident with the initial presumptive diagnostic in 30%. **Conclusions:** Most elderly patients that present with weight loss have an identifiable disease. Only female gender was associated with psychiatric disease. All elderly patients complaining of weight loss, even when small, should undergo a diagnostic evaluation.

**PB7 539 RARE PRESENTATION OF STREPTOCOCCUS PNEUMONIAE PNEUMONIA WITH BACTEREMIA AND MULTIPLE SUBCUTANEOUS ABSCESSSES.**

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**Introduction:** Streptococcus pneumoniae remains the principal bacterial cause of pneumonia in adults. Although bacteremia can lead to suppurative complications such as meningitis, pericarditis, arthritis, and osteomyelitis, metastatic infections in soft tissue are fairly uncommon. **Methods:** We report a case of streptococcus pneumoniae pneumonia who presented with abscesses in multiple soft tissue sites in a patient of 83 years with a review of the literature. **Results:** An 83 year old woman, was admitted to hospital for weakness and fever. On admission, the patient was febrile to 39° with multiple erythematous, warm, fluctuant swellings over left leg. On pulmonary examination, the breath sounds were diminished at the left lung base. Blood culture and aspiration of a subcutaneous abscess were identified as S pneumoniae susceptible to penicillin. To our knowledge, most reported cases of S pneumoniae soft tissue infection have involved cellulitis with 40 cases reported in the literature and 8 cases of subcutaneous pneumococcal abscesses. In these series the majority of patients had underlying chronic illnesses or were immunocompromised by alcohol abuse. Descriptions range from localized erythema to violaceous or brawny skin discoloration and bullae formation. Pneumococcal cellulitis was universally associated with bacteremia. Penicillin G was typically the drug of choice. Suppurative complications were common and surgical drainage was required in many

cases. Mortality was ~ 15 %. Conclusion: Streptococcus pneumoniae is an unfrequent cause of skin infection in adults and suppurative complications are common.

**PB7 540 USING THE MODIFICATION OF DIET IN RENAL DISEASE (MDRD) AND COCKCROFT AND GAULT (CG) EQUATIONS TO ESTIMATE GLOMERULAR FILTRATION RATE IN HEALTHY PEOPLE AGED 75 OR OLDER.**  
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Objectives: To compare the glomerular filtration rate (GFR) of patients aged 75 or older healthy people obtained by urine 24 h creatinine clearance (24 h-CC), these is estimated by using the CG and the MDRD1-2 formulas. Methods: Prospective observational study. There were included all patients aged 75 years or older healthy people (Barthel index 90-100 and Charlson index 1-2) from geriatric team consultation of a Geriatric Service from Madrid, into the period between 1-11-2007 and 1-11-2008 discarding patients without euvolement clinic condition or with kidney renal disease, urinary incontinence, dementia or another disorder that hinder to take urine 24 h. We compared CG (corrected to a body surface area (BSA) of 1.73 m<sup>2</sup>) , MDRD1 and MDRD2 against the 24 h-CG - corrected with BSA of 1.73 m<sup>2</sup> - using least squares linear regression. Differences from 24 h-CC were tested using the paired t-test. p value <0,05 and 95% interval confidence. Results: We studied 70 persons (44 females, mean age 82,87 +/- 5,8 years old). The mean of 24 h-CC was 56,6 +/- 22,79 ml/min and GFR estimated using the CG, MDRD1 and MDRD2 formulas was 54,27 +/- 15,25 ml/min, 71,48 +/- 18,65 ml/min, 69,78 +/- 18,53 ml/min, respectively. There was evidence of a relationship between 24 h-CC and the three GFR estimated (MDRD1: Beta standardized coefficients= 0,48; p<0,001; MDRD2: Beta= 0,50, p<0,001; CG: Beta: 0,53, p<0,001). There was differences significantly between the mean of 24h-CC , MDRD1 (mean -14,88 (-19,85 to -9,909, p<0,001), and MDRD2 (-13,186 (-18,253 to -8,120, p<0,001). However, not significantly differences between 24 h-CC and CG (2,328 (-2,312, 6,969, p: 0,32) was found. Conclusions: The CG and MDRD formulas compared with urine 24h creatinine clearance have a weak average relationship in healthy people aged 75 or older, but this formulas showed relevant differences between them.

**PB7 541 ARE GENERAL PRACTITIONER CHARACTERISTICS RELATED TO RECRUITMENT OF THEIR OLDER PATIENTS: THE BRIGHT TRIAL**  
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Introduction. High response rates are needed to ensure generalisability of information from research conducted in the community. The BRIGHT trial recruited 3700 older people in New Zealand to test a primary care disability prevention strategy. Do characteristics of the GP (age and gender) influence the success of recruitment of their patients? Methods and materials General practitioners in three regions of NZ were recruited by personal invitation. Eligible patients: 75 years or greater (65+ for Maori); lived in the community; and could communicate in English, were identified from the GP list of enrolled patients and sent a letter of invitation from their GP. Research staff completed consenting processes. GPs and practices were surveyed to ascertain demographic and practice characteristics. GP and practice characteristics associated with recruitment rate of patients were examined using generalized linear multiple regression. Results 132 GPs in 60 practices (1-9 GPs per practice) contributed 3751 patient participants aged 75 years and over (65+ for Maori). 43% of GP were women, 65% had been trained in New Zealand and 25% worked less than half time. On average the GPs had been in general practice for 17.7 years (8.8) and had been at the current practice for 12.7 yrs (sd 9.6). On average 46.8% of eligible patients were recruited (sd 9.2). 25% of GPs contributed less than 8 participants. Using multiple regression, the longer the GP had been practicing the more patients were recruited (p = 0.004) controlling for practice size, gender, sessions per week and country of graduation. Conclusion Patients from more experienced GPs were easier to recruit to research. Efficiency in recruitment may be increased by foreknowledge of likely high or low yield practices.

**PB7 542 THE DEVELOPMENT OF HEALTH CARE SERVICES MODEL FOR THE DEPENDENT ELTERS IN THAILAND**  
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Introduction: The objectives of the study were to (a) explore the needs of the Thai dependent elders and their caregivers (b) identify existing support systems including that assist the dependent elder (c) develop a health care service model for the dependent elders. Method: Applied participatory action research (PRA) was used. Purposive sample were drawn from Chaugnutnet area in Bangkok, Thailand including the dependent elders, families caregivers, lay persons in the community and health care professionals in the

Health Care Centre 29. In the first phase, a focus group was conducted for each group (8-10 persons) to identify need and problems caring for the dependent elders, support system and health care services available. The second phase another round of focus group was conducted to develop a health care services model. Data analysis was done within and across groups to interpret and reach consensus of health care services model. Results: The findings revealed that the Thai dependent elders and their families faced to stress, lack of sufficient economic and health care support. Lay persons also identified needs to enhance community networks which have existed in community and cooperate with religion institutions to assist the dependent elders and their family. Health care professions reported workload and limited budget. The finding suggested that a health care services model have to integrate social and health care services. The cooperation among the community networks, health care center and local government enhance satisfaction of services. Conclusion: This study was implemented in Urban area in Thailand may not apply in the rural area. The further study needs to explore the effectiveness of the model.

**PB7 543 COMPARISON OF HEALTH PROMOTING BEHAVIORS BETWEEN THE HEALTHY AND THE DIAGNOSED ELDER PARTICIPANTS IN SOUTH KOREA**

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Introduction The aim of this study is: To investigate the relationship between the relevance of disease and health promoting behaviors such as non-smoking, non alcohol drinking, regular exercise, and the levels of stresses which are measured by Brief Encounter Psychosocial Instrument (BEPSI), in the community setting (such as lower income for senior citizens); and to investigate the impacts of demographic factors and social economic status on the prevalence of diseases for the older population, in a community-based setting. Methods Three hundred sixty-five older adults were recruited and interviewed by public health nurses. The participants were in a lower income bracket, located in special government housing complex in Seoul. 114 of 365 respondents were 65 years or older. Results The mean age of the population was 73.68 year old (the range from 65 year old to 87 year old). Gender proportion of the subjects was 28.9% male and 71.1% of female. Twenty seven participants were healthy and 87 had one more diagnosed disease. There were no significant correlations between age, BEPSI, and the number of diagnosed diseases in elder. No significant associations between gender and the prevalence of disease; between health promoting behaviors (regular exercise or none smoking) and the disease. But a significant association between no alcohol drinking and the incidence of disease was noted. No-alcohol drinker had higher incidence of disease than alcohol drinker. Conclusion It is concluded that the impacts of health promoting behaviors and stresses on the prevalence of disease in elder are important. So comprehensive assessment of environment including reversal causal effects of the health promoting behavior, diagnosis of risk factors and early detection of disease, and planning of public health services are emphasized for frail older adults' health promotion.

**PB7 544 MEDICATION ADHERENCE AMONG GERIATRIC OUTPATIENTS WITH HIGH RISK OF POLYPHARMACY**

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Introduction: The study assesses the medication adherence among geriatric outpatients with high risk of polypharmacy. Method and Material: Baseline data from 193 outpatients enrolled in the "Medication Safety Review Clinic in Taiwanese Elders" study were analyzed. Enrollment criteria were 1) 65 years or older, 2) at least one prescribing physician belonged to the "core physician" group, and 3) either prescription with minimum of 8 chronic medications (a drug prescribed for at least 28 days) or visited at least 3 different physicians at the 2 participating hospitals from Aug. to Oct., 2007. Demographic, health-related, medication-related, and healthcare-related characteristics were collected for analysis. Poor medication adherence (PMA) for each drug was defined as taking fewer than 80% or greater than 120% of the prescribed doses over a 7- day period. Poor personal medical adherence (PPMA) was defined as at least 25% of medications prescribed for a person reached PMA. Result: The mean age was 76.2±6.2 years and 53% were male. Participants had on average 9.0±2.6 co-morbid chronic conditions and prescribed with 8.9±3.1 medications. Among the 1689 medications assessed, 314 (19%) reached PMA. Two-thirds (66%) of the subjects had at least one drug with PMA, and each subject had on average 1.7±1.8 drugs reached PMA. One-third (34%) had PPMA. Having higher number of drug-related problems (DRPs) from assessments, and having dizziness in 6 months prior to assessment were associated with higher risk of PMA. Having higher number of DRPs from assessments, having higher number of self-reported DRPs, and having higher Mini-Mental Status Exam scores increased the likelihood of PPMA. Conclusion: Poor medication adherence is common among geriatric outpatients with high risk of polypharmacy. Several drug and patient characteristics were associated with developing PMA and PPMA. Physicians should routinely ask about

medication adherence at each clinical encounter especially when unexpected clinical outcomes were presented.

**PB7 545 TRAUMATIC BRAIN INJURY IN OLDER ADULTS: COGNITIVE CONSEQUENCES**

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Introduction : Traumatic Brain Injury is frequently associated with young adults involved in motor vehicle incidents. However, a further important demographic group presenting to emergency and trauma services are older adults who have experienced both falls and motor vehicle incidents resulting in traumatic brain injury. This group represents a rapidly increasing public health challenge in our aging community. In young adults, mild traumatic brain injury (mTBI) is typically associated with neuropsychological recovery by three months post-injury and yet only a few studies have explored outcome for older adults, and more persisting deficits maybe expected. Our objective is to examine the three-month cognitive outcome of mTBI in a sample of older adults. Methods and Materials: A prospective cohort study was conducted in patients aged over 65 years and admitted to a hospital trauma service in Melbourne. After exclusions for co-morbidities and evidence of pre-injury cognitive decline, 29 mTBI patients were compared with two control groups - 29 patients with orthopaedic-only injuries and 29 healthy community adults. Participants were evaluated on a range of neuropsychological measures, including prospective memory, at three months post-trauma. Results: Analyses revealed that on many of the neuropsychological measures (including speed of information processing and memory) the mTBI group performed at an equivalent level as the two control groups indicating a recovery of neuropsychological status. However, on measures of prospective memory, or remembering to perform delayed intentions, the mTBI demonstrated significantly impaired performance as compared to the two control groups. Conclusion: These findings indicate a generally positive cognitive recovery pattern by three months post-trauma for older adults with mTBI. Nevertheless, persisting difficulties in prospective memory, such as taking medication or attending appointments, are common. These results will be discussed in the context of increased risk of everyday memory failures for older adults in the early stages following mTBI.

**PB7 546 DEPRESSIVE SYMPTOMS AND PHYSICAL ACTIVITY IN A POPULATION BASED STUDY IN ELDERLY RESIDENTS OF PORTO ALEGRE - BRAZIL**

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Introduction: Depressive symptoms are common in elderly subjects and may be associated with regular physical activity (PA). In order to understand the association between PA and different symptoms that could be related with depression we proposed this study. Material and methods: a population based study involving 1078 elderly from Porto Alegre - Brazil, questioned 12 symptoms related to depression and about regular physical activity. The depressive questions were: "Do you wake up well and rested most mornings?" (Q01), "Is your life full of interesting events?" (Q02), "Do you feel, sometimes craving of run-away?" (Q03), "Do you feel as no body understand you?" (Q04), "Have you ever feel like you are loosing the control over everything?" (Q05), "Is your sleep agitated?" (Q06), "Are you happy most of the time?" (Q07), "Do you feel worthless sometimes?" (Q08), "Do you feel good most of the time?" (Q09), "Do you have headache?" (Q10), "Do you feel week most of the time?" (Q11), "Do you feel like everybody is against you?" (Q12). Frequency of depressive answers were compared among three different levels of PA (no PA, 1 to 2 times a week of PA, 3 or more times a week of PA) and tested by Chi-square test. Results: Only the question about the quality of sleep (Q01) was not statistically associated with PA ( $p=0.451$ ). Subjects who exercise 3 or more times a week reported lower frequency for questions Q02, Q04 and Q12. Subjects exercising 1 or 2 times a week reported lower frequencies for questions Q02, Q04, Q05 and Q08. The no activity group reported higher frequency for questions Q11, Q12, and Q09. Conclusions: Elderly engaged in regular physical activities reported less depressive symptoms. It is not clear, however, if physical activity is the cause of the mood wellness or depressive symptoms are to blame for the lack of physical activity.

## Track C - Behavioural and Psychological Sciences

**PC7 547 LONG-TERM EFFECT OF PSYCHOLOGICAL TRAUMA ON MENTAL HEALTH OF AGED PEOPLE DISPLACED AFTER WORLD WAR II.**

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Introduction What are the long-term effects of mass trauma on the psychological wellbeing of displaced persons in late-life? Most epidemiological data are for short-to-medium term

effects, leaving the possibility that early reactions could reduce naturally over time as well as trauma that occurred decades ago could resurface in frail elderly suffering from cognitive dysfunctions or emotional problems. Specifically, we aimed to assess the long-term effect of forced migration after World War II on mental health and disability in aged displaced people resettled in Hamburg, Germany. Methods and materials Within a population-based cohort-study (LUCAS, Longitudinal Urban Cohort Aging Study), we identified a community sample of 414 people, displaced after World War II. We sampled a control group without displacement, matched by gender and age. Participants were asked to fill in a postal survey which was composed by questionnaires assessing psychiatric symptoms, such as depression, anxiety and post-traumatic stress; exposure to psychological traumatic events; disability and use of health services as well as current social, economic and integration factors. Multivariate analysis with adjustment for stressors since migration to establish the risk factors for mental wellbeing has been done. Results The postal survey was completed by 466 (53%) adults. Mean length of resettlement was 52.7 years (SD 13.2) and mean time since the most severe traumatic event was 58.8 years (SD 18.3). Displaced persons showed a significantly higher frequency of traumatic symptoms and depression but not anxiety. Further, displaced persons reported significantly lower subjective physical health but no significant amount of medical consultations. Certain interaction between trauma exposure and time since trauma were associated with a higher risk of symptomatology. Conclusion These findings demonstrate that there are long-term psychological problems in people who are forced to migrate. In further analysis we aim to examine resilience factors and utilisation of primary health care.

**PC7 548 PREDICTORS OF POST-TRAUMATIC STRESS DISORDER AMONG ELDERLY VICTIMS OF FLOOD DISASTER IN KOREA**

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The purposes of this study were to examine post-traumatic stress disorder among elderly victims of flood disaster and to explore factors influencing post-traumatic stress disorder of those people. A total of 155 elderly people aged 65 and over who were directly or indirectly damaged by flood disasters in Gangwon province, Korea which is mainly devastated by flood disasters were selected for this study. Post-traumatic stress disorder was measured and determined using Post-traumatic Diagnostic Scale (PDS) Korean version, with scores of 15 or higher to indicate possible PTSD. A total of 34.8% of the sample in the elderly flood victims showed symptoms of PTSD. The mean (standard deviation) scale score for the subjects was 11.8 (10.3). As a result of multiple regression analysis, the variables affecting PTSD among the elderly included knowledge of disaster, coping strategy, damage rate, depression, level of education, with knowledge of disaster having a greater impact on PTSD than other variables. These findings suggest that there is a need to provide education programs of flood disaster and disaster preparedness for the elderly people in the damaged areas or potential risk areas. A number of implications for the recovery strategies of PTSD for the elderly flood victims are also presented.

**PC7 549 SOCIAL PARTICIPATION AND SOCIAL EXCLUSION IN THE CASE OF MULTIMORBIDITY**

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Social exclusion is mostly related to poverty and the loss of social participation. In the concept of societal differentiation exclusion (and inclusion) is directly regulated by the different functional systems like politics, economy or religion. This approach analyses participation and role engagement in different societal spheres. The paper asks for health-related exclusion risks focussing particularly on multimorbidity which will be defined as more than one chronic illness. In this case exclusion risks are concentrated on the question of exclusion processes from organisations (political, religious) and activities like charity work, support to family, friends or neighbours, participation in clubs, educational programs or religious communities. For the statistical analysis the database of the Survey of Health, Ageing, and Retirement in Europe (SHARE) was used comparing the social situation of aging people from the age of 50 until 100 years in relation to good and poor health conditions and multimorbidity. The results show as expected a significant correlation of exclusion or retreat tendencies related to multimorbidity in all mentioned activities without the exception of the participation in religious communities. These tendencies are diminished among young elderly people (younger than 70 years) and increase with higher age groups and the number of chronic diseases. Gender differences exist, but not in relation to multimorbidity. Even taking into account that only the cross sectional SHARE database was used, the morbidity and age related exclusion and retreat phenomena remember to the classical theory of disengagement. Though the concepts of "diversity of ageing" and "active ageing" contradict the general assumptions of the disengagement theory, the theory seems (still) to be relevant in the case of age and (multi)morbidity. Further analysis will test cultural differences.

**PC7 550 BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD) DIFFERENCES AMONGST A SAMPLE OF EARLY AND LATE ONSET PATIENTS**

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Aims: to determine the prevalence of BPSD in patients with an Early Onset (EOAD) compared with those with a Late Onset (LOAD) Alzheimer's Disease. Methods: prospective study of eighty one patients diagnosed of Alzheimer's Disease (NINCDS-ADRDA criteria) at Unidad de Memoria HCSC. The sample was divided into two groups according to the patient's age at the diagnosis. Hence, patients were classified as EOAD (< 70 years) or LOAD (> 75 years). Demographic (age, gender and educational level) and functional outcome data (Lawton, Katz) as well as the results on neuropsychological measures were collected. BPSD were assessed with the 12 item version of the Neuropsychiatric Inventory (Cummings et al.). Statistical software used: SPSS v14.0. A Pearson Chi Square test and a median comparison were performed. Results: 81 patients divided into two groups EOAD (n= 37) and LOAD (n= 44). The mean age was 66 years for the EOAD group and 82 years for the LOAD group. Gender was distributed as follows, 18.5% were men while women represented the 81.5% of the sample. No significant differences were found on any of the demographic variables (age, gender and educational level). The statistical analysis of the total and the item per item score on the Neuropsychiatric Inventory did not find any significant difference between the groups. Conclusion: 1) There are no differences on the prevalence of BPSD between an Early Onset and a Late Onset Alzheimer's Disease sample. 2) Age does not seem to increase the frequency of Behavioural and Psychological Symptoms in Alzheimer's Disease

#### **PC7 551 CAREGIVER BURDEN AND GLOBAL DETERIORATION SCALE**

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Introduction: To describe the relationship between caregiver burden and stage of dementia. Methods and Materials: Retrospective transversal study including 200 patients. We registered demographic data and the results of Zarit scale and GDS. Statistical analysis performed by SPSS 14.0 program. Results: N = 200. 61,5% females, ages between 67 and 90 years (mean: 79,20 years  $\pm$  5,9). Mean Zarit punctuation was 24,14 for patients with 79 years or older compared with 20,73 for younger ( $p = 0,8$ ). No statistical relationship was found between Zarit punctuation and gender (23,17 for males and 21,78 for females,  $p = 0,2$ ). Patients with GDS 3 had mean Zarit punctuation of 21,47 (26,81 for 79 years or older, and 18,12 for younger,  $p = 0,9$ ); with GDS 4 had mean Zarit punctuation of 22,37 (23,04 for 79 years or older, and 21,83 for younger,  $p = 0,29$ ); with GDS 5 had mean Zarit of 21,75 (25,27 for 79 years or older, and 18 for younger,  $p = 0,18$ )and 34,33 with GDS 6. No statistical relationship ( $p = 0,72$ ) between early (1-3) and advanced levels of deterioration (4-6). Conclusions: 1.- The importance of the application of instruments to evaluate caregiver burden in patients in order to estimate the magnitude of the illness leading to ways of helping both patients and caregivers. 2.- In our study, there is a relationship between Zarit and the Global Deterioration Scale. Caregiver burden keeps on stable or even decreases during moderate or mild stages of the disease and increases in advanced stages

#### **PC7 552 THE ROLE OF THE PSYCHIATRIC CONSULTANT IN THE DIAGNOSIS AND TREATMENT OF DEMENTING DISORDERS**

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Introduction: People with dementing disorders increase dramatically: most have dementia of Alzheimer's type (DAT) or vascular dementia. The role of the psychiatric consultant in liaison consultation psychiatry is important for the diagnosis and identification of treatable psychiatric and behavioral findings. Methods and materials: A psychiatric section operates in the General Hospital of Ioannina, providing services of liaison psychiatry. Specialists from other clinics can call a psychiatrist for patients with psychiatric symptoms. Requests concerning old patients are usually related to dementia. Psychiatrist responds directly and continues with the diagnostic process and the administration of therapy. Results: A medical or a surgical clinic's request for a patient with suspected dementia is usually made because of behavioral symptoms related to delirium. This patient can often have a non-diagnosed dementing disorder. He displays acute confusion as a result of a disease, more frequently than a cognitively intact elderly patient. Depression symptoms, which are also related to dementia, are another reason for psychiatric examination. Many times elderly patients don't have appropriate psychiatric observation, because relatives focus on physical symptoms and their pharmaceutical handling. They neglect cognitive decline, because they attribute it to old age and believe there is no therapy. They complain more often about behavioral problems, but usually symptoms medication is administered, which causes side effects or more arousal. Nursing in the general hospital facilitates correct diagnostic approach by appropriate laboratory tests. The specialist administers proper medication, sets behavioral management (such as frequent time and space re-orientation), and informs family members about diagnosis and anticipated progress. Conclusions: Hospitalization for physical disorders in a general hospital of patients with dementia allows specialist to make

correct diagnosis and set the process of patient's observation after leaving hospital. This results in the relief of the patient and the family members, the secret victims of dementia.

#### **PC7 553 EVALUATION OF A PART-TIME CARE FACILITY FOR PEOPLE WITH DEMENTIA**

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Introduction: With the effort of providing good homecare to family members with dementia, many caregivers reach or even go beyond their personal limits. To date, a range of possibilities exist to alleviate caregivers' physical and psychological strain, e.g. patients' regular short stays at an institution or nursing home. However, the effect of this procedure upon the persons involved has not yet been evaluated in Switzerland. Methods and Materials: A process-oriented evaluation investigated the effects of visiting the part-time care centre of a specialized institution for dementia near Zurich upon part-time patients, their family caregivers, permanent patients, and staff members. 17 family caregivers and their patients underwent standardized interviews and were observed at their homes and during their stay at the institution. The main themes were quality of life, health, care burden and amount of relief experienced. In addition, 17 staff members were interviewed on job satisfaction and care burden, and 6 permanent patients were asked about the effects of having temporary guests at their ward. Results and Conclusions: Family caregivers showed slightly improved health since using part-time care in 80% of the cases, and depressive mood was reduced. About 70% of the respondents believed that by using part-time care in an institution, they would be able to keep their family members with dementia at home for longer, and 60% reported positive changes in their social activities. However, the results of this evaluation indicate benefits not only for caregivers, but also for patients: for example, aggressive behaviour was reduced in a quarter of the cases. In conclusion, utilizing a part-time care facility has a positive effect on family caregivers' physical and social resources and helps them cope independently with their daily routine for a longer time.

#### **PC7 554 REPETITIVE PRACTICE OF SHORT-TERM MEMORY TASKS FOR PEOPLE WITH ALZHEIMER'S DISEASE**

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Y. KUO

Introduction The aim of this study is to measure the learning capacity after a short and repetitive practice of verbal and object memory tasks in people with and without Alzheimer's disease (AD). Method Thirty-nine patients with AD( $72.79 \text{ y} \pm 7.13$ ) and 35 normal controls ( $73.46 \text{ y} \pm 6.30$ ) participated in this study. All participants completed two subtests of the Wechsler Memory Scale (Wechsler, 1997)—the logical memory and word-paired associates tasks, and the Fuld Object-Memory Evaluation (Fuld, 1982). The scores of each trial, the summations of all trials in each task, delay recall, and the retention percentage were collected besides the demographic data. Between-group differences were analyzed by MANOVA, and repeated measures ANOVA was used to examine between-trial differences for each group individually. Result There was no difference between the AD and normal groups regarding demographic factors of sex, age, education, and depression. The controls outperformed the AD group significantly in terms of the total scores, delay recalls, and the retention percentages among three memory tasks ( $p < .002$ ). Significant trial effect was found within each group. Post hoc analysis with Bonferroni procedures showed that normal controls made ongoing progresses until they reached the ceiling scores. Although significant progress from the first to the last trial was noticed in the AD group, the learning outcome was limited and much poorer than the first recall performance of the controls. Conclusion Memory deficits in encoding and retention of information, as well as the limited learning effect in the AD group were evident. The findings provide clinical implication for the therapists and caregivers: when giving instructions or trainings to the patients, even with repetitive learning provided, one should be aware of patient's limitation to avoid frustrations of both parties.

#### **PC7 555 PILOT STUDY OF THE REVISED FUNCTIONAL BEHAVIOUR PROFILE (FBP): AN ASSESSMENT TOOL FOR IDENTIFYING PRODUCTIVE BEHAVIOUR IN DAILY LIFE IN DEMENTIA**

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Keywords: Dementia - FBP - functional assessment – residual abilities – revised French translation. Background: The effects of dementia on performances of routine daily activities are sometimes difficult to understand ; family caregivers may overestimate or underestimate the residual abilities or emerging deficits. The Functional Behaviour Profile (FBP) (Baum, Edwards and Morrow-Howell, 1993.) is a functional assessment tool which helps caregivers to identify and describe patient's abilities in three domains (problem solving, performance on tasks and social interaction). This information can improve communication between the caregiver and the clinician so they can jointly plan strategies to maximize and maintain patient's function. Our pilot study (2007) established the clinical feasibility of a FBP French translation and its impact on caregivers' abilities to describe patient performance in daily

living. However, some item modifications were necessary to improve the tool's sensibility and the caregiver's understanding of questions. Aims: The objectives of this study were : (1) to identify item modifications required to improve caregivers' abilities to describe patient performance ; (2) to evaluate the impact of those modifications on the assessment of patient's abilities in daily life. Methods: We recruited patients from people with dementia attending a memory consultation clinic in Grenoble University Hospital. We interviewed primary caregivers (n=50) accompanying a patient ; they participated in a semi-structured interview and completed a revised French translation of the FBP. Results: Data from the 50 first interviews will be presented. This revised version of the FBP seems to be better understood by caregivers. It enabled them to distinguish between (a) performances in complex tasks versus simple tasks ; (b) performances in familiar versus non-familiar tasks. They can identify the modifications between past and current behaviours. Conclusion: The revised FBP French translation helped caregivers to better identify productive behaviours of their relatives. This version improves the assessment of the patient's abilities and performances of activities of daily living.

**PC7 556 HOW PATIENTS WITH ALZHEIMER DISEASE EXPERIMENTS AND MAKE SENSE TO CHANGE ? DEVELOPING A PERSON-CENTRED APPROACH.**  
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**INTRODUCTION :** Anosognosia among people with Alzheimer Type Dementia has been widely studied and has been operationally defined in a variety of ways including observation of the discrepancy between the patient self-report and the report of a natural caregiver, clinical ratings of a health-care professional or performance during neuropsychological tests. However, limited attention has been given to the way patients experiment and make sense to their situations. The present explanatory study aimed (1) at exploring how differing degrees and manifestations of awareness are manifested in the conversation and interaction of people with AD and (2) at identifying theoretical and practical implications. **METHODS :** Themes such as evaluations and representations of change, perception of self, adjusting to loss and impairments, were explored in semi-structured interviews with 46 people who had a diagnosis of mild to severe AD. Transcripts were analysed using a grounded theory approach. **RESULTS :** Despite the deficits, people with AD stay able to produce an intelligible discourse concerning the subjective experience of living with dementia. Moreover, the data tended to show that, despite certain perceptions are impaired, the system coordinating them remains. A preliminary model is presented that support the view of constructing awareness as a process including cognitive, affective and social dimensions. **CONCLUSION :** Because it maintains a view of the person with dementia as an active agent in constructing his/her own sense of identity and emphasises that this process necessarily occurs within a social context, data provides foundation for developing care interventions. This subject deserves to be deeply explored as it gives bases for clinical assessment of awareness. It also states ethical issues. In further research, we hope that understanding the way older people cope with dementia could improve their psychological well-being and quality of life. This work was supported by a grant from the Fondation Médéric Alzheimer (30 rue de Prony, 75017 PARIS)

**PC7 557 USE OF THE HOUSE DRAWING TEST(HDT) IN THE DIAGNOSIS OF EARLY STAGES OF ALZHEIMER**  
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Introduction The aim of this study was to test the hypothesis that freehand house drawing can be used as a complementary screening instrument to differentiate between patients in early stages of Alzheimer's disease (AD) and elderly controls(NS). Methods and materials Twenty six NS (MMSE=28.4+-1,10) and twenty four AD (MMSE=25.4+-2,41) matched for age (mean: 73.62 +-6,46), gender and education were included. The cognitive status of AD was established through clinical and neuropsychological assessment in the Memory Clinic at the Hospital of Arpajon (France). Graphic competence was compared with cognitive functioning by means of the MMSE. A 25 items evaluation of scale drawing, ranged from 1 to 25 is presented. The system of evaluation takes account of the presence of house details, their space organization, the proportion and form of features. Results A significant difference appears between the drawings of the AD and those of NS. The drawings executed by AD are simplified, impoverished, and spatial disorganized compared to the NS. The mean total score of AD was 11.29+-3,26 while the mean score of NS was 20.15+-2,09 (p<0,0001). The mean score of details supplementary of AD was 1.33+-1.24 and 8.69+-5,10 of the NS (p<0,0001). A high significant correlation (0.62) appeared between MMSE and HDT level. Receiver-operator curve (ROC) demonstrated that HDT score<17 detected early stage of AD with specificity of 96.2%, and sensibility of 95.8%. The test classified 96% of the patients correctly. Conclusions The HDT is a valid tool, easy to conduct. Drawing deficiencies are significant in the early stages of AD and this test may

improve the early detection of dementia. HDT may be used in combination with overlapping pentagon drawing task included in the MMSE, which remains correct over a long time even at the moderate stages of AD.

**PC7 558 SELF-REPORTED ANXIETY IN AUSTRALIAN MEMORY CLINIC ATTENDEES.**

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**Introduction:** Although anxiety is highly prevalent among people with dementia, more work is required to define its nature and significance in this context. Accordingly, we investigated anxiety symptoms in memory clinic patients. **Methods:** We recruited 203 consecutive memory clinic attendees and their caregivers and measured generalised anxiety symptoms on the Geriatric Anxiety Inventory (GAI), a 20-item self-report scale. In addition, we rated the patients on a standardised battery of measures, including the Neuropsychiatric Inventory (NPI). We compared our GAI findings with results from normal volunteers and psychogeriatric patients. **Results:** There were 117 female and 86 male patients with a mean age of 76.5. One hundred and forty-one (69.5%) had dementia (39.4% AD; 6.9% VaD; 12.8% mixed; 3.5% FTD; 1.5% DLB; 1.97% other), with an additional 6.4% CIND or MCI. Mean sMMSE score was 22.0. Mean GAI score was 5.4 (SD 5.8; range 0-20) with a Kuder-Richardson coefficient of 0.93. Fifty-two patients (25.9%) reported a history of anxiety disorder. There was a strong relationship between GAI score and history of anxiety disorder ( $KW \chi^2 = 25.6$ , df = 1,  $p < 0.001$ ). GAI score was correlated with NPI anxiety severity ( $r_s = 0.20$ ;  $p < 0.05$ ) and NPI anxiety distress ( $r_s = 0.20$ ;  $p < 0.05$ ). Mean GAI score was significantly higher in memory clinic attendees without dementia than in those with dementia (mean 7.0; SD 6.2 vs mean 4.7; SD 5.4;  $KW \chi^2 = 6.8$ ,  $p < 0.01$ ). In comparison, a separate population-based cohort of 205 women aged 65+ years (mean 74.4; SD 5.5; range 65-86) had a mean GAI score of 2.32; and a separate clinical sample of 46 male and female psychogeriatric patients (mean age 78.8 years) had a mean GAI score of 5.22. **Conclusions:** Anxiety symptoms are highly prevalent in memory clinic attendees, particularly those without dementia.

**PC7 559 ROAD SIGN RECOGNITION IN MINOR DEMENTIA OF THE ALZHEIMER TYPE**

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Today, Alzheimer disease and driving are the object of numerous governmental policies. According to Road Security, the risk of an accident is multiplied by five when a driver suffers from Dementia of the Alzheimer Type (DAT). Indeed, early on it affects the essential capacities to drive; executive functions being mainly studied. On the other hand, road sign recognition has not been analyzed much. As no consensus exists on the precocity of problems reading road signs (RRS), we have assessed the impact of minor DAT on sign recognition. To do this, we compared the abilities of test subjects between the ages of 74 and 89; 20 people affected by DAT (Mini Mental State between 21 and 28) and 20 people in good health. We also wanted to know if a standardized test could predict driving capacities. We therefore compared the results from the Evaluation Protocol of Visual Gnosis (EPVG) to those of the RRS protocol. We created a protocol that assesses the semantic knowledge of real signs, categories of signs, as well as the reasoning on the structure of the rules. A questionnaire on driving habits was also proposed to test the subjects in order to assess a possible change in driving behavior. At the end of our survey, we noted a change in the recognition of road signs in minor DAT. Difficulties increased with the progression of dementia. Results in the EPVG are not predictive of performances in RRS. Even more than a semantic deficit, our work revealed a very precocious change (at 28 in the MMS) in thinking capacities. Also, the recognition of road signs and the judgment on the construction of the rules can be supplementary tools for precocious evaluation of road reasoning capacities.

**PC7 560 NON-PHARMACOLOGICAL MANAGEMENT OF BEHAVIOURAL SYMPTOMS IN NURSING HOMES: THE TNM STUDY**

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Behavioural and psychological symptoms of dementia (BPSD) are often reported in institutions for the elderly. Objective: To evaluate the effectiveness of a staff education intervention to manage BPSD in older people with a diagnosis of dementia. Methods: The trial was conducted in 16 nursing homes; 306 patients with a diagnosis of dementia and presenting BPSD were selected. Nursing homes were randomly allocated to an intervention group or a control group. An eight-week staff education and training programme was conducted in the nursing homes from the intervention group. The main outcome measures

were the Cohen-Mansfield Agitation Inventory (CMAI) and an observation scale score. Assessments were done at baseline (W0), at the end of the 'intervention' period (W8) and 12 weeks after (W20). Results: There was a significant decrease in the global CMAI score between baseline and W8 (-7.8; p > 0.01) and between baseline and W20 (-6.5; p > 0.01) in the intervention group but not in the control group. Results of mixed linear models showed that the CMAI global score, the CMAI physically non-aggressive behaviours subscale score and verbally non-aggressive behaviours subscale score significantly decreased in the intervention group ( $p < 0.001$ ) although there was no significant evolution in the control group. Direct assessment with the observation scale produced the same pattern of results, with a significant decrease only in the intervention group. Conclusion: The intervention reduced BPSD in severely demented nursing home residents and this effect was still present 3 months after the end of the programme.

**PC7 561 RELATIONSHIP QUALITY AND QUALITY OF LIFE IN DEMENTIA**  
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Introduction: It is well-established that ratings of relationship quality made by family caregivers predict care-giver strain, but people with dementia have rarely been asked for their perspective, and the association of relationship quality with quality of life has not been evaluated. Methods: 77 people with dementia and their care-givers living in the community participated; 74% had mild dementia; 90% were co-resident; 78% were spouses; mean duration of memory problems 3.1 years (range 1-10). All completed the 5-item Positive Affect Index (PAI; Bengtson, 1973) and the 14-item Quality of Care-giving Relationship Scale (QCPR; Spruytte, 2002) and each couple was video-taped carrying out a verbal and a non-verbal task together. Trained assessors rated the video-tapes for emotional attunement, positive and negative affect and depersonalisation. Quality of life was assessed using the QoL-AD (Logsdon et al., 2002). Results: The ratings of relationship quality made by people with dementia showed good internal consistency (0.81 for PAI) and re-test reliability (over 12 weeks,  $r=0.66$  for PAI). There was reasonable agreement with care-givers' rating ( $ICC=0.58$  for PAI), with the degree of stress reported by the care-giver being the main predictor of discrepancies. Ratings made by the person with dementia correlated significantly with ratings of the video-taped interactions (e.g. QCPR and emotional attunement,  $r=0.30$ ,  $p<.05$ ). Self-reported quality of life (the QoL-AD) was predicted by QCPR, but not by depression, anxiety, care-giver stress or depression, MMSE scores, age, gender or dementia severity ( $R^2=0.14$ ;  $p<0.002$ ). Conclusions: Many people with dementia are able to reliably and accurately rate the quality of the current relationship, which may also be evaluated through observation of structured tasks. The quality of life of the person with dementia, as well as the stress experienced by the care-giver, are associated with the quality of the current relationship. Interventions should aim to sustain relationship quality.

**PC7 562 ADVANTAGES OF A SHARP PSYCHogeriatric UNIT FOR PATIENTS WITH BEHAVIOURS AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD)**

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BPSD are very common in the evolution of dementia. Psychogeriatric units offer a specialized pluri professional taking care. Objective: Determining the typology of the inpatients in a sharp specialized psychogeriatric unit. Estimating the advantages brought by this kind of taking care. Method: An over 9 months retrospective study, based on the collect of medical and social informations of the BSPI in-patients. All the in-patients have been evaluated by the NPI scale. 4 points have been used to estimate the taking care : The improvements of the BPSD. The analysis of the activating factors. The modification of the psychotropic treatments. The in-patient evolution. Result: On the 160 in-patients of this study, 126 were presenting symptoms of behaviour disorders and 84 of them were diagnosed for BPSD and were kept for our analysis. The average age was 83, 13 (+/- 7.63 [61; 98]). 37 % came from their domicile, 29 % from another hospital and 18 % from nursing home. MMS was 17,59 ( +/- 5.3 [7;27]). The BPSD appraised by NPI were controlled by behaviours of positive disorders (80, %), anxious disorders (32, %) and depressive disorders (30, %) productive disorders (44, %). The main symptom has been improved on 86 % patients, the average psychotropic figure have been limited, a diagnosis of dementia has been detected on 29 subjects. A sharp pathology has been discovered and treated on 55 patients and 63% patients were able to back home. Conclusion: From the results of this study, we can precise the interest of a specialized unit for the present BPSD's in-patients and we propose a discussion about their place in a geriatric service.

**PC7 563 EARLY IDENTIFICATION OF COGNITIVE CHANGE IN PRECLINICAL DEMENTIA**

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Preclinical cognitive deficits in AD are characterized by large episodic and executive impairments. Despite sizeable mean differences between preclinical cases vs. non-cases,

considerable overlap (> 40%) remains across performance distributions. Improving classification requires moving beyond the examination of static mean differences to consideration of relative timing and magnitude of decline. In the present study, we examined whether onset and rate of preclinical decline differed across cognitive outcomes. Participants (n=417 dementia cases and n=249 non-cases, aged 75+) from the Kungsholmen Project completed up to 5 measurement waves. We fit a series of change-point models in 1-month increments to identify the average transition point that best characterized acceleration of decline prior to dementia onset (compared to normative age changes). Protracted change points (> 7 years) were observed for cognitive correlates of dementia pathology (episodic memory), but faster rates of decline were observed for tasks that incorporate both fluid and crystallized abilities (category fluency). This distinction supports claims that well-preserved abilities may be most discriminative, but only in close proximity to incident diagnosis.

**PC7 564 NARRATIVES OF THE LIVED EXPERIENCE OF A DEMENTIA INTERVENTION: AN ANTHROPOLOGICAL STUDY**  
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Rigorous research design and standardized measures are necessary, but not sufficient to assess the impact of gerontological interventions and develop valid evidence-based practice. The social and physical contexts of an intervention and the meaning that participants ascribe to the experience of that intervention can impact the way a program is carried out in unanticipated and, using traditional methods of assessment, unnoticed ways. Narratives of participants' lived experiences of an intervention can provide critical insight into the process of implementation of that intervention and should be included as an essential component of program evaluation. Thirty older adults with dementia and their primary family caregivers participated in a three-month home-based, family-supervised physical activity program designed for persons with mild dementia. Participants were randomly assigned to one of two exercise groups and given baseline and follow-up standardized assessments of balance, flexibility, strength, and endurance. The majority showed clinically significant improvement at follow-up compared to baseline performance. This "pre-post-only 'black-box' design" (Patton 2005), focusing solely on the end result or impact of the intervention, was supplemented by ethnographic process evaluation (Butler 2005). Implementation of the program was not assumed as a given, but as a process to be examined. Follow-up focus groups and in-depth interviews with the family exercise supervisors elicited ways participants translated their training into action and the ways they negotiated that translation within specific social and physical contexts. Rather than passively replicating the program, family members took active measures to change and adapt it to fit their individual needs. Family members identified barriers and facilitators to implementing the program and criteria they used to determine successful implementation. An anthropological focus on context, meaning, and process provides insights into ways interventions are operationalized, complementing traditional assessments of outcomes and contributing to enhanced validity of evaluation research. (Funded by Alzheimer's Association)

**PC7 565 READING SYMBOLS AND ROAD SIGNS IN ALZHEIMER DISEASE**  
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E. CHAMPEAUX

Actually, there are many interesting studies on driving with AD. We understand this because AD multiplies by five the risk of a road accident (by road safety in France). The patients are not always aware of their problems and don't make any effort to help the disability (like adapted speed, getting lost, cutting the road and not respecting the road signs...). We would like to know if AD with mild dementia defects reading symbols and road signs. The question is: are these problems perceived or associated? Methods and materials The population is: 20 patients with mild dementia (mms: 21-28) and 20 elderly persons (control population); the age is more 65. We propose: - A perceptive test: putting together two same road signs among other distractions - An associated test: recognizing the signification of real signs different categories and wrong or faulty signs. Results - The perceptive test doesn't show any perceptive trouble in recognizing signs in patients with very mild dementia. - In associated test, we find a significant remark impact in patients AD. AD with mild dementia have more difficulties with signs of different categories and faulty signs because they need to think about the Highway Code. Patients with Alzheimer mild dementia don't have the necessary reflexions to evaluate the sign because their cognitive abilities don't function correctly. - The capacity of reading road signs is more difficult as the illness progresses. Conclusion All these tests obliged the patients to think about the road signs and understand the form of the road signs, and it's difficult for them because they have limited capacities of judging and reasoning. Even if elderly people have not a good knowledge of the Highway Code, they always can reason and understand the meaning of the signs which are unknown, Alzheimer are not able to.

**PC7 566 THE 'ROUND TABLE SCIENCE ET CITÉ ON DEMENTIA': RESEARCH BASED ON THE COLLABORATION OF CAREGIVERS, HEALTH PROFESSIONALS, AND SCIENTISTS**

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**Introduction:** In Switzerland, roughly two thirds of the people with dementia are being cared for by family members, who in turn face a high risk for physical and psychological illness. Twenty-five lay and expert members of the Round Table Science et Cité on Dementia designed and evaluated a research project to address some of the most urgent questions regarding dementia homecare in the region of Zürich. Methods and Materials: 67 family caregivers and their patients were interviewed at their homes. The interviews were largely standardized and the main topics covered were quality of life, health, coping with caregiving and dementia symptoms, and assessing the amount and kind of help received from other helpers. Caregivers also kept a standardized diary to assess the patients' affect over a range of activities. Results and Conclusions: Quality of life of caregivers does not necessarily diminish with time, reflecting a great effort to adjust to and master their situation. However, quality of life was highly predicted by depression and changes in the relationship between caregiver and patient. Although most caregivers have other helpers, half of them are not satisfied with the amount or quality of help received. Most caregivers feel they have too little time for themselves. Based on these and further study results, the Round Table is currently developing a range of recommendations and measures to improve the well-being of those caring for a family member with dementia.

**PC7 567 COST-EFFECTIVENESS OF A GROUP PROGRAMME REDUCING FEAR OF FALLING: RANDOMISED CONTROLLED TRIAL**

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**Introduction:** Fear of falling and associated avoidance of activity are common among older people and have negative consequences for daily functioning, quality of life, healthcare utilization and associated costs. This underlines the need for cost-effective interventions to reduce fear of falling and associated avoidance of activity. In the current study we evaluated the cost-effectiveness of a cognitive behavioural group intervention that reduced fear of falling and associated avoidance of activity. **Methods and materials:** This cost-effectiveness study was embedded in a two-group randomised controlled trial. We compared the costs and effects of an 8-week cognitive behavioural group intervention conducted by trained nurses, with those of usual care. A total of 540 persons were included in the study. Clinical outcomes were fear of falling and associated avoidance of activity. Direct healthcare costs included costs related to general practitioner consultations, specialist care, days in hospital, physiotherapist' consultations, hours of professional domestic help, hours of professional home care, home adaptations, aids, and assistive devices. Outcome measures were assessed at 2, 8 and 14 months by means of structured telephone interviews and self-administered questionnaires. **Results:** The costs for the program were on average €276 per person in the intervention group. The total direct healthcare costs per person (including intervention costs) were somewhat higher in the intervention group (€4,925) compared to the control group (€4,828). This difference of €97 was not statistically significant ( $p=.899$ ). Only the costs for physiotherapy were significantly lower in the intervention group, compared to the control group (€295 versus €509,  $p=.007$ ). **Conclusion:** This trial showed that the programme significantly reduced fear of falling and associated avoidance of activity while at the same time not significantly increasing direct healthcare costs. The programme is currently being implemented in regular care in the Netherlands.

**PC7 568 BEYOND SOCIOECONOMIC STATUS: THE INFLUENCE OF EARLY LIFE CIRCUMSTANCES AND MIDLIFE ASSETS ON OLD AGE FUNCTION. FINDINGS FROM THE AGES REYKJAVIK STUDY**

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**Introduction** While it is well-established that education and occupation are important in predicting function in old age, it is unclear whether other aspects of socioeconomic status could be important as well. This study focuses on the impact of early life circumstances and midlife assets on daily function in old age next to classical socioeconomic risk factors. **Methods and materials** We used data obtained in midlife to assess the effects of early life circumstances and midlife assets on physical dysfunction (i.e. mobility limitation and walking speed) and depressive symptoms three decades later. Data were obtained from 4,809 Icelandic men and women, aged 33-65 years who, in midlife, participated in the Reykjavik Study (1967-1994) and who were re-examined in old age in the Age, Gene/Environment Susceptibility (AGES)-Reykjavik Study (mean follow-up=29 years). **Results** Three decades later, men and women from lower educational and occupational levels had the highest risk of self-reported mobility limitation, depressive symptoms (GDS) and low walking speed (adjusted OR's ranging from 1.59 for mobility limitations to 2.20 for depressive symptoms) . Additionally, a physically straining occupation or owning fewer assets of house or car, living in older or poor quality housing, were also important

determinants of dysfunction in old age, independent of the classical socioeconomic risk factors (adjusted OR's ranging from 1.22 for a lack of  $\geq 1$  housing assets to 1.80 for a physically straining job). In addition, a recalled shortage of food in childhood was similarly related to negative health outcomes (e.g. OR=1.86 for depressive symptoms in women). **Conclusion** These findings support the hypothesis that even accounting for the classic socioeconomic risk factors, other aspects of life circumstances contribute to physical and mental dysfunction in old age. Whether these differences will diminish with improved socioeconomic status in subsequent generations should be investigated.

**PC7 569 SAFETY AT HOME OF PEOPLE WITH DEMENTIA: CONTRIBUTIONS OF AN EVALUATION OF RISK SITUATIONS IN A GERIATRIC CONSULTATION CLINIC**

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**Introduction:** The growing number of people with Alzheimer's disease living at home raises questions about their safety and quality of life. Cognitive deficits from dementia include impaired memory, lapses in attention, and judgment difficulties; patients are sometimes injured following domestic accidents. Families often express their concerns about the safety of their relatives and their vulnerability to danger. Few studies have measured the frequency of situations-of-risk, although a tool (Safety Assessment Scale) has been proposed recently (Poulin et al. 2006) to help evaluate community-dwelling patients. The purpose of this study was to describe the prevalence of safety problems among community-dwelling patients, and also to identify factors associated with potential situations-at-risk in the home. **Methods and material:** We studied patients who were living at home, and evaluated in a memory consultation clinic (with a caregiver-relative). Their relatives took part in a semi-structured psychological interview about security issues (based on a French version of the Safety Assessment Scale (SAS). Psychometric indicators of current patient functioning (ADL, IADL and MMSE) were also administered. **Results:** Results show that all of the people with dementia (n=103) were exposed to risks at home. Patients living alone (31%) were judged to be more at risk at home than those living with someone (69%). The most common risks reported concerned fires, food and polymedication. Home safety scores (SAS) are not related in a linear manner to cognitive level (MMSE) and dependency (ADL/IADL). **Conclusion:** The safety evaluation interview is an innovative opportunity to assess perception of risk and carers' preoccupations about patient well-being. The Safety Assessment Scale is useful in the context of memory consultation to (a) determine the risks at home and (b) to focus the interview with the caregiver towards preventing accidents and improving quality of life in the home settings.

**PC7 570 INDIRECT EFFECT OF SCHOOL VOLUNTEERING BY SENIOR CITIZENS ON PARENTS THROUGH INTERGENERATIONAL PROGRAM THE "REPRINTS".**

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**Background and Purpose** • We have launched a new intervention study, called "REPRINTS" (Research of productivity by intergenerational sympathy) in which senior volunteers aged 60 years and over engage in reading picture books to school children, regularly visiting public elementary schools since 2004. The purpose of this study was to examine the changes of evaluation of "REPRINTS" program by parents of school children during the 2 years. • **Methods** • 4-6 volunteers as a group have visited an elementary school in suburb Kawasaki city twice a week to read picture books. Baseline survey was conducted one month after launching volunteer activity. 1st –4th follow-up surveys were conducted every 6 months after baseline survey. Of 368 parents, 230 whose children were in 1-4th grades were analyzed. **Measurements:** School grade of children, gender, emotional image scale of older adults by SD (Semantic Differential) method (13 items), evaluation of activity of "REPRINTS" volunteers such as promotion of reading for children, or children's respect, thanks, familiarity with "REPRINTS" volunteers, indirect effect on promotion of safety community, reducing parent's physical and psychological burdens of volunteer service for school. Repeated cross-sectional analyses by ANCOVA were conducted to compare change of response between parents of 1-2nd grade children and those of 3-4th grade-children. • **Result** • In terms of children's familiarity with "REPRINTS" volunteers, two-way factorial analysis of variance demonstrated significant main effect of number of surveys and interaction between the grade and number of surveys adjusted for confounding factors. Also, main effect of grade and number of surveys was found to be significant among reducing parents' physical burdens of volunteer service for school. Main effects of school grade were significant in promotion of reading for children, indirect effect on promotion of safety community, and frequency of hearing episodes of "REPRINTS" volunteers from children. On the other hand, main effects of grade were significant in lightening psychological burdens and level of knowledge of "REPRINTS" volunteers. In terms of emotional image scale of older adults in general, neither main effect nor interaction between the grade and number of surveys were significant in all the subscales of 'socialization', 'activity', and 'cheerfulness' • **Conclusion** • The level of

knowledge and a few items of evaluations of "REPRINTS" volunteers significantly increased among parents of both low grades children and high grades children during the 2-year intervention. This study may suggest that "REPRINTS" program can contribute to establishing trust and reliance between generations of older adults and parents of school children by the children as mediators.

**PC7 571 BURNOUT SYNDROME IN FORMAL CAREGIVERS OF A LONG TERM CARE (LTC)**

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A Burnout Syndrome is a form stress produced in professionals who keeps a constant and direct relationship with other people, being more evident in assistential occupations. This syndrome covers physical, psychic and behavioral aspects and it may result in a fall of quality of interpersonal relationships. The objective of this study was analyzing Burnout level in a population of formal caregivers of one LTC. METHOD AND MATERIAL: The result of Maslach Burnout Inventory (MBI) applied in 52 formal caregivers professionals of a LTC was analyzed. The time average in the function was about 5 years and the scholastic level with more frequency between 9 – 11 years old. The data were divided into 4 groups, turning to account as indication the floors with higher performance of the caregivers: independents, semi-dependent functional and cognition and dependents. RESULTS: The same standard in the average values in the sub-items of scale [depersonalization (DE), emotional exhaustion (EE) and personal realization (EP)] among the groups was observed. There was low pointing in DE and EE and a high one in EP (Independent: DE = 5,9 / EE = 3,3 / EP = 15,3; Functional Semi-dependent: DE = 5,8 / EE = 3,4 / EP = 13,6; Cognitive Semi-dependent: DE = 6,3 / EE = 3,4 / EP = 15,7; Dependents: DE = 5,9 / EE = 3,3 / EP = 14,1). CONCLUSION: The average performance through MBI among the formal caregivers of a LTC presented a low degree of Burnout. Some studies show that elements like higher scholastic level and longer time in profession may act as protector effects, however, there isn't an agreement about what may be expected for each scale dominion yet or what may still protect or aggravate the Burnout symptoms. Others studies need to be done, when new variables may be explored.

**PC7 572 PROMOTING MORE POSITIVE ATTITUDES TO AGEING: THE 'AGEWISE WORKSHOP' INTERVENTION TO CHANGE ATTITUDES**

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Introduction: Health professionals' attitudes to ageing can influence the quality of care older people receive, yet few studies have examined attitudes and experiences of front-line health professionals. We examine the effects of a workshop intervention designed to assess and improve the attitudes of health professionals towards ageing and older people. Method: Participants were health professionals across the adult age range (n=343). The workshop is delivered free of charge, lasts half a day and is delivered in workplaces to groups of between 10 and 24 participants. The workshop is led by two facilitators who use a range of techniques including role plays, quizzes and information sheets to provide information and raise awareness about later life and older adults. Assessments were made pre and post workshop; a subset of participants were interviewed at 4-8 weeks follow-up. Results: Results support the efficacy of the training workshop. Levels of concern for older people increased post workshop. Although aspects of care with older people are good (81% reported that older people frequently treated with respect), frontline professionals also reported witnessing older people frequently being patronized (37%), embarrassed (21%) and abused (21%). Differences in pre and post workshop evaluations were found: knowledge about ageing improved after the workshop, and evaluations about work-based practices addressed in the workshop changed. Participant evaluations about the quality of the workshop were positive. Discussion: Negative attitudes towards older people can be reflected in unjustified age discrimination in employment and health, and negative stereotypes of older people which deny their strengths, skills and heterogeneity. The AgeWise workshop is a brief intervention which has the potential to challenge negative attitudes and stereotypes, and inform professionals about the potential for continued development, health, and quality of life into later years.

**PC7 573 EVALUATION OF AN INNOVATING TEACHING PROGRAM TO DEVELOP COMPETENCIES REGARDING HEALTH CARE AIDES WORKING WITH THE ELDERLY**

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Tending to frail elderly persons with loss of autonomy regarding activities of daily living (ADLs) requires a combination of knowledge, both theoretical and practical, and an attitude of openness to human values. The health care aides (HCA) are front-line caregivers who often feel overwhelmed by the magnitude of the task and the complexity or

difficulties encountered by an aging clientele increasingly dependent with multiple pathologies. These caregivers are in long-term care facilities representing the majority of the staff. In response to this situation the Institut universitaire de gériatrie de Montréal (IUGM) undertook the creation of an innovative program to support the continuous development of competencies needed for HCA to provide expert support and assistance to older persons with loss of autonomy. To target special competencies, this program has developed educational tools (DVD and an animator's guide) for educators who want to support the learning process of HCA on issues directly linked to their daily work "meal time assistance". This present study aimed to assess the implementation of this innovative program. Using a methodological approach to research and development Van der Maren (2003), we proceeded with four trials in two different long term care centers. During each trial, the training session has been systematically evaluated including the participation of the HCA in a discussion group a week after training. The project, which began in 2008, will continue in the winter of 2009. Initial results have already led to adjustments in our training approach. Future trials will further develop this educational formula.

**PC7 574 EVALUATING PSYCHO-EDUCATIONAL GROUPS AND INDIVIDUAL SUPPORT FOR CAREGIVERS OF ELDERS WITH ALZHEIMER'S DISEASE**

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This study contributes to the development of more effective intervention strategies for assisting family caregivers of elders with Alzheimer's disease (AD), by comparing the effects of a psycho-educational group coupled with training-oriented (Experimental Group – EG) or listening-oriented (Control Group – CG) home visits. In the EG, each caregiver was assisted in implementing the managerial and coping strategies presented in the psycho-educational group. To control for social contact effects, caregivers in the CG responded to an extensive interview about their situation. In the second phase of the study, the strategies used with each group were switched. All participants (Brazilians) completed evaluations before the intervention and at the end of phase 1 and phase 2. Comparisons between the EG and CG were made using Brazilian versions of the Zarit Caregiver Burden Interview (1980), Yesavage's Geriatric Depression Scale (Stoppe-Junior, 1994) and Logsdon's measure of Quality of Life in Alzheimer's disease (Novelli, 2006). Nine family caregivers for elders with AD were randomly allocated to each group, five in the EG and four in the CG. The data were analyzed using non-parametric tests (Mann-Whitney and Wilcoxon). The psycho-educational groups were effective in transmitting information, but did not reduce the caregivers' perceptions of burden, reporting of depressive symptoms or change their quality of life ratings. After the caregivers received the training-oriented home visits, their perceptions of burden significantly decreased and their quality of life ratings increased. The listening-based visits had no significant effects on the caregivers. We conclude that those who offer orientation programs for family members caring for elderly relatives with AD should further invest in evaluating the influence of home visits that assist caregivers in adjusting their managerial and coping strategies, to increase our knowledge of how to blend group-based and individual psycho-educational supports.

**PC7 575 COMMUNITY-BASED PREVENTION OF DEPRESSION IN OLDER ADULTS WITH THE PSYCHOEDUCATIONAL BRIEF INTERVENTION**

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This study looks at the efficacy of brief focused cognitive behavioral group intervention in the treatment and prevention of depression in older adults. For the prevention of depression, this intervention focuses on three points: education concerning depression, education concerning the importance of physical exercise, and lastly, the importance of improving family relationships and communication. Two methods of screening were utilized. First, public health surveys were employed. In all, 3,219 senior citizens took part in public health surveys, with a total of 294 citizens (9.1%) identified as being at risk for depression. The invitation letter to this intervention were sent one geographical area at a time. Second, information was drawn from local community newsletters. From these two sources, four different geographical groups were formed. Each group received 5 group sessions of 2 hours per week. Fifty-one participants received the intervention based on cognitive behavior therapy. Assessments were performed pre, mid and post treatment and there was a one month follow up comparison. The surveys aimed to measure the following aspects of depression: knowledge of the prevention and treatment of depression, daily activities, mood, and cognitive distortions. The outcome of the treatment for individuals will be measured by original questions about the clients' knowledge of depression, the number of walking steps, calories, SDS (Zung Self-rating Depression Scale) and JIBT-20 (Japanese Irrational Belief Test). General linear model fixed effects for time (pre, post and follow-up) were fitted to assessment scores. The intervention outcomes are indicated with improvements showed significant time effect on SDS, FMQ. Clients' knowledge of depression also significantly improved. The findings of this study showed that there are many potential benefits to using psychoeducational interventions with older adults.

**PC7 576 EFFECTIVENESS OF RECOLLECTION TRAINING FOR OLDER ADULTS WITH PROBABLE ALZHEIMER'S DISEASE**

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Introduction: As a part of memory disorders' rehabilitation, a memory training technique, called the Repetition Lag Procedure, was developed to target consciously controlled memory processing (recollection) for improvement (Jennings & Jacoby, 2003). Previous results have shown enhancement of memory performance on the training task and transfer measures in cognitively healthy older adults and individuals with Mild Cognitive Impairment (Jennings & al, 2005; 2006). As this technique has proved its ability to replicate and generalize, this study was designed to extend its use to Alzheimer's patients. Materials and methods: A group of 6 patients were trained individually one hour a day, three times a week for two weeks. The training procedure consisted in multiple trials of a yes / no recognition task in which some words were repeated after a variable number of intervening words (lag). After each correct trial, the lag was gradually increased. Their performance was evaluated on pre and post training tests and compared with a recognition practice group and a no contact group. Results: Training patients have enhanced their performance after six hours of training. Their capacity to correctly identified repeated items has increased across a lag interval of 1 to 4 intervening items. Likewise, post training gains following recollection training were found on DMS 48 and source recognition tasks whereas no changes were identified in the two other groups. Conclusions: As training benefits generalized to other measures of memory, the Repetition Lag Procedure has a beneficial effect on recollection and seems to be an efficient memory training technique for Alzheimer's patients.

**PC7 577 THE EFFECT OF AN INTEGRATED PHYSICAL ACTIVITY PROGRAM ON MENTAL HEALTH IN COMMUNITY-DWELLING OLDER WOMEN: CLUSTER RANDOMIZED CROSSOVER TRIAL**

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Introduction: To determine the effect of an 8 week integrated program to increase physical activity in community-dwelling older women. Methods: Two hundred and seventy-five women in 19 community centers were cluster-randomized into an intervention group (IG) and a control group (CG). A program consisted of providing fitted shoes, wearing a pedometer, and physical conditioning exercise once a week from December, 2007. The outcome measures included the number of steps taken a day and SF-36 subscales. Results: Subjects were allocated in IG (120 subjects, mean age  $80.1 \pm 0.5$  years) and CG (155,  $81.1 \pm 0.4$  years). The mean step counts decreased by 754 steps/day for IG and by 834 steps/day for CG with no significant group-difference. While the mean mental health of SF-36 increased by only 0.6 for CG, it did by 6.1 points for IG ( $p=0.03$ ). In IG, 42% of subjects increased their mean steps taken at the 8th week despite winter. Multivariate analysis showed that they were more likely to have lower baseline step counts and higher walking speed. ROC analysis identified a cut-off point of 3,412 steps/day (sensitivity of 0.58 and specificity of 0.84). Conclusion: Our 8 week integrated program aiming at increasing physical activity may have a beneficial effect on mental health for community-dwelling older women who have lower physical activity.

**PC7 578 IS THERE INFLUENCE OF THE GERIATRICS KNOWLEDGE IN THE PERCEPTION OF THE ELDERLY?**

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There is a worldwide concern in stimulating the formation of specialists in geriatrics and gerontology, to attend the aging population's needs. Objective: The objective of this study was to investigate the association between, geriatrics and gerontology courses, how the student understands the elderly and the students desire to specialize in this area. Population and methods: At total, 411 students from Federal University of São Paulo – Brasil (medical school, from first to sixth grade; fonoaudiology, first to fourth; and nursing school, first to fourth) were evaluated. They received a form with 32 pairs of characteristics regarding the elderly in general (Likert scale), and were asked if they had watched any geriatrics and gerontology classes, they were also asked if they had any interest in following that specialization. Results: Of all the students that considered specializing in that area, 98 had a positive view and 103 had a negative view. Similarly, for those who did not consider that area of specialization 70 had a positive view, while 140 had a negative view (chi-square,  $p<0.001$ ). There wasn't a statistical significance in how the groups that had geriatrics and gerontology class saw elderly ( $p=0.29$ ) or specialization preference ( $p=0.48$ ). Discussion: Geriatrics class had no influence on the students perception of the elderly, as well as the choosing of this specialization. Conclusion: To increase the effectiveness of geriatrics and

gerontology program, there must be an emphasis on ridding the elderly of the stereotypes and prejudice associated with them.

**PC7 579 ATTITUDES TOWARD THE ELDERLY AMONG HEALTH STUDENTS FROM BRAZIL**

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Introduction: Global aging is an increasing and recurrent theme in health sciences courses. The objective of this study is to evaluate attitudes toward the elderly among enrolled students of thirteen Brazilian Schools, from five Universities. Methods and materials: A cross-sectional study was conducted with all years students of Medicine (M), Physiotherapy (P), Nursing (N), Speech Therapy (ST), Physical Activity Sciences (PAS), Psychology (Psy), Social Service (SS) and Leisure and Tourism (LT). The students had been grouped in medical group (M), non-medical group (P + N + ST + PAS + Psy) and control group (LT + SS). Attitudes of all students were measured using the Brazilian version of the TeGeME II – Teaching Geriatrics in Medical Education study's questionnaire, with the analysis based on the Aged Semantic Differential (ASD) scale, developed by Rosencrantz and colleagues. Additional information about sociodemographic characters of students were collected. Results: A total of 2408 valid questionnaires were collected; 1411 women (58%) and 994 men (42%). A descriptive and then a significance analysis were performed. Compared to the control group, which resulted in 3.54, the medical group had more negative attitudes (3.60) than and the non-medical group (3.44). Male students (3.66) had more negative attitudes than the female (3.42) in all groups. Conclusion: The fact that the medical group had more negative attitudes toward the elderly than the non-medical group suggests that the means to deal with old people and how their body changes are studied can influence the attitudes.

**PC7 580 HEALTH PROFESSIONALS' PERCEPTION ABOUT THE NOTIFICATION OF VIOLENCE AGAINST ELDERLY IN THE PRIMARY CARE**

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Introduction: The violence affects several society segments and brings severe consequences to the population's health. The study aimed to describe the health professional's knowledge about the violence against elderly and identify their difficulties about the notification of this violence perceived during their practice. Methods and materials: An exploratory and descriptive research with a qualitative design accomplished in June and July 2008, in the pos-graduation course in Family Health from the Ceará State University, Brazil, with eleven students/professionals who have already worked or were working with the strategy of family health. It was applied a questionnaire and a semi-structured interview with the following questions: how do you describe the violence against elderly? Tell us your difficulties to notify the situations of violence against the elderly. As a post-graduating student, how did you analyze the compulsory notification from the cases of violence against them at the Primary Attention? It was realized the Analysis of Content, which led to the categories: the professionals understanding about the violence against the elderly, family as aggressor/elderly as an obstacle, the fear to notify/absence of cases, unprepared professional. It was respected all the principles of researches with human being. Results: These professionals know the significance of violence against the elderly. The family was emphasized as a difficult, sometimes, being the obstacle of the professional's performance or even the principal aggressor. The professionals' fear from the aggressors in notify cases of violence, many times, leads to the sub-notification. The lack of knowledge about the violence in elderly and the lack of preparation in cope with the victims, difficulty the professional performance. Conclusion: The qualification of the professionals, who work directly with elderly, is necessary to promote the protection and security of this social class that is vulnerable to bad treats and other kind of violence.

**PC7 581 L'INTERVENTION PSYCHOLOGIQUE LORS DE L'HOSPITALISATION D'UNE PERSONNE AGÉE DANS UN COURS SEJOUR GÉRIATRIQUE. UTILISATION DU MODÈLE CONCEPTUEL DE PROGRAMME (MCP) ET DE LA MÉTHODE INTERACTIVE DE RÉSOLUTIONS DE PROBLÈMES (MIRP)**

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INTRODUCTION: The hospitalization of an elderly person in a geriatric unit is supposed to be motivated by the appearance or the aggravation of somatic problems which require a diagnosis and the establishment of a therapy. However, this definition does not reflect the realities of hospitalizations. Medicals, families, socials and psychological problems need to

be identified even if the somatic problems remain the main issue. METHODS: A model developed for the evaluation of health programs was used to establish the clinical protocol for each individual. This "logic model" was introduced by Robert Flynn and Tim Aubry. It allows asking a number of issues that will lead to a global reflection. The first question is "Who does what to whom and why?". This question permits to define the role of each and to specify people to escort. The second question concerns the evaluation of the needs, and subsequently the availability of resources. The analysis of those two questions will result in the establishment of the clinical protocol. Outcomes of using this protocol will be discussed with patients, their entourage and medical team. Discussions on outcomes will permit to adapt the protocol to the individual. RESULTS : The use of this logic model applied to a patient is in its implementation phase. In this model, this phase is the key to permit an appropriation of the different actors. The patient benefits and risks, and ethic questions were the first points to be addressed. The coordination of different actors, including patient entourage, has permitted the determination of each respective role. The understanding of the intervention modes and the identification of useful tools has been improved. This study has demonstrated the importance of the psychological intervention as an interface between the different actors concerned by the clinical protocol. It has also demonstrated the necessity to "visualize" the short, average and long term objectives as an accompanying of successive crisis episodes. The study has brought lights to the relations of complementary and on the different protagonist limits.

**PC7 582 THE EXPERTS' PERSPECTIVE ON INTERVENTION – AN EXAMPLE OF ARMD INTERVENTION RESEARCH IN GERMANY**  
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Age-related Macular Degeneration (ARMD) is the main cause for severe visual impairment in the western countries. Most persons concerned are 65 years and older. Since cure of ARMD is not achievable yet, intervention and rehabilitation programs gain in importance focussing as well functional as psychosocial issues. Intervention research is predominantly present in quantitative pre-post designs concentrating on the change of outcomes in participants. This leads to the fact that the professional experts' perspective and influence is underrepresented in experiential studies. With this contribution a study using a qualitative approach will be presented which investigated programs for elderly visually impaired as well from the perspective of experts (n=5) carrying out the intervention as from the perspective of the participating elders themselves (n=15). The study is based on semi-structured interviews which were analyzed following the methodological paradigm of Grounded Theory. The talk will report the central categories analyzed, namely: Setting, Facing Vision Loss, Educational Forms and Phases. Furthermore the relation – in terms of contrast and coherence – with the elderly participants' view is elaborated, which leads to a problem set in interventions whether the visually impaired elder or the elder visually impaired is addressed. Including the experts' perspective in intervention research may help to understand better "how" interventions fail or succeed and may also lead to new ideas of interpreting quantitative results on outcome variables.

**PC7 583 GERIATRIC AND GERONTOLOGIC TRAINING NEEDS OF PROFESSIONALS INVOLVED IN ELDERLY CARE**  
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- Introduction The reflection about Gerontology and Geriatrics sciences is today essential and must also involve the training of professionals caring elderly people. Basing on it I did a study about training needs of these professionals with aim is to study training needs opinion of professionals taking care of elderly.
- Methods and materials I inquired 30 professionals through a questionnaire built by myself and previous tested. This questionnaire has 11 questions organized in 2 parts. The first one includes dimensions concerning the needs of the professionals training. The second part is reserved to some personal and professional data of the inquired. It was an opportunistic sample with population who agreed to collaborate.
- Results The sample included 30 professionals (13,3% males and 86,7% females), the average age was 30 years old (46,7%) and the majority were gerontological nurse practitioners (53,3%) and general practitioners (16,7%). In their opinion the needs of professionals involved in elderly care will increase in Portugal. In this country there is no geriatric speciality but they consider it is necessary. The training needs are: on team and elderly family relationships and in clinical topics. Although there is some training it is not enough and adequate.
- Conclusion From this study we understand that geriatry and gerontology are areas important to Portugal which needs to be taught to the professionals involved in elderly care. Although some of the inquired people don't know how to do it. The two main areas of training needs are: team and elderly family relationships and clinical topics. In the inquired professional's perspective, this is an area requiring development, mainly at the geriatrics level and training of the relational subjects: professionals and families. This kind of assessment may be useful for a first phase of an intervention plan.

**PC7 584 OBJECTIVE STRUCTURED CLINICAL EXAMINATION TRAINING (OSCE) AS A FEEDBACK TOOL FOR GERIATRIC MEDICINE FELLOWS**  
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Introduction: Geriatric Medicine fellowship training in the U.S. is only 12 months in duration. Fellows must learn patient assessment skills early in the program to achieve

proficiency by graduation. The objective of this pilot project was to develop geriatric medicine skill-based OSCE stations as a formative feedback tool for fellows early in their training. Methods: Using examples of OSCE training stations developed for medical students or with geriatric medicine content, 6 clinical cases and 3 "paper" cases were developed to test skills needed by geriatric medicine fellows. Each station included a skill-demonstration component and a written short-answer interpretation of the case. Evaluation checklists were developed to provide feedback to the fellows. Skill stations included assessment of delirium, fall risk, decisional capacity, polypharmacy, dementia, and telephone medicine. Paper stations included assessment of functional status, end of life symptoms, and frailty. Each station was reviewed and role-played in advance by faculty to identify problems in content or execution. Results: 9 fellows each rotated through 9 stations with 15 minutes allotted per station. Two faculty were assigned to each station as either the simulated patient or the evaluator. Fellow and faculty feedback was overwhelmingly positive for this OSCE. All fellows and faculty requested this be continued in the future and most desired it to take place twice each year. Stations that were most helpful included palliative care and polypharmacy. Skills for which fellows desired additional training included decisional capacity, functional assessment, and palliative care. Additional skills that faculty felt should be included in future OSCE training included breaking bad news and running a family meeting. Conclusion: OSCE training is an effective and well-received method of providing formative feedback for geriatric medicine fellows.

**PC7 585 SPIRITUALITY ASSESSMENT IN CLINICAL RESEARCH: A SYSTEMATIC REVIEW OF INSTRUMENTS**

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Introduction: Growing evidence supports the role of spirituality in influencing patient's health decisions and outcomes. Clinicians agree that assessing spirituality would be important in clinical care. However, spirituality assessment remains complex. A great variety of conceptualizations and constructs have been developed, resulting in a diverse collection of instruments to assess spirituality. Objectives: To perform a systematic review of instruments used in clinical research to measure spirituality, to propose a classification of these measures, and to identify further needs in the domain of spiritual assessment in health care settings. Method and materials: A literature search in Ovid MEDLINE, CINHAL, PsycINFO, and EMBASE databases, using the terms "spirituality", "assessment", and "adult" was performed. Religiosity measures and qualitative instruments were excluded. For each instrument, dimensions of spirituality, intended goals, and data on psychometric properties were recorded. Results: Overall, 38 instruments were identified and classified as single-item (n=6) or multi-dimensional instruments (n=32). These latter measures were then classified according to the main underlying construct into measures of general spirituality (n=19), spiritual well-being (n=5), spiritual support (n=6), and spiritual needs (n=2). Data on psychometric properties were mostly limited to reliability (internal consistency), content validity, and factor analysis. Measures of test-retest reliability, and convergent validity were reported only for a few instruments. Data on predictive validity were scarce and even though some instruments were used as outcome measures, no data on sensitivity to change was provided. Instruments measuring spiritual well-being were those most frequently used in clinical research. Conclusion: This systematic review highlights the various spirituality constructs assessed by these instruments. The proposed classification could help to select the appropriate instrument for specific research question. Information on psychometric properties remain limited, in particular, measures of sensitivity to change are essentially lacking and will be needed to use these instruments to monitor the effectiveness of spirituality-based interventions.

**PC7 586 INTEREST OF AN ETHICAL REFLEXION IN GERIATRICS**

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Introduction: Many ethical questions regularly surges when care of an old-aged person is concerned. In this context, a reflexion group has been set to analyse different difficult clinical situations, and to facilitate decision making. Methods: The group includes professionals in Gerontology, representing different actors of this speciality. Other professionals can also participate as experts whether or not they belong to the speciality. The meetings hold twice a month, and two clinical cases are discussed. Each case is presented by both the physician and the nurse before gathering opinions of all participants for final analysis and conclusion. Written propositions are made for a final report. The clinical issue is re-discussed during the next meeting. Results: Twenty meetings were held since March 2007. The analyses of clinical situations were done in sixteen of them; two were dedicated to the redaction of a decisional algorithm; two others were held in emergency for requiring a quick decision. The topics which have been discussed are: refusal of care (2), ask for euthanasia (2), choice of terminal care settings (3), transition from curative to palliative stage (5), stop-feeding decision (5), handling of family secrets

(2), contention (1) and finally, transfers to specialised departments (1). Conclusion: Three types of situations were identified from this experience: • The "crisis" for which the ethical group should rapidly be gathered • The "aftermath" which involves an important emotional tension • The subsequent reassessment of general concepts The place of this staff in a large Geriatric teaching hospital is discussed, as well as how to involve more professionals and to assess the impact.

**PC7 587 CONCEPT ANALYSIS: "DIFFICULTY" EXPERIENCED IN NURSING**  
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The purpose of this study is to clarify concept "difficulty" experienced by nurse using the strategies for concept analysis proposed by Walker and Avant. The attributes: "care receiver's behavior", "negative cognition", "support to the patients and their family", "select appropriate methods of nursing practice", "psychological response by nurses: disparity between ideal nursing situation and the realities of nursing". The antecedents: "existence of nurse as care provider", "existence of care receiver", "existence of nurse that aspires to provide good nursing care", "nurse's own cognition that they are not good at nursing", "limitations of nursing practice performed as part of an organization (duty)". The consequences: "negative physiological, psychological and behavioral responses of nurse", "measures to resolve the difficulty", "the risk of inability to continue working", "deterioration in the relationship between the nurse and patient", "spiral of difficulties". The difficulties felt in situations when nurses were unable to practice fundamental duties that had to be accomplished. The existence of the concept of "difficulty" is based on the premise that nurses had in mind a professional job situation that they wanted to find themselves in. The superordinate concept that dominates all of these categories is the existence of a disparity between the ideal nursing situation and the realities of nursing. The concept of "difficulty" is associated with various background factors, such as individual differences in the nurses' perceptions of difficulty, and problems with hospital administration such as a nursing care system and the distribution of human resources.

**PC7 588 SOCIAL BIOETHICS AND RECOGNITION: A PROPOSAL OF SOCIOLOGICAL INVESTIGATION IN GERONTOLOGY**  
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Introduction Bioethics arose in the USA, and its four basic principles (beneficence, non-maleficence, justice and autonomy) became known worldwide. In the 1990s, criticism emerged in face effectiveness lack front sanitary and environmental problems observed in countries in the southern hemisphere. New conceptual bases have been constructed for coping with these persistent problems. The dominant topics sometimes aiming at the protection of individuals, sometimes at that of population groups can be distinguished as Clinical Bioethics and Social Bioethics. Objective We consider that, in the praxis of work concerning empirical investigation on the elderly, the sociological theory, guided by recognition, approximates the propositions from Social Bioethics. Methods Two sociological investigation were developed involving elderly individuals from the city of Botucatu, Brazil. Data were collected by means of semi-directive and non-directive interviews under two methodological angles: hypothetical-deductive and inductive. In the first, the sociological frameworks of Axel Honneth's theory of recognition are testing hypotheses in search of three domains: self-esteem, self-respect and self-confidence. In the second, the framework of the Grounded Theory are using in search for the theoretical aspects concerning elderly individuals' vulnerability. Results In the first methodological approach, the results are deduced from the elderly individuals' discourse on ageing. In the second, the inductions from the elderly individuals' discourse are described by categorizations. This range of information enabled us to perform complex readings of the intersubjective ageing-related conflicts among the elderly persons. A reconstruction model will be tested on the elderly individuals who were interviewed. Conclusion The theory of social recognition enabled the empirical investigation of the values related to the elderly individuals' well-being. In the field of Gerontology, we affirm that this sociological research approximates propositions of Social Bioethics since the autonomy and vulnerability of the elderly, as priority topics, include the elderly individuals themselves as the subjects of knowledge.

**PC7 589 LEADING OF MOBIL GERIATRIC UNITS IN THE RELEVANCE OF APPLICATION OF THE ANAES GUIDELINES ABOUT PHYSICAL RESTRAINT IN ACADEMIC HOSPITAL**  
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The first time drew the interferences about the practice and the knowledge from physical restraint by two surveys : - one-day survey of the patients who are under physical restraint

in all hospital. The reasons, the used means, the context of decision, the existence of written medical prescription , the traceability of the motivation of this prescription, the assessment profits/risks, the traceability of supervision of side effects and information for patients and/or their families were studied. - survey about knowledges (definition, risks, means, difficulties) also. Résults One-day survey 13% of hospitalized patients are under physical restraint. The reasons are principally the risk of falling and the delirium. The decision to restrain physically is always taken by nurses sometimes with auxiliary nurse never with doctor. The used means is principally the bedrails. The medical prescription is almost never written. The traceability of the motivation of this prescription and the assessment profits/risks are almost never found. It's the same think to the traceability of supervision of side effects and information for patients and/or their families. Survey about knowledges Rate of answers is 50%. 27% of teams take a good definition of physical restraints, 91% estimate this practice has risks, principally injuries by ties, the risk of falling and excitement. The quoted means are principally ties of wrist, bedrails or sheets. 45,5% of nursing teams feel difficulties about this practice : to have a medical prescription, no adherence of patients or their families, to feel ethic problem or suffering to restrain someone. 66% want a formation. Comment After the assessment, it's necessary to work on alternatives at the physical restraint by elaborating guidelines about: - management of excitement - prevention of running away - risk of falling. And doing a procedure about the management of physical restraint when it is indispensable. Conclusion The evaluation of professional practices about physical restraint in geriatric units is known but this experience can be used in no geriatric hospitals through mobile geriatric units.

**PC7 590 THE CAPACITY TO APPOINT A PROXY BY PERSONS WITH COGNITIVE IMPAIRMENT: THE EXAMPLE OF VOTE**

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INTRODUCTION The capacity to design a proxy (CDP) by cognitively impaired (CI) persons is poorly documented, whatever the context: consent to research, consent to treatment, everyday decision and voting. No tool is available to assess the CDP. CI subjects are most prone to require proxy appointment, in particular for voting in countries where proxy voting is allowed. The aim of the present study is to assess the CDP for voting in an internal medicine and 2 different geriatric populations. METHODS AND MATERIALS We developed a 3 item CDP questionnaire (CDPQ) exploring choice, understanding, reasoning about proxy appointment (scored 0 to 3) and proposed it to all French nationality patients, present at 2008 municipal French election day in the Internal Medicine department, the Geriatric Rehabilitation department and the nursing home of teaching hospital. The questionnaire performance was related to MMSE score and demographic data. RESULTS 138 patients were included. 92 answered the questionnaire (sex ratio 0.4, mean age 74). Means of CDPQ scores were 1 (1.2), 2.2 (1.1) and 2.2 (1), respectively in the nursing home, the Internal Medicine and the Geriatric Rehabilitation departments. There was a significant correlation between CDPQ and MMSE scores ( $rs=0.615$ ,  $p<0.0001$ ). MMSE score <10 may predict a CDPQ score < or equal to 2 (PPV 84%, specificity 95%) and MMSE score >20 may predict a CDPQ score >2 (PPV 90%, specificity 88%). CONCLUSION CDP testing is feasible in widely different patients. For highest and lowest MMSE levels, MMSE score is highly predictive for CDPQ values. For intermediate MMSE scores, CDPQ assessment may contribute to give specific information on CDP. Further studies are needed to assess the relevance and the implication of those data.

**PC7 591 STIMULUS ONSET ASYNCHRONY (SOA) SENSITIVITY AND MODALITY EFFECT IN ALZHEIMER'S DISEASE AND SCHIZOPHRENIA**

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INTRODUCTION : Since many years lengthening of Reaction Time (RT) has been observed in Alzheimer's disease and schizophrenia. Today using a serie of RT with different paradigms and cognitive models of mental steps involved in responses, it's possible to estimate the duration of elementary mental operations. This study shows such an approach and compares Alzheimer and schizophrenic patients. METHODS : 14 healthy young subjects ; 36 healthy elderly subjects ; 13 patients with mild Alzheimer's disease ; 15 young schizophrenic patients and 16 middle-aged schizophrenic patients from two different hospitals were included. RT paradigms include : simple visual reaction time (VRT) ; Visual Backward Masking (VBM) ; Mnemonic Visual Prospection ; Visual

Prospection using two SOA (0 ; 600 ms). Same stimuli were used in all paradigms as response mode except for the VBM. The analysis was done on correct responses only (ANOVA). It concerns VRT, the durations of stimulus structuration and its mental representation elaboration, SOA sensitivity and modality effect (difference between « Different » and « Identical » responses). RESULTS : the main results were : 1) in the 3 pathological groups : a 30-50% slowing down of central steps of the visual processing with a slight structuration lengthening but without mental representation elaboration lengthening ; 2) a dramatical SOA sensitivity decrease in the two schizophrenic groups whereas an important increase was observed in the Alzheimer's group ; 3) the modality effect was by far higher in the Alzheimer's group compared to those observed in the schizophrenic and control groups. CONCLUSION : central processing of visual stimuli appears lengthened in Alzheimer and schizophrenic patients. First steps, automatic processing, are affected in schizophrenic patients whereas later steps, controlled processing, are impaired in Alzheimer patients.

**PC7 592 ASSESSMENT OF QUALITY OF LIFE OF RURAL AND URBAN ELDERLY POPULATION OF WARDHA DISTRICT**  
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INTRODUCTION: All aspect of "Health Status " life style, satisfaction, mental state or well being together reflects the multidimensional nature of QOL in an individual . For the year 2003 the SRS estimates are 7.2% of total population were above the age of 60 years. India has acquired the label of "an aging nation" with 7.7% of its population being more than 60 yrs old .Urbanization is rapidly spreading through India. OBJECTIVES: - To assess the difference of quality of life between rural and urban elderly population in Wardha district. - To find out the association between the sociodemographic profile and quality of life of elderly population in Wardha district. MATERIAL AND METHODS: The Community based cross sectional study was conducted in Wardha district on 800 subjects of age group above of 60 years age , study subject were selected from urban (n=400) and rural (400) using multistage simple random technique. Face to face interview using pretested questionnaire by trained interviewers to collect data. The WHOQOL bref was used to assess the quality of life. RESULTS: The study showed that the elders living in the urban community reported significant lower level of quality of life in the domains of Physical 51.2 (S.E.-3.6) and psychological 51.3 (S.E.-2.5) than the rural elderly populations. The rural elderly population reported significant lower level of quality of life in the domain of social relation 55.9 (S.E. - 2.7) and environmental 57.1 (S.E.-3.2) than urban elderly population. CONCLUSION: The difference between the quality of life in rural and urban elderly population is due to the differences in the socio-demographic factors chronic disease, social resource, life style behaviors, financial resources and income adequacy.

**PC7 593 OPTIMISM PREDICTS HIGHER SURVIVAL AT ADVANCED AGES - A TEN-YEAR FOLLOW-UP OF 2,262 NONAGENARIANS IN THE DANISH 1905 COHORT.**  
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Introduction: Predictors of survival among the oldest-old are not well understood, and subjective measures have only been studied very little. The aim of this study was to examine the effect of being optimistic about one's own future on survival among the oldest-old. Material and methods: The Danish 1905 Cohort Survey is a nationwide, longitudinal survey comprising all individuals born in Denmark in 1905. At baseline in 1998, a total of 2,262 persons aged 92 or 93 agreed to participate in the intake survey. The baseline in-person interview consisted of a comprehensive questionnaire including physical functioning and health, and a question about whether the respondent had an optimistic, neutral or pessimistic outlook on his or her own future. Results: Univariable Cox regression analyses revealed that women and men who had an optimistic outlook on their future were at lower risk of death compared to their neutral counterparts (HR 0.82, 95%CI (0.73-0.93) and 0.81, 95%CI (0.66-0.99), respectively). When activities of daily living, cognitive functioning and self-reported disease was taken into account the association between optimism and survival weakened in both sexes, but the general pattern persisted. Women who had an optimistic outlook on their future were still at lower risk of death compared to neutral women (HR 0.85, 95%CI (0.75-0.97)). The risk of death was also decreased for optimistic men compared to their neutral counterparts, but the effect remained non-significant (HR 0.91, 95%CI (0.73-1.13)). Conclusion: This study provides evidence that an optimistic outlook on one's own future may be an important predictor of survival among the oldest-old women but to a less extent among the oldest-old men.

**PC7 594 EFFECTS OF PRODUCTIVE ROLES AND PRODUCTIVE ROLE IDENTITY ON THE AFFECTIVE WELL-BEING OF THE ELDERLY IN JAPAN.**  
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A number of previous studies have shown the positive effects of productive activities on the psychological well-being of the elderly who are voluntary involved in these activities. This study adopts the perspective of the interactional role theory in order to consider the social psychological mechanism in which an increase in productive activities results in an increase in psychological well-being. The interactional role theory hypothesizes that the effect of productive roles on affective well-being brings about a productive role identity. Therefore, the purpose of this study is to verify this hypothesis in the case of the elderly Japanese by using cross-sectional and longitudinal data. Two mail surveys (wave 1 and wave 2) were conducted for a randomly selected sample of individuals between 65 and 74 years of age (n = 215), and wave 2 (6/7/2009) was conducted around five months after wave 1 (2/3/2009). The results of the covariance structure analysis that was conducted using the cross-sectional data in wave 1 were as follows: (1) a number of productive roles and the frequency of engaging in productive roles positively influenced productive role identity but not affective well-being, and (2) the productive role identity increased affective well-being. Moreover, the result of the modelling analysis of the cross-lagged effects that was conducted using the longitudinal data in wave 1 and wave 2 showed that while the productive role identity in wave 1 anticipated affective well-being in wave 2, the affective well-being in wave 1 did not anticipate the productive role identity in wave 2. A set of results confirm my hypothesis in Japan, and findings indicate that the positive formation of productive role identity is more important than adopting productive roles in order to increase affective well-being.

**PC7 595 THE RELATIONSHIP OF SMOKING AND GRIP STRENGTH AMONG THE COMMUNITY-DWELLING ELDERLY IN KOREA**  
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Introduction: Lower grip strength was reported to be associated with a decline in bone marrow density (BMD)and to increase the risk of spine fracture among the elderly. Smoking, one of major components determining bone marrow density, was also known to have an indirect effect on bone loss. This study was conducted to elucidate whether smoking is associated with grip strength in the community-dwelling elderly in Korea. Methods and materials: The survey was conducted among persons participated in the Hallym Aging Study, population-based cohort of 647 men and women aged 45 or over. They were invited to a general hospital and were evaluated for clinical measures. Grip strength was measured using digital dynamometer TKK-5401. Results: Out of 647, 461 (218 men, 243 women) satisfied inclusion criteria in this study. Mean of grip strength among men and women was 30.8kg and 17.3 kg, respectively. After adjusting for covariate variables, grip strength was higher in order of none, ex, and current smoking (33.4, 30.7 and 29.4kg). Current smoking was found to increase the risk of the decreased grip strength (adjusted Odds Ratio [aOR]=3.17, 95% Confidence Interval [CI]=1.04-9.71) compared with non-smoking in men. If the period abstained from smoking is 6 years or over, the mean of grip strength of these ex-smokers increased to equal level of non-smokers. Men with low body mass index(BMI) <23kg/m<sup>2</sup> were more likely to have decreased grip strength than overweight men with BMI =>25kg/m<sup>2</sup>. Women with no education (OR=3.74, 95% CI=1.37-10.47) and with osteoporosis (OR=2.53, 95% CI=1.14-3.72) appeared to have higher risk of decreased grip strength than women with higher education of 7 years or over and with normal bone density, respectively. Conclusion: These results showed that current smoking was an independent risk factor for decreased grip strength in men.

**PC7 596 ESTIMATION OF SHARED HERITABILITY FOR COGNITIVE CAPACITY AND MORTALITY: ASSESSMENT OF DISCRETE-EVENT TIME MODELING**  
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Introduction: The primary aim of this study was to estimate the shared heritability related to cognitive capacity and mortality in a bivariate quantitative model. Secondly, we investigated the utility of discrete-time event models with random effects in the modeling of heritability. We used mortality as the event time variable, to make comparisons to continuous event time models. Methods and materials: The subjects included 267 intact twin pairs of the OCTO-twin study aged over 80 years. Excluded were pairs with dementia or suspected dementia. By approaching survival data as longitudinal categorical data with censorings viewed as missing data under the missing-at-random assumption, it was possible to construct latent class mixture models for event time models with continuous random effects to model dependency within twin pairs, and to include the continuous phenotype in the model. We used the data from the first eight years of the study in a hybrid model for event times and a cognitive capacity measure (factor of Block Design, Synonyms, Figure grouping, Thurstone Memory test, Digit span, WAIS) . Results: We observed an additive genetic component (60 %, CI 95%: 27%, 93 %) for cognitive capacity and a common environmental component (79%, CI 95%: 53%, 100%) for first four years

and no significant components for the second four years of mortality follow-up. Time-invariant follow-up measurements gave similar estimates in a frailty model, and our proposed model. Conclusions: Firstly, we found the composition of variation in cognitive capacity and all-cause mortality to be due to separate sources of variability. Genetic interpretation was only supported for cognitive capacity. Secondly, our results suggest that discrete time models are a useful and flexible tool for assessing heritability. These models have potential for assessing complex relationships with other longitudinal measurements in easier terms than continuous counterparts such as frailty models.

#### **PC7 597 PERSONALITY TRAITS AND ACTIVE AGEING**

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Active ageing (WHO, 2002) is a worldwide aim and there are several indicators that characterize elderly persons as active. Personality traits are among those characteristics since they are thought to partially explain a more or less successful adaptation of the individual to changes during the aging process. In this cross-sectional study we made an analysis of data from a large Portuguese study on active ageing (DIA Project) conducted both in mainland and the Portuguese islands of Madeira and Azores. Data were obtained from 1115 community old dwellers (mean age 70 years old; SD 8.6 years) who responded to an extensive assessment protocol (P3A) that included a personality questionnaire. Participants were classified according to their scores on several measures of physical, social, psychological and cognitive functioning and distributed in different groups. The results are discussed considering the differences found on the personality traits scores (namely Neuroticism, Extraversion and Openness to the Experience) between those participants presenting optimal scores for general well-being and those presenting an average functioning, as well as considering differences between age groups. Authors discuss some implications for understanding personality influences as personal determinants on the active aging model.

#### **PC7 598 EDUCATION, WEALTH, INCOME, OCCUPATION, AND COGNITIVE IMPAIRMENT IN LATER LIFE**

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Introduction: Cognitive impairment poses a serious threat to health and well-being in late life. Its risk may differ by socioeconomic status (SES), a widely recognized attribute of health. This study examines the influence of SES on cognitive impairment in older adults living in the community. Methods and materials: This is a cross-sectional study of a nationally representative sample of 4155 persons aged 65 years and older from Wave 1 (2006) of the Korean Longitudinal Study of Aging (KLoSA). Cognitive function was assessed using the Korean version of the Mini-Mental State Examination. SES variables included education, household income, net assets, and occupation. Multivariate logistic regression analyses were conducted by age group (65-74, 75+) and gender, adjusting for demographics, chronic conditions, health behaviors, depression, and physical disability. Results: In the unadjusted analysis, lower levels of education, household income, net assets, and non-white collar job were significantly associated with a higher risk of cognitive impairment. Overall, these associations were observed within age groups and gender. Adjusting for the correlates, the middle school educated showed 67% higher odds of cognitive impairment, than those with a college education. Persons in the lowest quartile of net assets had the highest odds of cognitive impairment (OR [95% CI]=1.59 [1.21, 2.09]). Respondents with a lifetime of unemployment were 2.2 times more likely to be cognitively impaired, compared with the upper white-collar group. In the young-old, significance was retained for education, net assets, and occupation, whereas for the old-old only education remained a significant factor. In men, significant associations were observed for all SES indicators except income, while in women, education and net assets predicted cognitive impairment. Conclusion: The wide disparities in cognitive health across social gradients suggest the need for more investments in health programs and targeting of appropriate services for the disadvantaged groups of the older population.

#### **PC7 599 SCREENING IN THE ELDERLY PEOPLE - SCREENING PROTOCOL FOR THE IDENTIFICATION OF VULNERABLE ELDERS RNAR - 75**

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Introduction: The screening methodology is used for a risk or non-risk assessment, in the elders, with the purpose of minimizing the primary ageing process, prevent pathologic ageing and optimize the answers at the health and social level, in order for them to adjust to the needs of the elderly. Methods/Materials: This study the application of the Screening Protocol for the Identification of Vulnerable Elders RNAR - 75, in 240 subjects, 61% of the feminine gender and 40% of the masculine gender, with more than 75 years of age, distributed in a balanced way in contexts of community service and in primary health care services. The multidimensional protocol includes dimensions of biological as well as psychosocial nature. The average time for its use is 20 to 25 minutes. Results: In what concerns geriatric indicators, 37% shows a low body mass index (BMI) and 19% a high index; 43% presumes risk of being polimedicated; 40% demonstrates risk of falling; 51%

risk of incontinence and constipation. As for sensorial processes, 53% shows risk of hearing threshold and 58% risk in visual acuity. In what concerns functionality, 23% and 70% show risk of being compromised in the AVD and AIVD, respectively. At the psychological level, 58% shows a predisposition for depressive symptomatology and 52% shows risk of cognitive deficit. In the socio-familiar sphere 20% demonstrate risk in the social relationships and family support. At last, in the context of risk assessment for mistreatment of the elder, it has been seen that 20% presumes verbal aggressiveness, 9% financial abuse and 3% physical abuse. Conclusion: Generally, the screening protocol sets the elders in a medium record, in what concerns the assessed risk in each construct. In this sense, the assessment of biopsychosocial risk allows to operationalize intervention strategies adjusted to older people.

#### **PC7 600 SUICIDAL IDEATION IN A SAMPLE OF GERIATRIC INPATIENTS**

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Introduction The will to live is affected adversely in a number of the elderly. How often can death wishes be found in a sample of geriatric inpatients? What are the characteristics of afflicted and of non afflicted persons? In what way differ the degrees of suicidality with respect to the context in which they occur? Are they stable over time or are they changing? Methods and materials 138 inpatients of a geriatric hospital were screened. 16 persons of the case group and 21 controls took part in intensiv interviews at 2 measurement points within one week. Medical data where assessed as well. Results 36% of all patients reported passive or active suicidal ideation, suicide plans, or suicide attempts during the past half year. Cases and controls in the interview group differed regarding to depression, cognitive impairment, worse health, more intake of medicine, less hope, less satisfaction, stress, and feeling to become a burden. Nearly all reported that death would be a satisfying state. First hypotheses for intervention can be formulated on the basis of the association of the degrees of suicidality with different context variables. Suicidality remained equal or increased in half of the participants during the time of one week. In the other half suicidality decreased. Conclusion The prevalence of suicidal ideation in elderly patients must not be underestimated. Not only active but also passive suicidal ideation demands attention. Generally speaking the attention to active and passive suicidality can be improved by looking out for any concrete mention, depression, minor hope, and comments that death would be a satisfying state. Specific intervention measures are required in view of the different contexts in which the degrees of suicidal ideation occur. The observed variation of suicidality in time underlines that intervention is helpful for elderly patients.

#### **PC7 601 COGNITIVE FUNCTIONS AND SELF RATED HEALTH: WHAT ASPECTS OF COGNITION ARE RELATED TO JUDGMENT OF OUR HEALTH?**

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Introduction Self-rated health (SRH) is associated with adverse outcomes, but the mechanisms are incompletely understood. In particular, it is unclear how SRH might be associated with cognition. We studied associations between SRH as measured by a Self-Rated Health Deficits Index (SRHDI), depressive symptoms, and neuropsychological test performance to investigate which aspects of cognition could be correlated with poor SRH. Methods In the Canadian Study of Health and Aging, individuals aged ≥65 completed a self-administered questionnaire, a battery of neuropsychological tests, and a screening interview. 280 participants, of whom 177 (63%) were women, had completed all three of these elements. We correlated SRH with each neuropsychological test score and with depressive symptoms. Data were analysed using spearman correlation and split by gender linear regression to adjust for age, 3MS, years of education, depression symptoms, and frailty as measured using a frailty index. Results The SRHDI was correlated with memory test performance in women: ( $p=0.030$ ,  $r=-0.18$ ), visual search and cued recall ( $p=0.016$ ,  $r=-0.20$ ). In contrast, for men SRHDI was correlated with verbal fluency and comprehension: Animal Naming ( $p=0.044$ ,  $r=-0.21$ ) and token test ( $p=0.011$ ,  $r=-0.27$ ). Women with depressive symptoms (mean SRHDI 0.33) had worse SRH than those without (mean SRHDI 0.25) ( $p=0.013$ ). These associations were independent of age, educational attainment, and Modified Mini-Mental State Examination (3MS) score. Conclusions SRH was weakly associated with performance on memory tests in women and language comprehension and fluency in men. For women, depressive symptoms were associated with worse SRH, but this was not the case for men. These results suggest subtle sex differences in how cognition and depressive symptoms relate to SRH, and underscore the importance of considering these sex differences in future studies of SRH and cognition.

#### **PC7 602 A RELATED FACTOR OF MUSIC THERAPY & COLLABORATE WITH THERAPISTS IN OTHER FIELDS IN A SENIOR HEALTH & WELFARE DOMAIN**

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**Objective:** In various fields necessity for collaborate with therapists in other fields has been pointed out recently. However, music therapy, there has been little study. Therefore, this study examine for related factor of Music Therapists and collaborate with therapists in various other fields in A Senior Health and Welfare Domain. From now on, I intend useful for practice of Music Therapy. **Methods:** A survey was carried out in October 2005 by mailing self-typed questionnaire to Japanese Music Medical Treatment Society certified Music Therapists and 92 Music Therapists(68.1% of total recipients), who returned valid responses, were selected as 72 Music Therapists who involve in Senior Health and Welfare domain for analysis in this study. A four-item scale was used for an answer of 5 items of the collaboration. 5 items are self-efficacy derive from collaborate with therapists in various other fields, acquisition of information for objects, exchange of information with therapists in various other fields, knowledge of therapists in various other fields, specialty knowledge of therapists in various other fields. About Psychological Independence, this study used a measurement that was developed by SUZUKI and SAKIHARA that consist of 8 items. **Results:** In the multiple regression model, there was significant in Music Therapists that collaborated with many therapists in various other fields so that self-efficacy and Psychological Independence were high. In the logistic model, there was significant difference by collaborated with therapists in various other fields. Specialty knowledge contributed to collaborated with a Doctor positively. Self-efficacy contributed to collaborated with a Occupational therapist and a Speech-Language-Hearing Therapist positively. **Conclusion:** Self-efficacy and Psychological Independence contributed to collaboration positively. Also, there was significant difference by collaborated with therapists in various other fields.

**PC7 603 DEVELOPING A 5-ITEM COMPUTERIZED ADAPTIVE TEST FOR GERIATRIC DEPRESSION: AN EFFICIENT AND ACCURATE SCREENING TOOL**  
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**Background.** Adaptive depression screening tools are important for clinicians and researchers to efficiently and accurately identify depressive symptoms. Developing a computerized adaptive test (CAT) using latent trait item response models is one way to streamline depression screening questions. This study shows how a computerized adaptive test has higher validity and reliability than a static short-form depression screening test; with high sensitivity and specificity when compared to a powerful depression screening tool based on the Diagnostic and Statistical Manual (DSM)-IV criteria for major depressive disorder. **Method.** Simulations were conducted to examine the validity and reliability of the CAT in relation to the 8-item static depression items from the National Institutes of Health (NIH) Roadmap Initiative Patient Reported Outcomes Measurement Information System (PROMIS) measures for 240 simulees. We then piloted the CAT and the 8-item PROMIS static short form in 60 older adults living in the greater Boston area. **Results.** The difference in the distribution of measurement errors shows greater precision and reliability for the CAT than the 8-item short form test based on the simulations. In the pilot sample, we found the reliability of the 5-item CAT to be 0.90, with a sensitivity at 100% and specificity at 97% compared to the Patient Health Questionnaire (PHQ)-9 major depression screening based on the DSM-IV. The total time saved by conducting the CAT compared to the 8-item static short form was a 38% reduction in administration time. **Conclusion.** The CAT is a highly valid and reliable indicator of the true trait level, and shows relatively higher accuracy and reliability than the 8 item-static short form. The CAT also shows higher efficiency, reliability, sensitivity, and specificity compared to the PHQ-9. Item response models are important for developing efficient and accurate depression screening tools for older adults.

**PC7 604 CAREGIVER SATISFACTION AND CAREGIVER DUTY FULFILLMENT: CENTRAL CULTURAL CONCEPTS IN CAREGIVING**  
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Despite many years of research, the concept of burden remains too broad to be the best outcome indicator of the effectiveness of caregiver interventions. For the most part, research in the area of Latino/Hispanic caregiver burden has been neither culturally competent nor linguistically congruent. Aims To describe the perceptions of the caregiving experience of bilingual (Spanish-English) and monolingual (Spanish) Latino/Hispanic family caregivers of patients with Alzheimer's disease, and the culturally and linguistically relevant expressions and terminology used by these caregivers to describe the consequences of caring for a family member with Alzheimer's disease. **Methods** An ethnographic study (Modified Spradley) was conducted to compare monolingual

Alzheimer's caregivers in Colombia, South America, and bilingual Alzheimer's caregivers in Texas, United States. 20 caregivers participated in formal semi-structured interviews. Participant observations were completed with 27 additional caregivers. **Results** Three overarching themes were revealed: a) caregiving has consequences, b) caregiving fulfills a duty, and, c) caregiving is satisfying. Additional components of each theme were identified. In addition, the linguistic exploration revealed that the bilingual caregivers did not spontaneously use the word burden to describe their perception of their experience. Most bilingual caregivers in the U.S did not understand the word cargo (most used translation of burden to Spanish). In contrast, all Colombian caregivers understood the meaning of cargo, however they did not perceive their caregiving experience as such. **Conclusions** The best measures of the impact of caregiving duties and of the interventions to minimize the negative effect of caregiving may lie, not in the position on Latinos/Hispanics of the Euro-American concept of burden, but in other concepts that more positively express the impact of caregiving. Caregiver duty fulfillment and caregiver satisfaction are proposed as positive perceptions of the caregiving experience of Latino/Hispanic Alzheimer's caregivers. Both concepts are culturally competent and linguistically congruent.

**PC7 605 "SCALA DI VALUTAZIONE DI EMOTIVITA' E BENESSERE NELL'ANZIANO" (SVEBA): ANALYSIS OF PSYCHOMETRIC CHARACTERISTICS**  
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**Introduction:** the psychopathology in the aged it is undetected and untreated, it can last for years associated with a poor quality of life, difficult with social and physical functioning, poor adherence to treatment, worsening of medical problems. A screening instrument to detect it would allow a more comprehensive approach to the patient. The range of symptoms could span from depression to anxiety, but most of the short check-lists available are focused on depressive symptoms. For this reason a 15 items check-list, designed to cover a wider array of symptoms, has been designed for the Italian population. The study investigated the presence of symptomatological clusters to detect possible different symptom' profiles in populations with different comorbidity. **Methods and materials:** Sample: 214 home-dwelling elderly Ss ( $M=31,8\%$ ,  $F=68,2\%$ ), aged 65+ (mean age= 80,2 yr, sd 7,16) referred to geriatric unit. Exclusion criteria were moderate-severe dementia, psychosis and severe medical comorbidity. The matrix of correlations, the Keiser-Meyer-Olkin and Bartlett test were applied to check for applicability of factorial analysis, then a "principal axis factoring extraction method" was applied. **Results:** The sample showed a mean score of 4,45 (sd 3,50) at the SVEBA index. The analysis identified 4 factors, confirmed by the generated Cattell plot curves. These factors explained the 54% of the total variance. The first factor collected 4 items related to lack of motivation and initiative. The fourth factor included items related to somatic complaints and anxiety. The third factor collected symptoms related to sleep disturbance. **Conclusion:** In the structure of SVEBA index is possible to identify three main symptoms profiles related to motivation, anxiety and somatic symptoms and sleep disturbance. These results seem able to confirm the good clinical validity of SVEBA, given that the clusters identified are among the more frequent in the profile of psychopathology of the elderly populations.

**PC7 606 THE CANADIAN COALITION FOR SENIORS**  
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The Canadian Coalition for Seniors' Mental Health (CCSMH) was established in 2002 and since its inception, the CCSMH has grown to be Canada's leading non-governmental organization that focuses on seniors' mental health issues. With a membership of over 1000, the mission of the CCSMH is to 'promote the mental health of seniors by connecting people, ideas, and resources.' In 2006 the CCSMH received funding from the Public Health Agency of Canada to develop national, multi-disciplinary evidence based guidelines on the assessment and treatment of mental illness in seniors. Four Guidelines were created with focuses on depression, delirium, suicide prevention and mental illness in long term care homes. Since their release over 40,000 copies have been disseminated across Canada and worldwide, and the CCSMH has turned its focus to the implementation of the guideline recommendations into practice and policy. With additional funding from the Public Health Agency of Canada, the CCSMH has formed seven pilot projects working to create knowledge translation products as tools to facilitate implementation. These include pocket guides for physicians, training packages including an interactive case-based DVD, adaptations of the guidelines to palliative care settings, and module based tele-educational sessions. In addition, networks have been created and strengthened during the pilot process. The four Guidelines are also informing new guides for seniors and families, which will translate the information in the guidelines to a target new audience. Released in April 2009, these Guides will help seniors and families to understand the guideline topics and to empower them to understand their own risk factors, illness and options for medical and psychosocial care, based on the most current evidence. The goal of this session is to

provide participants with innovative examples in guideline implementation and knowledge translation in seniors' mental health.

**PC7 607 RESILIENCE IN LATER LIFE: THE GERIATRIC DEPRESSION SCALE IN QUALITATIVE RESEARCH**

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**Introduction:** The aim of this research was to investigate how elderly nursing home residents in Australia conceptualise the phenomenon of depression, its causes and effects in the context of limited lives. Standardised assessment instruments (SAIs) such as the Geriatric Depression Scale – Short Form (GDS-SF) are increasingly used in residential aged care facilities to screen for depressive disorders among older people. The process of interviewing using SAIs, however, has not been scrutinised in the same depth. **Methods:** Six residents from a Western Sydney nursing home were interviewed using a modified version of the GDS-SF questions as an open-ended in-depth interview which was transcribed and analysed using thematic content analysis. **Results:** Four of the six residents from the main study were classified as having moderate symptoms of depression according to the GDS-SF, however, none of these residents identified themselves as depressed people, despite their frailty and physical and social limitations. The study found that respondents can often generate contradictory material during the course of a GDS assessment and were commonly at pains to explain that they were intrinsically active and independent people, even if circumstances prevented them demonstrating this at present. While admitting to physical dependency, they countered negative implications by showing how it was resisted. The information residents volunteered in relation to the GDS-SF items were given in the form of talk or stories, which were treated as data in their own right. Three themes emerged that residents associated with feelings of depression including: poor physical health; socio-environmental factors; and difficulties maintaining close personal relationships. The findings paradoxically revealed resilient behaviour alongside feelings of depression in the respondents' talk generated by the GDS. **Conclusion:** The study has generated meaningful insights into the phenomenon of depression, in particular of resilience, by incorporating the feelings and perspectives of elderly nursing home residents.

**PC7 608 SUICIDE IN OLD AGE IN MAGDEBURG IN EAST GERMANY – THE INFLUENCE OF FUNDAMENTAL SOCIAL CHANGES**

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**Introduction** Following the reunification of Germany the overall suicide rates in East Germany declined steeply – according to official statistics now reaching an all-time low. The age group above 65 years deserves special attention due to their growing proportion in a constantly aging population. So far no descriptive analysis including relevant social influences on suicide has been undertaken. **Methods and Materials** The suicides in two time periods – 1985 to 1989 (A) and 1999 to 2004 (B) – in Magdeburg, the capital of Saxony-Anhalt, were compared analyzing in a first step all cases of death registered in the city, followed by an analysis of the files of the department of public prosecution. Suicide rates were then calculated using vital statistics and correlations to basic social factors estimated. **Results** A total of 470 suicides occurred in period A, among them 87 men and 86 women of age 65+, compared to a total of 206 suicides in period B, among them 25 men and 25 women of older age. Comparison between age groups showed that elder men and women by far showed the strongest decrease in suicide risk of all age groups and benefited most of the social changes. Correlations were found with the following factors: Replacement of town gas containing toxic carbon monoxide by nontoxic natural gas; legislative ban of barbiturates; number of psychiatrists and psychotherapists practicing in the city; immensely increased use of antidepressants according to prescription data. **Conclusion** People of elder age benefit most of all age groups from the fundamental social transformation process. Among the complex causal factors mediating lower suicide risk are restrictions of easily available "soft" lethal methods. An progress in medical support also has to be mentioned. An analysis of the individual motives is still lacking and urgently needed to identify those persons still most at risk for suicide.

**PC7 609 ROLE OF NUTRITION IN ALZHEIMER DISEASE(AD) PREVENTION AND RECOVERY IN ELDERLY**

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**Background & objective:** World population is getting old very fast and elderly is one of the main population groups in countries which have allotted big part of health and treatment services to themselves. One of the most prevalent diseases in elderly which is caused their disability and practically prevents them of having a normal life. Alzheimer is a degenerative brain disease and leads to memory loss and awareness and personality destruction. Role of genetics in Alzheimer etiology is very little. Environment and diet are known as its main risk factors and nutrition is a factor which has a special importance.

**Materials and methods:** Reviewing local and international articles. **Results:** Alzheimer disease is often accompanied by malnutrition. Severe loss of  $\geq 5$  kg in 6 months is a risk factor that is usually caused by forgetting intake of food or drinking. So the patients lose weight very fast which leads to Cachexia at the end of the disease. Laboratory findings have suggested that oxidative stress may contribute to the pathogenesis of AD. Antioxidants such as vitamin C and  $\beta$  carotene in fruits and vegetables have a protective role in preventing this disease. Vitamin E is another antioxidant which can help to decrease the risk of afflicting disease. Other than fruits and vegetables, the effect of some types of spice have been studied in prevention and recovery of AD. Researchers believe that the low prevalence of Alzheimer in India comparing to US is related to the consumption of curry powder which is consumed a lot in India. Also researchers have found during some studies that there is a special ingredient in turmeric and curry powder which can increase the number of brain defense cells or macrophage cells that eliminate  $\beta$  amyloid that is related with AD. Effective ingredients in turmeric and curry powder is Curcumin that has antioxidant and anti-inflammatory effects. Also researches have shown that drinking tea has similar effects like Alzheimer drugs. Acetyl choline esterase in tea have similar effects to anti-Alzheimer drugs. Extracted Ginkgo biloba tree which have developed in Asian countries has very useful effects such as developing blood and oxygen circulation for better brain function. Extracted Ginkgo biloba tree which have developed in Asian countries has very useful effects such as developing blood and oxygen circulation for better brain function. **Conclusion:** Healthy nutrition and adequate intake of crucial types of micro nutrients, especially antioxidant and also paying attention to elderly nutrition and monitoring nutritional status assessment can prevent incidence and progression this disease. **Key words:** Alzheimer – antioxidant — nutrition

**PC7 610 MENTAL HEALTH OF RURAL ELDERLY POPULATION: FOCUS ON DEPRESSIONS**

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Between 1971 and 1984 a comprehensive cross-sectional and longitudinal investigation on the mental health of rural (Shop) population aged 70 and over from 46 villages near Sofia was carried out (N=707). At initial examination 43.5% were well or very well psychologically adjusted - normal ageing. Some kind of mental problems had 37.4% - mostly mild and moderate disorders, usually not impeding the everyday domestic, agricultural and cattle-breeding activity of the elderly and well tolerated by their families and neighbours. Mood and/or cognitive disorders prevailed. An attempt to analyse all depressive spectrum i.e. from clinically expressed (pervasive) old age depressions to borderline depressive states and depressive signs inherent to the ageing process per se was made. It appeared to be difficult to delimit ones and others from gerontological viewpoint. In 1981 using mostly clinical criteria I analysed 8.3% true depressions (Petrov: Etats dépressifs après l'âge de soixante-dix ans. Minerva Medica, vol. 72). Revising later the same material I found the full range of people with depressive signs embracing 22.2% (16.4% minor or borderline; 5.8% pervasive depressions). Besides, 14.6% of the elderly studied referred to a border zone between normal ageing and depression (Petrov, St. Petersburg, 2007). The Self-Evaluation test used revealed that similar themes – health, family relations in narrow circle, old age, work capacity and economic security - dominated the value thinking and motives of dissatisfaction, but they were significantly more common in depressions than in rural elderly without depression (in most cases at  $p < .001$ ). The clinical-psychological follow-up (for maximum 16 years period) revealed stable mental health in 24.0%, including stable good condition in 15.9%. Some improvement toward a better mental balance showed 16.8%. In 55.1% a deterioration occurred - leading to cognitive decline, anxiety or dysthymia-depression (22.5% developing depression and/or anxiety or worsening of such a condition).

**PC7 611 E-MAIL CONSULTATIONS ON DEMENTIA**

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Consultations and providing information to persons with dementia and their family caregivers are important aims of Alzheimer societies. Enough information and support are important conditions for informal caregivers to be able to cope with their situation. Czech Alzheimer Society has experience with personal consultations, self support groups, printed information materials etc. In the last months of 2007 we have started „electronic consultations“ via our webpage. **Methods:** We analyzed 256 e-mails sent to the webpage www.alzheimer.cz from the beginning of this service in the end of 2007 until June 2008. **Results:** Above mentioned e-mails contained 303 questions. Various questions concerning professional services for persons with dementia (how and where to find services) were most frequent (78). Staff members from different health and social care institutions asked us about different (sometimes very basic) issues concerning care in 27 cases. 21 family caregivers asked how to care in the family and in 10 cases we helped to find information sources on how to care, in 12 how to cope with behavioral problems, 17 questions concerned pharmacotherapy and 17 the diagnostic process. 14 persons asked about genetic aspects of dementia. In 12 cases we learned about bad experience with care and advised how to proceed, in 6 cases how to cope with exhaustion and burn-out of family caregivers

etc. Conclusion: The spectrum of questions reflects the situation of care provision for persons with dementia in the Czech Republic. It supports the opinion that we need not only more and better services for persons with dementia but also enough information about them. Education on dementia should be included in the curriculum of health and social care professionals. This research project was supported by the institutional research plan MSM 0021620843 FHS UK.

**PC7 612 PSYCHOGERIATRIC UNIT: A RETROSPECTIVE STUDY OVER 18 MONTHS**

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Introduction: A psychogeriatric unit of five beds was created in 2003 at Lille hospital (France). Two different types of patients are hospitalized: dementia patients with behavioral disorders and old psychiatric patients. Methods and materials: Data collection has been performed in the psychogeriatric unit from January 2007 to July 2008. Only one investigator collected data from social and medical records. We have investigated clinical outcome. Comparisons of patients presenting dementia versus patients with psychiatric disorders have been performed using SPSS software for statistical analysis (khi2 Test, Fisher's exact test, Mann-Whitney U test). Results: 72 patients (49 with dementia and 23 presenting psychiatric disorders) were hospitalized during these eighty months with an average length of stay of 66 days. Median age was 78 years old, with majority of female (65% and 85% for dementia group and psychiatric group respectively, p=0,048). However there is significant discrepancy between the two groups, psychiatric patients are younger (p=0,005). Both groups presented a lot of medical comorbidity. Half of patients was coming from home or nursing home. Leading causes of hospitalisation for the dementia group were agitation or aggressive behaviors (50%), depressive disorders (18%); and for the psychiatric group: depressive disorders (39%), delusional ideations or hallucinations (26%). Diagnosis of dementia was not initially known for 13 patients. A guardianship order was requested for 10% of the patients. For the dementia group, the psychotropic drugs have been largely modified during hospitalisation (less anxiolytic drugs (p=0,004), more thymoregulator treatments (p=0,008)). This elderly population is particularly frail with higher risk of falls, infections or delirium. For 80% of patients a clinical improvement was observed during the hospitalization. Conclusion: These psychogeriatric patients need a comprehensive health care in specific units because of many comorbidities. A medical monitoring is often necessary after hospitalization (65%).

**PC7 613 FEATURES OF CRIMINAL BEHAVIOR IN THE ELDERLY: ABOUT 6 CASES**

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Introduction: The elderly are less often arrested, judged or experted than younger adults, even if criminal behavior is not so uncommon. The objective of our work is to determine the sociodemographic and clinical characteristics of old offenders and the type of criminal behavior. Methods and materials :This is a retrospective study about all reports of psychiatric expertises done in the department C of Razi hospital from 1 January 2006 to 31 December 2008. The information was collected with a predetermined form with 16 items. Results : Six files were selected: the average age was 75.33 years. The sex ratio (M / F) was 5. The majority of our patients were married (5cases), illiterate (4 cases), unemployed (5 cases), rural (4 cases) and without criminal records (6 cases). Psychiatric antecedent were found in two cases. The offences committed were: murder (2 cases), assault and battery (2 cases) and embezzlement (1 case). Conclusion : The main clinical diagnoses were: depressive disorder, bipolar disorder, Alzheimer dementia and substance abuse. Most authors agree that there is a real organic and / or psychiatric disorder causing this criminal behavior and tend to judge old offenders as irresponsible.

**PC7 614 PREVALENCE OF DEPRESSIVE SYMPTOMS IN ELDERLY PEOPLE FROM BRAZIL'S MIDDLE-WEST REGION, AND ITS INFLUENCE ON THE PERFORMANCE OF MINI-MENTAL STATE EXAMINATION**

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Introduction: Depressive symptoms in the elderly are often related to cognitive deficits, which lead to the presumption that there is a strong association between these conditions. Such entities, appear to indicate something beyond the normal process of aging, therefore, to attend the health needs of this population it is essential to be aware of which injuries occur more frequently in this age group. With this purpose this study aims to investigate the prevalence and intensity of depressive symptoms in elderly from three levels of health care. Methods: A population-based sample of 573 elderly of both sexes participate this study. We evaluated scores on the Reduce Geriatric Depression Scale (GDS-15) in addition to Mini-Mental State Examination (MMSE) which was associated with a form of socio-demographic data in order to consider the influence of education in this cognitive scale. Results: Of the participants, 76.44% (n = 438) were females and 23.56% (n = 135) males. Of this total, 10.64% (n = 61) were illiterate, 48.87% (n = 280) read and write (less than 8 years of study), 27.57% (n = 158) were between 8 and 11 years of study and 12.8% (n = 71) had more than 11 years. Regarding the MMSE scores, the average were 23.72%, the female average was 24 points and the male 23 points. It was observed that in 73.82% of the sample the scores of GDS were normal. However 4.01% of the elderly present GDS scores that indicate severe depression (above 9). Conclusion: It was observed the high prevalence of depressive symptoms that is independent of the gender and also the influences of this framework in the performance of MMSE taking into account their level of education.

**PC7 615 QUALITY OF LIFE, ANXIETY AND DEPRESSION IN ELDERLY PATIENTS WITH COPD**

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Within the chronic respiratory diseases, COPD is the most prevalent. The measurement of the specific Quality of Life (QOL) for the COPD provides data about the impact of this on its daily life and psychological familiar structures. The objective of the present study was evaluated the differences between dyspnoea perception, general health, anxiety and depression symptoms, in two groups of elderly patients with COPD (n=28). The elderly patients with advanced COPD who compose the sample were distributed in two groups according to level of the quality of life, measured by the St. George's quality of life questionnaire (good QOL n=11; bad QOL n=17); later they were evaluated by means of following questionnaires: the Hospital Anxiety and Depression Scale (HADS), the scale of the Medical Research Council (MRC) for dyspnoea and the Goldberg General Health Questionnaire (GHQ). The results show statistical significant differences between both groups in the level of dysnea (p<0.05), anxiety (p<0.05), depression (p<0.05) and subscales (anxiety/insomnia and depression) of GHQ (p<0.05). Multiple regression analysis identified subscale anxiety/insomnia of GHQ as a good predictor of QOL deterioration in these patients. In conclusion the worsening of the quality of life was related to psychopathology especially in elderly patients with COPD.

**PC7 616 DISPNOEA AND PSYCHOPATHOLOGY IN ELDERLY COPD PATIENTS**

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Chronic Obstructive Pulmonary Disease (COPD) is a progressive disease with dyspnoea perception as a main symptom. In severe stages, dyspnoea can constitute a risk factor for depression, anxiety and somatization diseases. Objective: the objective was to evaluate the presence of these psychopathologies based on dyspnoea and severity stages in patients with COPD. Materials and methods: patients (n=51) were evaluated by means of the Hospital Anxiety and Depression Scale, the scale of dyspnea (MRC), the General Health Questionnaire (GHQ-28) and spirometric criteria. Results: the increase of dyspnoea level and disease severity, produce a progressive worsening of anxious, depressive and somatic symptoms with clinical relevance (p<0.05). There was a significant co-relation between those parameters (p<0.05). Conclusions: the early detection and treatment of these psychopathologies associated with dyspnoea and evolution of the disease must be an important factor in this complex pathology.

**PC7 617 PROMOTING AND SUPPORTING SENIORS MENTAL HEALTH IN CANADA: A SYSTEMATIC APPROACH**

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In response to the aging population and associated increase in prevalence of mental health problems anticipated, the Public Health Agency of Canada has funded several national projects. The purposes of the projects, carried out by the BC Psychogeriatric Association

and the Canadian Coalition for Seniors Mental Health, are to build the capacity of seniors, health care providers, communities and the health and social service systems to support the mental health of all seniors, including those who are mentally ill or at risk of mental health problems. The projects have increased awareness of issues related to seniors mental health and produced the following: (1) handbook by seniors for seniors about meeting the mental health challenges of aging; (2) Best Practices Guidelines for (i) Long Term Care (With a Focus on Depression and Behaviours,(ii) Assessment and management of Delirium, (iii) Assessment and Management of Depression, (iv) Suicide Prevention, for health care providers and "translated" for seniors; (3) Psychosocial Resource manual for care providers; (4) Seniors Mental Health Policy Lens; (5 ) Canadian Psychosocial Research Agenda for Seniors Mental Health (6) Guidelines for Supporting Seniors Mental Health During Cancer Care; (7) Seniors to Seniors booklet about meeting the mental health challenges of cancer. Together these initiatives and the inter-sectoral collaborative process used, have increased awareness of mental health challenges of aging and provided seniors, health care providers and the health and social service system with tools to address them.

**PC7 618 VALIDATION OF ABBREVIATED MENTAL TEST AND ITS CORRELATION WITH MINI-MENTAL STATE EXAMINATION IN IRANIAN ELDERLY**

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Dementia is going to be an important public health problem in many developing countries in near future. Therefore, providing a reliable, easy to apply, time saving and culture free instrument for screening dementia in large populations is a necessity for these countries with their ever-increasing number of older population and limited economical and/or human resources. The purpose of this study was to determine the reliability of Abbreviated Mental Test (AMT) developed by Hodkinson in Iranian elderly and to see whether it can be a legitimate alternative for previously standardized Farsi version of MMSE. MMSE and AMT were implemented for 100 patients with dementia, randomly selected among the members of Iranian Alzheimer's Association. The same tests also applied to 100 non-demented controls living in the neighborhood community. Subjects and controls had at least 4 years of formal education and were of both sexes. DSM-IV-TR criteria and Global deterioration Scale used as gold standards. Gathered data were analyzed using the software SPSS, Version 13th. The results showed that AMT is a reliable test for detecting dementia (Cronbach's Alpha=0.905) among Iranian elderly. AMT scores were also highly correlated with MMSE scores ( $p=0.000$  at  $0.01$  level). At cut off six, the sensitivity of AMT amounted 85.1% and the specificity was 99%. It is concluded that AMT is an appropriate psychometric instrument for detecting dementia in Iranian elderly and can safely be substituted for the more detailed and sophisticated test, MMSE.

**PC7 619 APPLICABILITY OF THE RRS-4, A SHORT OBSERVER SCALE FOR SCREENING GERIATRIC DEPRESSION, IN PRIMARY CARE.**

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Screening for depression is critical to improve diagnosis and management of depression in elderly populations. Short and ease-to-use instruments are of importance to help primary care physicians to screen for geriatric depression in routine practice. We tested the applicability of the RRS-4 in a community living depressed old sample. Method: 751 patients > 60 years old detected as depressed (clinically depressed and MiniGDS score  $\geq 1$ ) and treated by their General Practitioner were included in an observational study (ODESSA). Each patient was assessed, at inclusion and at follow up, with the RRS short form (RRS-4) an observer depression rating scale of which a threshold of 3 has been validated in medically ill old depressed. Only patients with completed data, without dementia, stroke or Parkinson Disease, and under antidepressant were considered for analysis. Results: 551 patients (mean age  $\pm$  SD: 73.8 y.o.  $\pm$  8.8, 69.9% female) were retained for analysis. At inclusion 98.7% scored  $\geq 3$  on the RRS-4 (mean score  $\pm$  SD: 8.7  $\pm$  2.5). At the second visit (median: 31 days; minimum: 2 - maximum: 249), 12.5% of the patients were on depression remission according to the RRS-4 score (under 3) for only 9.1% on the MiniGDS score (score =1). The RRS-4 mean score ( $\pm$  SD) at second visit was:  $5.4 \pm 2.6$ , which represented a decrease of  $3.2 \pm 2.9$  on the RRS-4 total score. Each RRS-4 item decreased its score for more than 30% at the second visit. Conclusion: the RRS-4 is a brief and ease-to-use observer depression rating scale particularly suitable to detect depression in primary care as it detects depression without the need of patient compliance. It showed good concordance with the miniGDS for depression detection. Moreover we report a better remission score after treatment than the MiniGDS. This result has been

previously reported in young depressed adults. However, further studies are needed to test the RRS-4 sensitivity to change under treatment in depressed old patients.

**PC7 620 SPIRITUALITY AND RELIGION AS PREDICTORS OF SUCCESSFUL AGEING IN LATER LIFE**

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Introduction The perception of meaning and purpose in later life has been studied in relation to healthy ageing (e.g. Busse, 1985). Religion and spirituality can contribute towards meaning, but as components of health and well-being have been largely ignored. It has been suggested that spiritual and religious resources can contribute towards successful ageing via a number of different pathways, from helping older adults adjust to disability and loss, to religious influence on health behaviours (Baltes & Smith, 2003, Coleman & O'Hanlon, 2004). Crowther and colleagues (2002) proposed 'positive spirituality' as an additional component in Rowe and Kahn's (1998) model of successful ageing. With a growing interest in the spiritual influences on health attempts have been made to examine these links. The present study investigates religious and spiritual beliefs and practices as predictors of successful ageing in a UK sample. Methods and Materials The survey is being sent to 200 adults (aged between 55-100yrs) living in the UK. The sample represents a range of older adults in the British population. Mental health, physical health and social support are measured. Religious and spiritual beliefs and practices are investigated in depth and well-being is measured using Ryff's (1989) scales of psychological well-being. Results Data will be analysed using correlation and hierarchical regression techniques. Controlling for the effects of socio-demographic, mental health, physical health and social support variables, spiritual and religious measures will be entered into the regression model last to test their predictive value in relation to individual well-being. Analysis will also examine age related differences in the effects of spiritual and religious beliefs, focusing on three groups; the 'baby boomers' (55-65yrs), the 'young old' (65-74yrs) and the 'middle-old old' (75+yrs). Conclusion Findings will be discussed in relation to the current controversies around rising spiritual interest and declining religious affiliation among older people in the UK, and the implications for health provision and policy.

**PC7 621 BEHAVIORAL ROUTINIZATION OF HEALTHY OLD ADULTS: INFLUENCE ON COGNITIVE RIGIDITY AND FLEXIBILITY**

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Introduction Routinization during aging is characterized by an increase in preference for habitual behavior. A possible consequence of high routinization is the risk of rigidity increase and flexibility reduction (Bouisson, 2002). The Einstellung Water-Jar Task (WJT; Luchins, 1942) allows the study of cognitive rigidity through perseveration in set solution use. The Trail Making Test (TMT; Reitan, 1959), by proposing one task (TMTA) and then alternating between two tasks (TMTB), gives a measure of cognitive flexibility (TMTB - TMTA). The aim of this study was to investigate the influence of routinization on the adaptation skills of healthy older adults. More particularly, we hypothesized that old adults with high routinization present more cognitive rigidity and less cognitive flexibility than those with less routinization. Methods and materials In the first experiment, 34 healthy old adults ( $M = 63.7$  years) performed the WJT, and in the second experiment 52 healthy old adults ( $M = 66.7$  years) completed the TMT. Routinization was estimated with the Preferences for Routinization Scale (Bouisson, 2002) and participants were classified as showing low and high routinization levels. Results Results on the WJT revealed that, compared to low routinized participants, high routinized participants showed more perseveration in the use of the set solution, whereas a more direct solution was available. Concerning TMT, high routinized participants presented less flexibility (measured by difference TMTB - TMTA response time) than low routinized participants. Conclusion Routinization preferences of healthy older people in daily life behavior were associated with an increase in cognitive rigidity (Exp.1) and a decrease in cognitive flexibility (Exp.2). These findings demonstrate strong links between behavior and cognitive skills, and suggest a negative impact of excessive routinization on the adaptive resources of elderly adults.

**PC7 622 DOES CHILDLESSNESS REDUCE WELL-BEING AT ANY STAGES OF THE LIFE COURSE?**

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Introduction: The study explores and distinguishes links between parental status (childless persons, parents with residential children, and empty nest parents) and a range of psychological well-being outcomes at different stages of the life course. Methods and materials: Data are from the Norwegian Life Course, Gender and Generation (LOGG) study (age 18-84, N=15,500). We separate outcomes into cognitive (life satisfaction and self-esteem) and affective (positive and negative affect, depression, loneliness) components. Results: Parental status has a net effect on cognitive well-being among women, as childless women report significantly lower life satisfaction and self-esteem than

both mothers with residential children and empty nest mothers. However, motherhood is inconsequential for affective well-being. Among men, parental status is unrelated to any of the well-being aspects. Parental status effects are consistent across age groups, marital statuses, and educational levels. Conclusion: Overall, the results do not support the old myth that children make people substantially happier or that not having children jeopardizes well-being in later life. It was surprising that childlessness was inconsequential for well-being also among older, formerly married men, a group that tend to be at particularly risk of social isolation and loneliness. On the other hand, having children in the home is unrelated to psychological distress. This finding contrasts US literature and highlights the role of social policies in shaping the impact of parental status on well-being.

**PC7 623 LONELINESS AND SOCIAL ISOLATION IN OLD PEOPLE LIVING IN THE COMMUNITY**

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Introduction Loneliness and social isolation are two core concepts regarding social relationship in human life that are particularly relevant in old age. This study focuses on the prevalence of loneliness in a community sample of people aged 50+ and aims to identify the factors that can contribute to its experience. Methodology Within the context of an extensive Portuguese project on active aging, 1266 persons were interviewed using a standard questionnaire including measures of loneliness, social network, psychological distress, mental status, general health condition and socio-demographic variables. Results The prevalence of loneliness was 16.3% (N=206). Findings show that 4.6% of the participants reported feeling always lonely and 11.7% feeling loneliness regularly. Our data confirmed the expected univariate association between loneliness, widowhood, self perceived poor health, psychological distress and cognitive deficit but failed to show, when controlling for all the other variables in the model, the association with gender, age, living arrangements, social network or the number of health problems. As we did not find any relevant association between loneliness living alone and social network, that become non-significant in the adjusted model of loneliness, we suggest that both concepts of emotional and social isolation, are independent and the subjective and affective nature of loneliness in old age. Predictors of loneliness (explaining 29% of variance) are: being widow, perceiving own health as poor or very poor, and having psychological distress and cognitive impairment. Conclusions Authors emphasize the importance of psychological variables (namely depression) as predictors of loneliness and the need for social and psychological interventions to prevent its consequences in morbidity and mortality.

**PC7 624 DOES SENSE OF CONTROL DECLINE OVER A FIVE YEAR PERIOD AMONG NORWEGIAN MIDDLE-AGED AND OLD?**

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Introduction High sense of control is related to benefits in many aspects of life. A number of studies have however shown that the sense of control is lower among the elderly than among younger people. Such cross-sectional findings may suggest that the sense of control declines as people get older, but very few studies have used longitudinal data to examine whether such age variations are due to cohort or aging effects. With data from two waves of the Norwegian NorLAG study, we ask: Does the sense of control decline among middle-aged and old over a five year period? Are there factors that seem to accelerate the decline or to slow it? Method and materials. Analyses are based on data from the Norwegian Life-course, Ageing and Generation Study - NorLAG. The sample consists of 2471 persons aged 40 to 85 have been have been interviewed and have returned a postal questionnaire both in wave 1 (2002-2003) and wave 2 (2007-2008) of the study. Sense of control is measured by The Personal Mastery Scale (Pearlin & Schoeler 1978). Results In contrast to research based on US data, we find that there is little to no change in the sense of control over five years for men and women aged 40 to 75 in the first wave of the study. Only those aged 75 and older experience a significant decline over the next five years. Similar patterns are found for women and men and for people with different levels of education. Employment, good physical health, and a high score on agentive orientation in wave 1, slow down the decline in sense of control. Conclusions Sense of control does not decline in a community based sample of Norwegians until rather high age. Possible reasons for the distinct Norwegian findings may include the high levels of trust and social capital characterizing the Norwegian society, and the favorable and optimistic economic climate between 2002 and 2007.

**PC7 625 ATTACHMENT TO LIFE IN OLD AND VERY OLD AGE – SHIFTING IMPORTANCE OF RESOURCES**

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Introduction: Active attachment to life is an existential issue especially in old and very old age and can be captured by the construct valuation of life (VOL). As old and very old

individuals may differ in terms of endorsement and with respect to what makes a life worth living, the present study investigated whether mean levels and the explanatory value of socio-demographic, social, and health predictors for VOL would differ between young-old and old-old individuals. Methods and materials: A sample of 356 community dwelling individuals aged 65 to 94 years was presented with Lawton's POSVOL questionnaire and other established measures to assess predictors of VOL. Results: Mean level of VOL decreased from the third to the fourth age. Zero-order correlations showed significant relations between socio-demographic (i.e., age, gender, marital status, education), social (i.e., social contacts, phone calls, volunteering, contact with youth), and health (i.e., mobility, vision, hearing, activity restrictions, ADL, IADL) indicators. Results of a multiple hierarchical regression analysis demonstrated that health indicators explained twice as much variance of VOL compared to social indicators, whereas socio-demographic indicators including age made no longer an independent contribution. Separate analysis for young-old and old-old participants further revealed age-differential prediction patterns. For the young-old, the role of health factors was especially strong, whereas specific social factors became more important in the old-old group. Conclusion In sum, age-differential predictive values of the resources seem to indicate positive adaptation to aging in that old-old individuals seem less influenced by poor health and appreciate the social resources that make their day. Taking into account such prediction patterns may help to design specific intervention for young-old and old-old individuals.

**PC7 626 POSITIVE ASPECTS OF THE CARE GIVING OF DEMENTIA PATIENTS. THE RELATIONSHIP WITH POSITIVE EMOTIONS**

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Introduction: It is well documented that the care giving process of Alzheimer's patients has impact on the informal care giver on several domains of the care giving person, mainly in the affective, health, social and in the psychological well being. However, recently had emerged new research lines centered in the study of the positive aspects of the care giving process. This research has addressed that there are also positive aspects related with the care giving process. As a result, the aim of this study was to analyze the positive effects of the care giving process among Alzheimer's caregivers and its association with emotional parameters. Method and Materials: A cross-sectional analysis of self-reported data was conducted. Measures of demographics, satisfaction with the care giving and positive and negative affect were administered to 51 Spanish community dwelling Alzheimer's patients informal caregivers. Satisfaction with care giving was evaluated through the Satisfaction with Care Questionnaire (Lawton et al., 1989) and the positive and negative affect was measured by the Positive and Negative Affect Schedule (PANAS, Watson et al, 1988). Results: Pearson correlation analyses were carried out in order to analyze the relationship between satisfaction with the care giving and emotions. A negative association was found between proud [ $r(49) = -.358; p<.01$ ] and enthusiastic feelings [ $r(49) = -.360; p<.01$ ], when relating each one to dissatisfaction with care giving. Conversely, to be ashamed is positively related with care giving dissatisfaction [ $r(49) = .338; p <.05$ ]. This data outline that caregivers that are proud and had enthusiasm are more likely to be satisfied with the care giving while caregivers that are more ashamed are more dissatisfied with the care giving. Conclusions: These results had the potential to substantially increase our understanding of basic care giving research and the outcomes of intervention efforts.

**PC7 627 THE RELATIONS BETWEEN SUBJECTIVE WELL-BEING AND PHYSICAL, PSYCHOLOGICAL AND SOCIAL FUNCTIONS AMONG THE OLDEST OLD**

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Introduction. During the last few decades, the gerontological literature documented the positive aspects of aging, especially among the young old. However, recent studies of the oldest old suggest that the process of optimization in very old age is more difficult than in earlier age. The aims of this study are to examine (1) age differences in physical, mental, and social functions and well-being among the oldest old; and (2) the relations between well-being and physical, psychological and social functions. Methods. We sampled 1,600 Japanese older men and women aged 85+ living in Tokyo. Sixty hundreds and sixty people completed the test battery of physical functions (ADLs, IADLs and subjective health), psychological/mental functions (MMSE and self-efficacy), social relations (social network support and companionship), and subjective well-being(WHO-5 and PGC). Results. Age differences were found among 3 age groups(85-89, 90-94, and 95+ years old) in ADLs, IADLs, MMSE and social network. The older group had lower ratings in these variables than the younger group. But, there were no age differences in well-being, subjective health and social support (the quality aspect of social relations). For women, well-being was significantly associated with providing social support, companionship, self efficacy and subjective health. For men, well-being was related to the social network and support from family and subjective health. Conclusion. The results suggest that physical and mental

functions and social network decrease with age among the oldest old who are healthy enough to participate in this type of research, but that subjective well-being continues to be maintained. The elder people may shift the placement of importance from physical and mental functions to close relationships and emotional satisfaction in order to maintain subjective well-being.

#### **PC7 628 EMOTIONS IN EVERY DAY LIFE**

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**Introduction:** The subjective dimension of ageing is progressively playing a bigger role in the clinical practice, as well as in research in Gerontology. The current empiric evidence supports the fact that in the older there is a more complexity and emotional richness, a more adequate management of emotions, and, among other questions, a better integration between emotion and cognition. The current research has the goals of describing and analysing the places in which emotions have a bigger importance in the elderly, and which are the emotions that concue in them. Methods and materials: The sample was comprised by 90 people from Spain. 40 men and 50 female, between 65 and 85 years old, including healthy and frail people. Qualitative analysis techniques have been applied to them: focus groups (n=66) and in-depth interviews (n=24). Results: The results highlight the existence of 5 spaces of main importance in the ageing process, where emotions play a fundamental role, and which are: • The space of Affect (feelings to people or things): love, attachment, disgust, desire, respect, solidarity, tenderness. • The space of Certainty (related to trustworthiness and security/insecurity): relief, calm, restlessness, insecurity, fear, serenity, awe. • The space of Action (related to the mood to perform activities): discourage, depression, enthusiasm, hope, frustration, laziness, and pessimism • The space of Relationships: comprehension, loneliness, rejection • The space of Joy: fault, happiness, melancholy, nostalgia, sadness, shame. Conclusions: The analyzed data suggest the importance of emotions in 5 vital spaces for the elderly people in the process of ageing, that constitute by themselves 5 future spaces for interventions in Gerontology.

#### **PC7 629 BELIEFS ROLE IN THE ACCEPTANCE AND REFUSAL TO PARTICIPATE IN A DEMENTIA PREVENTIVE STUDY**

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**Introduction** Incidence and prevalence of Alzheimer Disease will increase in the coming years. The absence of effective treatment contributes to develop researchers' interest for prevention. To understand why some elderly people agree to participate in a dementia preventive study while others refuse to take part is an important issue in research. More exactly, the purpose of this study is to determine how health locus of control (internal control, control by powerful others, chance control; Walltson and al., 1994) and perceived threat of disease participate in the discrimination of elderly's decision-making process in taking part or refusing to participate in a dementia preventive study. Method and material 60 participants aged 70 years old and more, of whom 29 persons who accepted and 31 who refused to take part in preventive study completed a questionnaire which evaluated health locus of control (MHLCS, Walltson and al., 1978) and perceived threat of disease (Roberts and al., 2003). Results Results indicate that variables which contribute the most to discriminate the two groups are: chance control, control by powerful others and perceived threat. In other words, persons who accepted to participate showed a "power of others" control and felt more threatened by Alzheimer disease than people from the other group. Furthermore, persons who refused to take part in the study are more likely to present a "chance" control. Conclusion Reporting that elderly people who accept or who refuse to take part in a preventive study present health's external control confirms previous studies' results. These results imply that if we want to increase elderly's people empowerment towards their health, and of this fact increase their feeling of control and their adherence to preventive programs, we should inform them.

#### **PC7 630 ALZHEIMER'S DISEASE: PROGRAMME OF PSYCHOGERONTOLOGY AND SOCIO-EDUCATIONAL ATTENTION TO THE FAMILY**

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**Introduction:** Psychogerontology aims to find, among other objectives, ways of intervening in dementias being the most common of them the Alzheimer's disease (AD). The Programme mentioned above aims to investigate the impact of this infirmity on the social and family relationships of the caretakers, promoting support to those people through individual and group activities. Methods and Materials: The appointments are done in a Centre of Rehabilitation and in a Geriatric Hospital-Day once a week for 12 weeks. The participants were family members of those who have Alzheimer in an early or moderate stage of the disease participated. The meetings, which last for 1 hour and 30 minutes, show orientations about the old age and AD through audiovisual resources and group dynamics. The participants share their experiences and their speeches are recorded, transcribed and analysed through the technique of Bardin. Quantitative and qualitative instruments were

applied: Family System Test, Genogram, and Social Convoy Diagram. The rules indicated by the authors of those instruments were followed. Results: 24 family members participated, 20 were women and 4 were men with a mean age of 68. It was noticed that the disease reached the structure and family dynamic of those people, especially in relation to the hierarchy because the sick people do not have the same power anymore. The characteristics of the social network of the caretakers affect the quality and the kind of support received. Lone caretakers say they have a smaller and less satisfactory social life. The evolution of the disease demands a greater attention by the caretakers, restricting their social involvement and triggering symptoms such as stress and depression. Conclusion: The project offers therapeutic and informative benefits about the disease, altering, in a significant way, the subjective well-being of the participants, favouring the enlargement of the social and emotional support network.

#### **PC7 631 THE FAMILY RELATIONSHIPS IN THE PERSPECTIVE OF CARETAKING DAUGHTERS OF PARENTS WITH ALZHEIMER'S DISEASE**

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**Introduction:** Alzheimer's disease (AD) is the most common form of dementia, and one of its main consequences is the fact that it affects all the family system. This research aims at investigating the family relationships between daughters and their parents (father or mother, possible or probable AD patients). Methods and Materials: The sample consisted of thirty-two daughters and their respective parents (six fathers and twenty-six mothers). We started from a bibliographical review, out of which we devised an open interview with a semi-structured format. This was recorded, transcribed and later analyzed according to the Bardin technique. We also used FAST (Family System Test), a tool consisting of a bi-dimensional investigation process with the view to analyzing, structurally and systematically, the subjects' perceptions insofar as their family relationships went. Results: The results have pointed out that, upon receiving the news of the diagnosis, the majority of daughters and of their relatives reacted negatively. Prior and subsequent to the disease, the most highlighted sub-category was unfavourable family relationships (conflicts). It was also verified that the daughters perceived a hierarchical inversion of power regarding their Alzheimer mothers ( $Z=-3,6$ ;  $p<0,001$ ). Nevertheless, it was clear that the daughters would rather exercise their authority less often, which reveals their discontentment with being, in fact, their mothers' mothers at times. Even though the caregivers have realized the hierarchical inversion in relation to their mothers, the emotional bond (cohesion) towards their mothers did not grow less strong. Conclusion: The search for professionals as crucial when the disease is in its initial stage so as to facilitate treatment and to promote the health of the family. Having a great range of information about the disease may favour the family system when it comes to decision-making and to practical measures which can contribute to the emotional balance of those involved.

#### **PC7 632 AND THE NOMINEES FOR THE CATEGORY "WISDOM" ARE ....**

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**Introduction:** The present study is part of a greater research project, namely "The Development and Manifestation of Wisdom", which is currently conducted at the University of Klagenfurt. Wisdom is often considered as the ideal endpoint of human development (Clayton & Birren, 1980). We propose, that experience with and reflection upon difficult life events can foster the development of wisdom. Methods/Materials: Through several public calls people were asked to nominate a wise person they personally know. Nominees were invited to participate in the study. The present findings focus on the nomination part of the study. The nominators were interviewed via telephone using a semi-structured interview in order to collect demographical data and to determine the reasons for the nominations. Furthermore, the nominators were asked to describe a specific episode in which the nominee acted in a wise way, and to characterize the nominated person in their own words as well as through rating lists. Results: Overall, the results indicate that most nominees were older than the nominators, and more men were nominated regardless of the gender of the nominators. Concerning characteristics of the nominees, some differences were discovered between male and female nominees and nominators. Most nominators reported episodes where the nominee helped them to resolve a problem by showing them a new perspective, giving advice, or being empathic. Conclusion: Most results are consistent with findings of previous studies, especially those concerning age and gender of the nominees (e.g. Denney, Dew & Kroupa, 1995; Sowarka, 1989). On the other hand, data about wisdom episodes offer new insight about the concrete manifestation of wisdom.

#### **PC7 633 THE EFFECTS OF AGE AND EDUCATION FOR THE CANCELLATION TASK PERFORMANCE**

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**Introduction:** Cancellation tasks are widely used for the assessment of selective attention. However, the factors of age and education for the cancellation task performances were not widely investigated. The aim of this study is to evaluate the effects of age and education

for cancellation accuracy and time from young to late adulthood. Method There were 162 community residents (Tainan city, Taiwan) with no known neurological history volunteered to participate in this study. Participants performed symbol cancellation tasks in a computer-based system. Their age are from 18 to 89 years old (Mean = 42.4, SD = 16.47) with the mean education years of 13.9 ( $\pm$  4.38). Each participant has practiced the trial session prior to the test to ensure competence in using a stylus to cancel the target on the tablet PC screen. Result After controlling for education, age is minimally correlated with task time (random form:  $r = .191$ ,  $p = .015$ ; structured form:  $r = .328$ ,  $p < .001$ ), but not accuracy. We further divided participants into two groups by age (below and above 50 years old) and using MANOVA procedure to test the effects of forms and age on task time and accuracy. Main effect of age was only significant for task time ( $F = 5.309$ ,  $p = .023$ ), while the education covariate significantly with task time ( $F = 7.688$ ,  $p = .006$ ) and accuracy ( $F = 5.730$ ,  $p = .018$ ). Conclusion We found that age is related to the task time. Education plays an important role in cancellation performance that poorer accuracy may be associated with lower education. The sluggish pattern by aging may associate with both motor speed and attention shift. Further investigation is suggested to explore whether motor speed is associated with task performance in people across life span.

**PC7 634 DO PRODUCTIVE ACTIVITIES COMPENSATE FOR THE LACK OF PAID WORK? AN ANALYSIS ON THE EFFECTS OF UN-PAID WORK ON THE SUBJECTIVE WELL-BEING OF SENIOR JAPANESE MEN**  
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Previous literatures discussed the various effects of productive activities on senior citizens. Japanese men have traditionally been considered to be workaholics who experience negative effects on retirement because of the loss of the many psychological and social resources. Productive activities compensate for the meaning of life that was previously contributed to by employment. This study aims to examine the effects of productive activities on the psychological well-being of senior Japanese men. In 2002, a questionnaire survey was conducted for the probability samples of 580 married men in their sixties and their wives in the Tokyo metropolitan area (response rate: 62.8%). Full-time or part-time workers, retirees and their wives (260 couples) were analyzed and productive activities—paid-work, volunteer work and housework—were examined. Multiple regression analysis was conducted. First, the effects of full-time and part-time job and volunteer work were examined. Volunteer work had the positive effect of reducing feelings of loneliness. The interaction term of paid work and volunteer work was significant. When working people performed volunteer work, they experienced lesser feelings of loneliness than those not doing volunteer work. Housework lowered their self-esteem. However, the interaction term of paid work and housework was significant. Working people doing housework showed higher life satisfaction than those not sharing housework. The effects of productive activities differed. People probably made social contacts through volunteer work, which reduced their feelings of loneliness. Perhaps, traditional sex role norms were related to the negative effects of housework. Interestingly, the positive effects of productive activities for the employed people were more pronounced than those for the retired; this suggested that the quality of work for the old people might differ from their previous work at younger days, thus deteriorating their well-being. Further research is required on the quality of work engaged in by old workers.

**PC7 635 SUPPORTIVE COMMUNITY LIVING SERVICE CONCEPTION: INFORMATION COMMUNICATION TECHNOLOGIES ACCEPTABILITY AND ORGANIZATIONAL INTEGRATIVE ASSESSMENT METHODS IN CONTEXTUAL ENVIRONMENT**  
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Introduction This paper presents an evaluation research program which aims at validating supportive community living services conception methodology in contextual environment. This approach takes place in an urban home based services, systems and policies development activity to support aging and dependency. The fragmentation of service provision in the domain of supportive community living was not born yesterday : multiplicity of stakeholders involved in the activity, atomization of assistive products, services and technologies for personal use in daily living conditions, lack of generalized and homogeneous evaluation programs in contextual environment. The purpose of this paper is to propose an integrative methodology for products, services and Information Communication Technologies (ICT) development evaluation process in domestic living environment. Methodology The methodological frame of this research is supported by system acceptability model (Nielsen, 1993) which provides a global evaluation process based on financial, technical, social and individual acceptability criteria. The approach that we developed also descended from work organisation structural factors and consumer-worker interaction as a macro activity process in the field of service relation (Engeström, 1999). Results The results of this research concern three components. Firstly, an innovative device evaluation which is compatible with stakeholders' compelling needs (elderly

people, socio-health workers and family carers). Secondly, an understanding of collective activities, positions and views of stakeholders involved. The potential perturbations impacts of technologies will be highlighted in order to build the basis of new work organization and practice change. Ultimately, the conceptualisation of engineering service life cycle evaluation process applied to supportive community living. Conclusion A service oriented evaluation methodology has been set up to target independent living conditions through ICT products and services for elderly people and change management in work organizations. This new research paradigm aims at allowing elderly people to stay in their familiar home environment despite progressive loss of independence.

**PC7 636 TOWARD A DEFINITION OF SOCIAL AND EMOTIONAL LONELINESS FOR OLDER ADULTS**

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Introduction: Older people who are socially engaged are better able to cope with the challenges of old age, and remain healthier both mentally and physically. However, as the life course unfolds, physical mobility may become restricted, friends and family become busy or live at a distance, and peers dwindle. Many older people risk becoming lonely. While loneliness has been seen as a single state, evidence suggests that loneliness can be divided into two distinct types: social and emotional (Weiss 1973). However, we do not have a good definition of either social or emotional loneliness. Most recently O Luanaigh and Lawlor (2008) suggested social loneliness can be associated with a lack of social integration while emotional loneliness is the result of psychological factors. In this paper we will report on progress toward developing definitions for social and emotional loneliness. Methods and materials: A mix of quantitative assessments and qualitative ethnographic case study methods were used to provide both statistical models and in-depth understanding. Within a clinical setting we assessed a range of demographic, psychological, social and medical variables. Ethnographic case study methods provided in-depth qualitative dimensions of loneliness relationship to social networks and social support. Results: We found a stronger relationship between small social networks and Social Loneliness. Social Loneliness is also associated with poor nutritional indices. Emotional Loneliness was associated with certain personality traits and general anxiety suggesting a lowered ability to cope with life events. Conclusion: Understanding the difference characteristics of socially and emotionally lonely older adults provides the opportunity to develop clear definitions of each, leading to targeted interventions best suited to the type of loneliness identified.

**PC7 637 SEXUAL BEHAVIOR AND PHYSICAL CAPABILITIES IN ELDERLY: THERE IS RELATIONSHIP?**

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The aim of this study was to identify characteristics of sexual behaviour and their correlation with the physical capabilities flexibility, strength, balance and body mass index (BMI) in older individuals active. Participated 17 individuals (61.1; +7.5 years) who were part of a programme of physical activity. The volunteers answered a questionnaire about sexuality and went through a physical evaluation, where they were assessed the BMI, flexibility, strength of grip manual and the physical condition (VO2máx). Responses were correlated with each other and with the physical capabilities assessed. Statistical analysis was performed using the Coeficiente Correlation of the Pearson, Correlation of Spearman, the Chi-square test and the test R2. It was noted that 76% were married, 60% thought his body pleasant, 80% were in a higher degree of satisfaction with life, 17.6% had relations several times a week and 23.5% once a week. The average physical evaluation were BMI = 27.39 (+ 4.2) kg/cm<sup>2</sup>, flexibility = 256.95 (+ 85.9) mm, force = 34.77 (+ 8.6) KgF and VO2máx = 26 , 16 (+ 8.67) l/min-1. There wasn't correlation between the frequency of sex with BMI, strength, flexibility and VO2máx. There were a slight correlation between 'satisfaction with life' and 'frequency of relations', and between BMI and satisfaction with the Corps. Physical aspects as flexibility, strength and VO2máx not correlate with the characteristics of sexual behaviour studied. There is correlation between BMI and relationship with the body, between change of sentiment and age, and between satisfaction with life and frequency of sexual intercourse.

**PC7 638 LONG-STANDING ACTIVITY PARTICIPATION: THE RELATION OF OCCUPATION TO SUCCESSFUL AGING AND WELL BEING**

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Introduction. This study examined the relation of long-standing occupation to successful aging, quality of life, and life satisfaction. Long-standing activity participation was defined as occupational engagement in a particular activity for a period of five years or more. Quality of life and life satisfaction were defined as positive states of well being that were assumed to be factors inherent in successful aging. Successful aging was defined as continued good health and well being in concert with high function and active engagement

with life (Ros & Kahn, 1999). Life satisfaction was overall contentment with life. Quality of life was defined as overall positive well being that included health status and contentment with life. Engagement in long-standing occupation provides seniors with a healthy way to occupy time, and a means for staying active and socially connected. Methods and Materials. Correlational research procedures were used to collect data on occupation, well being, and successful aging in a sample of 278 community-dwelling older adults. The Long-Standing Occupation Measure (LSOM,  $r=.81$ ) was used to measure activity participation. The Successful Aging Profile (SAP,  $r=.84$ ) was used to measure successful aging. The Quality of Life Scale (QOLS,  $r=.92$ ) was used to measure quality of life. The Satisfaction with Life Scale (SWLS,  $r=.81$ ) was used to measure satisfaction with life. Spearman rho analyses were used to determine coefficients ( $p < 0.05$ ). Results. Findings indicated that there were moderate significance relations between long-standing occupation and successful aging and well being. These findings indicated that long-standing occupations had a moderate significant relation to successful aging and well being. Conclusion. This sample of older adults had participated in a variety of occupations including volunteerism, hobbies, and gardening across their lifetimes. These activities kept them socially connected and related to their overall life satisfaction and quality of life.

#### **PC7 639 ATITUDES TOWARDS ELDERLY SEXUALITY**

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The aim of this exploratory study was to find the potential difference in attitudes towards elderly sexuality, between elderly and young adults. The sample consisted in 10 subjects, divided in two groups. The J group with 5 individuals with ages between 20 and 30. And the I group formed by 5 individuals with ages equal or greater than 65. The age was the only variable in the sample, which was controlled. To access the data it was used a semi-structured interview. For the analysis of the collected data it was applied the Osgood Semantic Differential Scale (-3 to +3 scale). From the interview 18 sub-categories emerged, distributed in 4 major categories (Social, Behavioural, Physiological and Psychological). The I group presented higher values than the J group in every category. The Physiological category showed the more neutral values in both groups ( $I=0.26$ ;  $J=-0.32$ ). The I group presented the higher value in the Psychological category (1.08). The higher difference between groups (0.98) also appeared in this category. The average of the four categories showed that the I group had a most positive attitude towards elderly sexuality (0.67), than the J group (0.03). The values that are shown by the J group, may indicate a lack of investment in this issue. The elderly have a more positive attitude towards sexuality in their age, than the young adults. The value that they present is lower than one, which could point to a partial, difficult or painful way of experiencing their sexuality. It shows that the elderly live their sexuality in an environment ruled by lack of information, prejudice and social believes. This study confirms the need of sexual education. That should be thought not only to the youngest, that are the tomorrow's elderly, but also to the elderly of today.

#### **PC7 640 AGEING IN PLACE & NEIGHBOURHOOD ENVIRONMENT WALKABILITY**

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Ageing in place is defined as an individual's functional interdependence with their local area. Their cognitive, affective and behavioural functioning as embedded within the physical environment of their residence and residential location, and the formal and non-formal networks of support contained therein. In the present study ageing in place (AiP) is investigated from the perspective of the inter-relationship between the walkability of the residential location (the neighbourhood) and the mediating effect of older adults' navigational skills and activity level. Latent variable partial least squares data analyses indicate a significant direct relationship between neighbourhood environment walkability and AiP with neighbourhood environment walkability, diversity and accessibility of land use mix, street connectivity, aesthetics and infrastructure and safety for walking contributing to the significant relationship while the presence of traffic hazards and the hilliness of the area were significantly negatively related. An indirect relationship via wayfinding route and orientation strategies and sense of direction was evidence, however activity level was non-significant.

#### **PC7 641 STRESS AND EVERYDAY MEMORY FUNCTION: COMPARING CAREGIVERS AND NON-CAREGIVERS**

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Introduction: Daily stress can negatively impact cognitive function (e.g., Vitaliano et al., 2005), so it is important to study memory function under stressful circumstances in a

realistic living situation. Methods: Fifteen caregivers ( $M=71$ ,  $SD=7.81$ ) participated in the study for 14 days, and 20 non-caregivers ( $M=78$ ,  $SD=5.95$ ) participated for 7 days. Everyone completed standardized cognitive tasks (including information processing speed), daily stress assessments, and performed a challenging everyday memory task. Results: A fully unconditional multilevel model revealed that 30% of the variance in the everyday memory task was between people, while 70% was within people. Although the number of stressors experienced each day was not related to daily memory performance and caregiver status did not moderate the within-person relationship, subsequent models considered specific stressor domains separately and examined the role of cognitive performance. Results revealed that on days when caregivers experienced health-related stressors they benefitted much more from having faster processing speeds; that is, they remembered better than on days when they did not have health-related stressors, and they outperformed non-caregivers with high scores ( $\gamma_{13} = .08$ ,  $t = 2.18$ ,  $p = .03$ ). This model explained 16% of the within-person variance and 29% of the between-person variance in daily memory. An additional model revealed study-related stressors were equally detrimental to all caregivers, regardless of processing speed. However, for non-caregivers, study-related stressors and slower processing speeds were detrimental; if non-caregivers had faster speeds, they seemed to be buffered from the negative effect of the study-related stressor ( $\gamma_{13} = -.04$ ,  $t = -1.92$ ,  $p = .05$ ). This model explained 19% of the within-person variance and 35% of the between-person variance in daily memory. Conclusion: Better cognitive function can buffer the impact of particular stressors on everyday memory ability for both caregivers and non-caregivers.

#### **PC7 642 CELL PHONE SOFTWARE TO AID SENIOR CITIZENS IN RECALLING NAMES**

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Introduction: This project is motivated by surveys of senior citizens who report difficulties in recalling people's names. Our aim is to design, build, deploy, and evaluate novel location-aware cell phone software to assist older adults in recalling names. Methods: An interdisciplinary team of computer scientists, neurologists, geriatricians, and speech/language pathologists researched user needs through participatory design sessions with five older adults. We created a series of increasingly richer prototypes of Internet server software and cell phone client software that communicates with this server. The server stores a database of one's social network and places one frequent. An inference engine uses this information and knowledge of the cell phone's location to suggest names of people one might plausibly encounter in that place. The client software presents the forecast of names to the user, engages in a dialogue with the user about forecast quality, and solicits data that should be added to the database to improve future forecasts. We are pilot testing with 8 individuals, gathering quantitative data on forecast quality, and recording interview data on the suitability of the technology and its use. Results: We shall present first results from the pilot studies, including how good the forecasts are, how our subjects enter social networks into the system, and how and under what conditions forecasts are requested. We shall report on improvements in the functionality and user interface for both server and client. Conclusion: Evidence from pilot studies is sufficiently positive to suggest that further work is warranted on a context-aware cell phone that uses a representation on one's social network and knowledge of the phone's location to suggest who one might plausibly encounter, and that such forecasts are likely to be beneficial to seniors. One next step will be a controlled field experiment using participants with mild cognitive impairment.

#### **PC7 643 COGNITIVE DEMAND ESTIMATED IN ACTIVITIES OF DAILY LIFE AND ITS RELATIONSHIP WITH COGNITIVE FUNCTIONING IN ELDER PEOPLE**

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INTRODUCTION: The performance in activities of daily living cognitively demanding could have a positive result in cognitive functioning delaying brain slowing commune to aging and improving performance in different cognitive processes involved. In this research we examine the relationship between the estimate of cognitive effort in activities that elder people engaged in their daily lives and different cognitive processes.

MATERIALS AND METHODS: We conducted a cross-sectional study on a sample of 52 persons over 60 years without cognitive impairment and healthy that lives in rural areas. In the evaluation we used a questionnaire on activities of daily living and a neuropsychological battery which measures different cognitive processes: episodic memory, working memory, processing speed and visual search, attention, reasoning and executive processes. RESULTS: After analyzing statistical of data we see that the estimate of the cognitive effort which the elderly make in their daily living activities are related to neuropsychological tests that measure working memory, processing speed and visual search, reasoning and executive processes. In contrast, there has not been found relationship between the estimate cognitive effort and episodic memory tests.

CONCLUSION: The results show that episodic memory is not the most important factor in the estimate of cognitive effort in the activities of daily living and the need to consider other processes such as processing speed, working memory and executive function in

cognitive training to improve the functional capacity for instrumental activities of daily living of the elderly living in the community.

**PC7 644 GIVING AND RECEIVING SUPPORT IN OLD AGE: ITS CONTRIBUTION TO SATISFACTION WITH LIFE**

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**INTRODUCTION:** Within the context of intergenerational relations, the social exchange theory posits that those people who receive more than they give experience the highest levels of wellbeing. The equity theory suggests that the highest levels of wellbeing are associated with balanced relationships. In spite of the abundant research on mutual support relationships and wellbeing, the empirical evidence for such theories is hardly conclusive. Our aim is to test both theories considering the exchange of support between elderly people and their adult children. **METHOD AND MATERIALS:** 489 elderly people were interviewed (aged 60-98; M = 73.3 years, 42% males, 58% females), in good health and living in the community. Items were drawn up using a Likert scale (1-4, Never – Many times) to obtain the frequency of support (instrumental and emotional) received from sons and daughters. **RESULTS:** The ANOVAs performed, controlling the effect of socio-demographic and subjective health variables, revealed that the situations of reciprocity and non-reciprocity in instrumental support produced the same levels of satisfaction with life. However, in emotional support, equitable relations led to higher levels of satisfaction. **CONCLUSIONS:** The results partially support the equity theory, thereby indicating the significant role of reciprocity and emotions in wellbeing. Some consideration should be given to the possible role of cultural norms on the support for and from adult children in old age.

**PC7 645 WORKING CONDITIONS AND WORK-RELATED MENTAL HEALTH AMONG KOREAN OLD-AGE WORKERS**

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**Introduction :** Psychosocial working conditions in modern societies have become increasingly important. Especially old-age workers are more vulnerable to work-related mental ill-health because of their poor working conditions and ageing work. This study aims to examine association of working conditions with work-related mental healths. **Methods and materials:** This study focused on the 1,044 aged workers(aged 50-64, 760 male and 284 female workers) from the first Korean working conditions survey(KWCS) data in 2006. Work-related mental health had been defined as having one or more symptoms of stomach pain, stress, sleeping problem, anxiety, and depression. We computed the percentage of work-related mental ill health problems, all-adjusted odds ratio(OR) using the SAS logistic procedures. **Results:** 195 workers(18.7%) had one or more work-related mental ill health problems. The prevalences of mental ill-health problems were 5.6% and 3.2% for stomach pain and 18.7% and 14.4% for stress, 5.3% and 3.5% for sleeping problems, 4.1% and 2.5% for anxiety, and 3.3% and 1.8% for depression in male and female aged workers. Job strain and the perception of work-life balance were associated with work-related ill mental health. **Conclusions:** To improve mental health, job demand should be reduced and work-life balance maintained among Korean aged workers. This study will support development of more targeted mental health interventions.

**PC7 646 RACE AND SOCIOECONOMIC DIFFERENCES IN HEALTH BEHAVIOR TRAJECTORIES ACROSS THE ADULT LIFE COURSE**

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**Introduction:** The purpose of this research was to describe how individual health behaviors – including alcohol consumption, smoking, physical activity, and weight management – change over a 16-year period in progressively older age groups. Additionally, race- and education-based variations in intra-individual changes in health behaviors were examined. **Methods and Materials:** We used hierarchical linear modeling with data from 3,617 American adults aged 25 and older who were interviewed up to four times. **Results:** On average, levels of alcohol consumption and the likelihood of smoking both declined over time. While rates of decline in alcohol use moderated among older adults, rates of decline in smoking were steepest among older adults. Physical activity levels increased among young adults and decreased among older adults; the odds of being overweight followed the same pattern. Significant race- and education-based variations were evident in both the levels and rates of change in these health behaviors. For instance, while White Americans exhibited significant advantages over Black Americans with respect to levels of physical activity and the odds of being overweight, these advantages diminished over time, particularly among older adults. Regarding education, adults with high levels of education consumed more alcohol than the less well-educated, and these differences persisted over time and across age groups. Furthermore, low education adults were more likely than those with high levels of education to smoke, and were also less likely to experience late life drops in the odds of smoking. **Conclusions:** These findings suggest the presence of substantial and evolving race- and education-based stratification in health behaviors

throughout the adult life course. While many of the race differences appear to diminish over time and during late life, education-based differences seem to persist or grow. Future work in this area should examine the health effects of various trajectories of health behaviors during later life.

**PC7 647 A NOVEL APPROACH TO EXAMINING THE LIFE SATISFACTION INDEX-Z DIMENSIONS AMONG COMMUNITY-DWELLING OLDER ADULTS**

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**Introduction:** Life satisfaction is a major aspect of psychological well-being that may influence how older adults live. Life satisfaction has been defined by the preferred feeling about oneself and measuring life satisfaction among diverse older adults is a challenging and important area of research. With different dimensions and levels of life satisfaction, there are varying associations with mortality and other adverse health outcomes. Therefore, this study examines the measurement properties of the Life Satisfaction Index-Z(LSIZ) using a novel approach that considers both the common and unique factors of the scale. **Methods and materials:** In 480 older adults (aged 65 and older) from the University of Southern California Well Elderly Study, we conducted a confirmatory factor analysis on the LSIZ (13 items) using a bifactor model under item response theory. **Results:** We found that a bifactor model adequately described the LSIZ scale ( $c^2=106.48$ ,  $df=40$ ,  $CFI=0.95$ ,  $RMSEA<0.06$ ). There were three unique factors that were also present with the common underlying life satisfaction factor: Zest, Congruence, and Mood. While these factors are consistent with previous LSIZ dimensions, we found that the Mood factor consisted of only the negatively worded items. Based on the factor loadings, the mood factor was also identified as the nuisance factor, which did not conceptualize the common life satisfaction factor as well as the other factors in the bifactor model. **Conclusion:** This is the first study, to our knowledge, that uses the bifactor model to examine the Life Satisfaction Index-Z in the field of gerontology. The USC Well Elderly Study consists of a diverse group of older adults, rather than a homogenous sample, to account for possible measurement bias when assessing for life satisfaction and relating the total score to outcomes. Careful attention must be paid to negatively worded questions used in independent living older adults as they may not be measuring overall life satisfaction, when summed as a total score.

**PC7 648 AWARENESS ACROSS A LIFE-SPAN: A COMPARISON OF OBJECTIVE AND SUBJECTIVE MEASURES IN AGING.**

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**Background:** Estimating one's own cognitive functioning is crucial for everyday life and insight of possible cognitive decline. It is quite common for healthy adults to have some concerns about their memory, particularly as they get older. We report here the results of the first part of a larger study aimed at investigating four aspects of self-evaluation of cognitive functioning. The first concerns the possibility that cognitive evaluations change as a consequence of experience of tests; the second aims to understand whether complaints represent an accurate appraisal of memory problems or an incorrect self-evaluation. The third aim is to assess whether the pattern of self-evaluation is similar across cognitive domains, as previous studies have largely concentrated on metamemory and metacognition, whilst fewer studies have extended their research of self-evaluation to other domains (Ackerman & Wolman, 2007; West et al., 2002). The fourth aim is to understand whether the ability to self-evaluate deteriorates as we grow older, as previous aging research suggests that older adults lack metacognitive ability (Vecchi, 1999; McCallum et al. 1985; Best et al. 1990). **Methods:** Questionnaires were developed to measure self-evaluation of cognitive functioning in different domains (semantic memory and language). Participants' self-estimated ability scores in both domains were collected, before and after abilities were assessed with neuropsychological tests. **Results:** The reliability for both questionnaires was high (Cronbach's alpha =.70 and 0.95). Correlations were calculated for both questionnaires before and after testing, both reached significance. Correlations between self-evaluation and objective ability in language reached significance with memory barely failing to reach significance. **Conclusion:** Preliminary data show that young adults tend to provide lower estimates of their cognitive abilities after experiencing cognitive tests suggesting that actual performance can modify self-perception. The positive correlations between self-evaluation and performance on neuropsychological tests provide evidence for relatively accurate estimation of cognitive skills.

**PC7 649 ASSOCIATION OF MENTAL INDEPENDENCE WITH SELF-RATED HEALTH IN THE JAPANESE ELDERLY**

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**Introduction:** Physical independence has been identified as a factor of self-rated health that has been well known as a predictor for future health status and mortality in the elderly. However, the relation of mental independence and self-rated health is not clear. The

purpose of this study was to reveal the relationship between mental independence and self-rated health among elderly people living in Tokyo. Methods and materials: Data was collected from 1,294 residents of four age groups (305 residents aged 35-40 years, 288 residents aged 45-50 years, 302 residents aged 55-60 years, and 399 residents aged 65-70 years) in Setagaya-ku, Tokyo by random sampled mail survey in 2007. Self-rated health was classified into four categories (1, poor; 2, fair; 3, good; 4, very good). Mental independence was assessed using the Mental Independence Index (Suzuki and Sakihara, 2003) consisted of the purpose directionality subscale (4-item) and self-responsibility subscale (4-item). Generalized linear model was used to test hypotheses. Results: Self-rated health in the aged 55-60 years group was relatively low. The total score of the mental independence index in men was higher than in women (26.4 vs. 25.5), and in women, the total score of the mental independence index increased with age. The independent factors of high self-rated health were no subjective symptoms, having a job, high mental independence, and no medical remark. There were some interaction effects. The relation of mental independence and self-rated health was remarkable in the group without a regular occupation. The relation of occupation and self-rated health was remarkable in the aged 55-60 years group. Conclusion: Mental independence was one of the relevant factors of self-rated health in each age group. Self-rated health in the aged 55-60 years group including baby boomers was relatively low, and there was an interaction with occupation.

#### **PC7 650 QUALITY OF LIFE IN THE OLD AGE: DESCRIPTION AND MODEL OF ROUTE.**

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In the last years the expectancy of life increases. There are many studies about third age. For examples: (González-Celis, 2002; Lang y Heckhausen, 2001; Asakawa y cols, 2000; Ministerio de Trabajo y Asuntos Sociales de España, 1996; Tamer, 1989). However, in Venezuela researches in this field are insufficient. Recently, the interest for study in older population in their different aspects has emerged. Based on the research "Calidad de vida en la vejez en los distintos contextos" (Quality of life in the old age at different contexts) by the "Ministerio de Trabajo y Asuntos Sociales de España" (Work and Social Affairs Ministry of Spain), the present study, "Calidad de vida en la vejez: descripción y modelo de ruta" (Quality of Life in the old age: description and model of route) was developed. The main objectives of the present investigation are: to describe the quality of life of a group of subjects that belongs to the third age and inhabits in Chacao, a place located in the Metropolitan Area of Caracas – Venezuela, and to analyze the relationships among a set of variables and its power of prediction on the quality of life of the above mentioned group. The gender, the age, the social status, the educational level, the place of residence, the participation in a social program identified as "Programa de la Juventud Prolongada" (Program of the Prolonged Youth) and the use of the services given by the "Casa de la Juventud Prolongada" (Home to the Prolonged Youth) were the variables taken into account. The sample of the study was 300 subjects. They complied with the criteria of selection: to belong to the third age (65 years or more), to live in Chacao, an area located in the Metropolitan Area of Caracas, and no cognitive deficiencies. The instruments of measure utilized were: MiniMental Test, Questionnaire of Personal Information and "Cuestionario Breve de Calidad de Vida (CUBRECAVI)" (Brief Questionnaire of Quality of Life. In reference to the description of the quality of life, in the present study, the majority of the sample reported better quality of life at the subscales health, functional skills, satisfaction with their life and quality of the environment. Nevertheless, the majority reported diminished quality of life at the subscales social integration, constructive use of time and social and sanitary services. Related with the analysis of the relationships among a set of variables and its power of prediction on the quality of life of the subjects, the results were: men, the younger individuals, those who belonged to a higher social status, those who had higher educational level, those who lived at their own home, those who took part in the program identified as "Programa de la Juventud Prolongada" (Program of the Prolonged Youth) and those who did not use the services given by the "Casa de la Juventud Prolongada" (Home to the Prolonged Youth) were the ones that reported better quality of life. The present study is a contribution to the comprehension of the quality of life in the old age from an integral and multifactorial perspective that support the concept proposed by the biopsicosocial model of the health and it provides a platform for probable and future programs. Keywords: Quality of life in the old age and social, demographic and situational variables. D' Alessandro, M. (2004). Calidad de vida en la vejez: descripción y modelo de ruta. Tesis de Maestría no publicada para optar por el título de Magíster en Psicología. Universidad Simón Bolívar, Caracas, Venezuela.

#### **PC7 651 SUCCESSFUL AGING: WHO MET THE CRITERIA?**

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Introduction: Is not clear which indicators characterize elderly persons as successfully aged. Our aim was to measure the prevalence of successful aging in Mexican women according with definitions and indicators reported in different world wide studies. Methods: Data analysis from the cross-sectional study "Mujeres Grandes" conducted in Guadalajara, Mexico 2007. Data were obtained from 638 women participants, aged 60+ (mean=70.9, SD=7.1), all of them were classified as successful or not successful based

on 16 different authors definitions. Results: The range of proportion of successfully agers varied greatly from 1.7% to 97%, the mean was 38.4% (SD: 31.2; median: 32.6; percentile: 25-75=6.7-67.2). The major variations were found when definitions included disease-free criteria, with a mean proportion from 2.9% (SD: 1.2; median: 2.9; percentile: 25-75=1.7-4.2) to 46.5% (SD: 28.8; median: 48.2; percentile: 25-75=20.3-73.3) when excluded. According with definitions including all biological-psychological-social criteria, mean proportion was 2.3% (SD: 0.8; median: 2.3; percentile: 25-75=1.7-2.9). When only biological criteria were included, mean proportion of successful agers was 63.8% (SD: 21.2; median: 73.3; percentile: 25-75=41.7-76.4), according with the only one definition including just psychological criteria 97.2%, none reported only social criteria. The proportion of successful agers was 28.5% (SD: 21.7; median: 23.3; percentile: 25-75=7.3-52.8) according with definitions including both biological-psychological criteria. The most used criteria for successful aging were functional and cognitive ability. Among the studies including functional ability, mean proportion of successful agers in our population was 34.6% (SD: 29; median: 28.2; percentile: 25-75=5.6-61.2), and was duplicated among definitions of studies that did not include (mean: 64.7%; SD: 45; mean: 64.7; percentile: 25-75=32.2-97.2). When cognitive ability was not taken into account, 54.6% (SD: 33.7; median: 70; percentile: 25-75=23.3-76.4) met the criteria of successful aging, and when it was, just the half 25.7% (SD: 23.8; median: 17.3; percentile: 25-75=3.6-52.8). Conclusion: The arbitrary nature of the definitions resulted in considerable variation in the proportion of successfully agers in the same population. It is necessary to establish a standard for defining and quantifying the concept of successful aging.

#### **PC7 652 SIMPLIFYING AND INDIVIDUALIZING HEALTH-RELATED INFORMATION PROMOTES RECALL**

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Introduction: Health-related instructions are important for health promotion among elderly and their ability to manage health problems. Health professionals and studies report that individuals recall very little of the information that is provided in terms of diagnoses or advice regarding health-promoting behaviors. In this study, the complexity and emotional valence of health-related advice was manipulated to find out, if recall could be improved. Particular attention was paid to the differences between younger and older adults. Methods and Materials: Younger adults (n=37, mean age=24.57) and older adults (n=34, mean age=74.18) performed a standardized step test and were informed about the general meaning of the test for health promotion as well as about their personal performance scores. The complexity and emotional valence were manipulated. Recall was tested in a delayed free recall task. Results: Both age groups recalled the information of low complexity better than the highly complex one. Additionally, low complexity with a negative framing was most advantageous for the old persons (32% recalled compared to 20% in all other conditions) ( $p<0.05$ ). All participants recalled more about their personal performance scores than about the meaning of the test for health maintenance. Test performance and recall were related in the older group only. The higher their personal performance score, the better they recalled particularly the negatively framed information (meaning of the test for health:  $r=0.43$ ,  $p<0.1$ ; personal performance:  $r=0.51$ ,  $p<0.05$ ). When information was framed positively, test performance was only related to recall of personal performance scores ( $r=0.47$ ,  $p<0.01$ ;  $r=0.54$ ,  $p<0.05$ ). Conclusion: The study confirmed that for the elderly the reduction of complexity of information, and its individualization can improve recall of health related advice.

#### **PC7 653 EFFECTS OF AGING ON THE ABILITY TO IGNORE TASK-IRRELEVANT FLUCTUATION IN PITCH DISCRIMINATION TASKS**

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Selective-attention deficits impairing the ability to extricate relevant from irrelevant information at the perceptual level could help diagnose age-related cognitive decline at an early stage. The experimental evidence supporting this claim is already considerable, but it remains to be determined where and how the irrelevant information interferes with the relevant one. To help answer this question, the effects of irrelevant duration or level differences on pure-tone frequency discrimination thresholds (FDTs) were studied in healthy, normal-hearing, young and older adults. Target tones were presented either in isolation or followed by a distracter tone after a 90- or 350-ms silent interval; both tones were 1000 Hz, 80 ms, and 70 dB SPL. Irrelevant differences occurred simultaneously with relevant frequency differences or sequentially, in the distracter. With both presentation formats and silent intervals, FDT elevations (i.e., interference) were much larger in older than in young adults if the irrelevant differences were in level, but if they were in duration, FDT elevations were small in both groups; these trends could be accounted for in terms of context effects. The interference seems to take place at relatively late rather than early information-processing stages because it happens both simultaneously and retroactively (i.e., sequential), and depends on the similarity of relevant and irrelevant dimensions.

**PC7 654 A META-ANALYSIS OF COGNITIVE AND PHYSICAL FITNESS TRAINING TRANSFER EFFECTS**

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**INTRODUCTION** The effectiveness of transfer of cognitive abilities in older adults through cognitive and physical fitness training has been questioned. We conducted a quantitative meta-analysis to determine what kind of training and construct combinations have shown the largest transfer effect sizes. We hypothesized that not all training studies would yield similar effect sizes and that cognitive training would differ from aerobic exercise study effect sizes for different cognitive abilities. METHOD Thirty-five cognitive training studies were selected if they tested the transfer of untrained cognitive abilities from one area to another for older adults. Only studies with older adult control groups were included. All of the d values were coded for one of three training types: cognitive training, which could be either strategy or practice, or aerobic training. Effect sizes were computed for the transfer abilities of functional abilities, memory, mental rotation, reasoning, speed, subjective changes, supervisory, visual, working memory, and IQ. 365 d values were calculated from the 35 studies. Overall tests of homogeneity were performed for the three different training types as well as for the ten dependent cognitive constructs. RESULTS The overall effect size was very small, with a mean d of .04 and heterogeneous across studies ( $Q = 698$ ). Both cognitive and aerobic studies were also heterogeneous ( $Q$ 's of 545 and 153). Evaluation of specific transfer abilities indicated that memory and reasoning showed no transfer in aerobic studies; as shown previously, speed, supervisory abilities, and working memory were improved, with effect sizes ranging from .12 to .19. For cognitive training, speed, memory, and subjective appraisals improved, with effect sizes ranging from .12 to .38. DISCUSSION This meta-analysis revealed that cognitive training and aerobic training studies differ in transfer outcomes and effect sizes, suggesting that combining both approaches may optimize improvement in cognitive aging.

**PC7 655 "ONE WHO PLANTS A GARDEN, PLANTS HAPPINESS": THE THERAPEUTIC BENEFIT OF GARDENING ACTIVITIES FOR OLDER COMMUNITY DWELLING ADULTS**

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The importance of the aesthetics of nature to human well-being is commonly acknowledged, and a growing body of evidence describes the psychological and physiological benefit obtained from natural environments. According to Biophilia theory humans are not only genetically encoded to respond positively to natural environments, our emotional, intellectual, and physical well-being depends upon having access to nature (Wilson, 1984). For older adults, gardening activities potentially provide an outlet for enhanced physical and emotional well-being. Increased physical activity can reduce the risk of some cancers, Type 2 diabetes, heart disease and depression (Mathers, Vos, & Stevenson, 1999), all of which are significant contributors to Australia's health care costs. Therefore having an understanding of older adults' motivation for continuing participation in gardening would be beneficial. The aim of the present study was to further an understanding of the therapeutic benefits of adults' gardening experiences. It was hypothesised that participants' experiences of gardens and green spaces would be linked to their enhanced physical and emotional well-being. Method and Materials The sample consisted of 31 community-dwelling adults ( $F=21$ ,  $M=10$ ), whose ages ranged from 50 to 86 years ( $M= 67.35$ ,  $SD=8.68$ ), recruited from New South Wales and Queensland, through local church and social groups. A self-report survey instrument was constructed for the study based upon a framework of biophilia (Wilson, 1984) and ageing theories (Baltes et al., 1999). Participants indicated their agreement, on a scale of one to five, with a set of attitude statements. The survey also included several open ended questions, demographic questions, and a gardening activity inventory. Results and Conclusions Quantitative and qualitative analysis showed that participants derived a sense of purpose, and enjoyed physical and emotional well-being through their gardening experiences. They enjoyed the tangible benefits, as well as the aesthetics of gardens, citing "pleasure" as the primary reason for their continued involvement. Those participants who indicated that they were members of a gardening group, reported significantly more 'social benefits', compared to those who were not. The findings have implications for encouraging older adults' participation in gardening activities, and for the creation of social gardening programs for older adults residing within the community and in residential aged care facilities.

**PC7 656 THE CHANGES OF EMOTION EXPERIENCES, DEATH ANXIETY, AND SUBJECTIVE WELL-BEING IN OLD AGE: AN ANALYSIS OF LONGITUDINAL STUDY.**

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The purposes of this study were to investigate the changes of subjective well-being(SWB) and emotional experiences(EE), death anxiety(DA) in old age and to analyze the effects of EE, DA on the SWB in old age based on the longitudinal data. Hallym longitudinal aging study was started at 2003. The 1st wave was in 2003 and 2,529 old adults were participated. The 2nd wave study was with 1,798 participants and the 3rd wave study was with 1,131. Using PANAS, PGCMS and the death anxiety questionnaire, this study was performed. In results, the SWB was not dramatically decrease with age. Female old adults'

SWB were lower than the male old adults. The elderly experienced more positive emotions(PE) than the negative emotions(NE) and the frequencies of experience of negative emotions were not increase with age. The elderly experience less negative emotions as they get older. Death anxiety was increased with age and female old adults experienced more anxiety than the male old adults. Experiencing more PE, less NE and lower death anxiety had positive effects on maintaining the SWB in old age. Especially, experiencing less negative emotions was more helpful to optimize one's SWB in old age than experiencing more positive emotions. These results support the socioemotional selectivity theory and emphasized the importance of quality of emotional life in old age.

**PC7 657 THE MEANING OF AGING FOR ELDERLY HOMOSEXUAL MEN IN ISRAEL**

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**Introduction** Understanding the meaning of aging as it is perceived and experienced by elderly homosexuals in Israel is the theme of this qualitative research. Literature points at the fact that the population of the elderly homosexuals suffers from exclusion and stigmas by elderly heterosexuals and at times also by the young men in the homosexual community. The present research aims to shed a light, on the experience and the perception of aging among elderly homosexuals who did not expose their sexual inclination. This research is first of its kind which is held among elderly homosexuals in Israel. Methods The aim of the present research is to learn, through the elderly themselves and based on phenomenological methodology including semi-structured in depth interviews, about their world, perceptions , experiences and the manner in which elderly homosexuals grasp and perceive their aging within the Israeli society. The population in this research included ten elderly homosexual between the ages of 72 and 80. Results The findings of the research pointed out four major themes that preoccupy the elderly homosexuals: the conflict between acceptance of the old age and its denial; difficulties in getting older and the coping modes with them; the familial and social relationships of the elderly homosexuals and homosexuality and the attitude towards it all along the years. Conclusion The conclusions of the research were: (1) There is more similarity than difference between the aging process of the homosexual elderly and that of the heterosexual elderly (2) the elderly find it difficult to accept their old age but they do not reject the changes bound by the actual aging process (3) there are difficulties in the familial and social relationships of the elderly and their source is usually linked with their sexual inclination and seldom with their aging (4) the concept "coming out of the closet" as it appears in professional literature does not correlate with the actual process of coming out of the closet of the interviewees .

**PC7 658 RELATION OF EVALUATOR'S ATTRIBUTE TO SELF-REPORTED VISUAL AND/OR HEARING DIFFICULTIES.**

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**Introduction** Recently, influences of sensory losses to the psychosocial variables are draw attention in the epidemiological research for the elderly people. Availability of subjective reported sensory impairment rather than objective measure of sensory loss are pointed out because subjective report in visual and hearing impairment reflect the level of the difficulty experiencing in the daily activities (Massof et al., 2001). A study that validated the relationship between audiology and self-reported hearing difficulties among healthy workers showed lower correlation between two measurements (Hashimoto et al., 2004). However, he concluded although subjective reported hearing difficulties may not be replaceable measure to objective audiology measurement, but may be useful tool to detect psychosocial problems of hearing. Thus, the aim of this paper is to test relationship between self-reported visual and/or hearing difficulties and psychosocial background. Methods and Material Participants were younger people ( $N=352$ ), middle-aged ( $N=325$ ), and younger elderly ( $N=565$ ). Visual and hearing impairments were assessed by the self-assessed measurement in everyday situations; seeing well enough to read street signs at night, a friend across the street, and newspaper, and hearing enough to understand words in a normal conversation, over the telephone, and on a conversation.(Wallhagen et al., 2004; Strawbridge et al., 2007). Response sets and scores for each problem were none (0), a little (1), some (2), and a great deal (3). In addition to sociological background of age, sex, living together, outgoing frequency, we also measured self - rated health, mental health, and 5 dimension of personality traits. Result In younger elderly, there were statistically significant but moderate correlation between hearing impairment and neuroticism ( $r=.091$ ) and extroversion ( $r=-.089$ ), and between visual impairment and living together ( $r=-.088$ ), self-rated health ( $r=-.177$ ), mental health ( $r=-.121$ ), neuroticism ( $r=.127$ ), extroversion ( $r=-.193$ ), agreeableness( $r=-.088$ ), and conscientiousness ( $r=-.251$ ). Conclusion The results indicated that psychosocial background has some relation to self-reported sensory difficulties.

**PC7 659 FREQUENCY OF GOING OUTDOORS AND SUBJECTIVE WELL-BEING AMONG OLDER ADULTS IN JAPAN: A 5-YEAR LONGITUDINAL STUDY**

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**Introduction:** Previous studies have demonstrated that frequent going outdoors in daily life is beneficial effect on physical health for older adult. However, little is known about its effect on subjective well-being. The purpose of this study was to determine the role of frequency of going outdoors on self-rated health using a sample of Japanese older adults. **Methods and Materials:** Out of one-third randomly selected subjects from all residents aged 55 to 79 years who lived in Hatoyama town, 1.5 hours apart from central Tokyo, 677 subjects without any mobility difficulty completed both the baseline and follow-up surveys 5 years apart (2002-2007). The town consists of two different residential areas; one is so called "New Town" which was developed in 70's, and another is original agricultural area. Frequency of going outdoors in daily life was assessed by following 4 categories: more than once per day, once per 2-3 days, once per a week, and seldom. Subjective well-being was operationally defined by self-rated health. Responses were coded as excellent/good=1 and fair/poor=2 for the analysis. Multivariate logistic regression analyses were used to determine an independent association between the frequency going outdoors at baseline and self-rated health at follow-up, controlling for potential confounders such as age, gender, residential area, educational attainment, self-rated health, medical conditions, subjective rating of economical status, social support indices at baseline. **Results:** Those who went outdoors more often at baseline likely reported to have better subjective health at follow-up ( $p<0.001$ ). Even after multiple-adjustment, the effect of frequency of going outdoors remained significant (odds ratio=1.79, 95% confidence interval 1.17-2.74,  $p=0.007$ ). **Conclusion:** Frequent going outdoors in daily life have beneficial effect on subjective well-being in older adults independent of potential confounders, suggesting the importance of physical and social activity.

**PC7 660 OLDER ADULTS' POOR MEMORY PERFORMANCES ARE NOT INEVITABLE! THE COMPENSATORY ROLE OF MOTIVATION**  
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Research into the psychology of aging has shown the existence of a decline in various memory functions. One explanation for this age-related memory decline, developed since the mid-1980s, involves the construct of memory self-efficacy (MSE), people's confidence in their memory abilities. The literature on MSE converges to show that older adults obtain lower memory performances in part because they believe their memory is poor. However, the mechanisms responsible for this effect are poorly understood. The aim of our study was to test the hypothesis that the impact of one's MSE on one's episodic memory performance is mediated by one's persistence when performing memory tasks. Eighty-one adults aged 55 and over participated in this study. The participants completed a MSE questionnaire and performed a difficult self-paced word-list free recall task. The time taken to study the word-list (study time) was taken as a measure of persistence during encoding. Participants' age, education level, depressive symptoms, memory span and episodic memory abilities were collected to be controlled, as were several other variables potentially confounded with study time such as time-consuming regulation actions (performance monitoring, strategy use...). The results showed the expected mediation effect. Controlling for the potentially confounded variables, word recall scores were positively predicted by MSE scores, with this effect being partially explained by the longer study time of participants with higher MSE scores. In conclusion, our data support the hypothesis that the positive impact of one's MSE on one's memory performance is mediated by one's persistence on the task. Our results are discussed in relation to classical theoretical models of memory aging focusing on the "cold" and uncontrollable aspects of cognitive aging (e.g., speed of processing) to propose a more complete and optimistic view of memory aging. The practical implications of such a model are then highlighted.

**PC7 661 OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS): DIFFERENTIAL COGNITIVE IMPAIRMENTS ACCORDING TO AGE**  
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Numerous studies show that patients suffering from OSAS develop neurocognitive impairments. The present study aimed to assess the relationships between OSAS, age and cognitive disorders. **Methods:** 27 community-dwelling recently full night polysomnography-diagnosed untreated OSAS, aged from 29 to 75 years (Group 1: mean years [standard deviation]= 42,45 [6,7]; Group 2: 54,71 [3,15]; Group 3: 68 [5,48]) were studied. All patients performed neuropsychological tests (MMSE, Dual task (DualT), Trail Making Test (TMT)). In order to assess patients' abilities in immediat/delayed recall and memory span, patients were presented a list of 16 words in three successive trials. They had to recall items after each presentation (immediate recall) and fifteen minutes latter (delayed recall). Memory span ability was assessed with tests of increasing complexity: Digit Span forward (Digit-f), Digit Span back (Digit-b) and Digit Ordering Test (DOT). Results were compared to healthy subjects data and between the three groups Results: Patients' scores in MMSE were similar as those of healthy subjects. In DualT, no between group difference was observed. In TMT, there was an age effect ( $p<0,01$ ), particularly

marked in TMT-B condition ( $p<0,001$ ). In immediate recall tests, even though all subjects improved their performance in successive trials ( $p<0,001$ ), older subjects showed lower performances than younger subjects ( $p<0,05$ ). In delayed recall, all performances decreased ( $p<0,01$ ), with no age effect. In memory digit span, a difference between the three tests was observed (Digit-f > Digit-b > DOT:  $p<0,001$ ), with no age effect. **Discussion:** Age and OSAS seem to alter in the same way older patients' performances. However, the most striking result of this study is the low performances of younger patients in the memory span digit test, assessing working memory. These performances are in the same range as those of the elderly healthy subjects, suggesting that OSAS could be a model of early pathological aging.

**PC7 662 MEMORY TRAINING FOR OLDER ADULTS WITH LOW EDUCATION: MENTAL IMAGES VERSUS CATEGORIZATION**  
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**Introduction:** Considering that in developing countries such as Brazil, a high percentage of older adults are illiterate, or have limited educational experience, it is necessary to investigate which training strategies may be more effective for cognitive improvement in this group. This study aimed to describe the potential benefits of memory training to older adults with zero to two years of formal education, and to compare the effectiveness of categorization and visual imagery training. **Method and materials:** 29 healthy older adults with zero to two years of formal education participated. 16 participants received training based on categorization (categorization group- CATG) and 13 received training based on mental images (imagery group - IMG), one group served as control for the other due to the fact that they trained different strategies. Training was offered in 8 sessions of 90 minutes. The participants were evaluated pre and post training through cognitive screening tests (MMSE - Mini Mental State Examination, VF - Verbal Fluency animal category), episodic memory tests (18-picture memory test and the RBMT - Rivermead Behavioral Memory Test) and the GDS - Geriatric Depression Scale. **Results:** IMG improved performance in episodic memory tests and had reduced depressive symptoms. CATG increased the use of categorization strategy, but did not increase performance in episodic memory tests. **Conclusion:** Results suggest that the strategy based on the creation of mental images was more effective for older adults with low formal education.

**PC7 663 NIGHT PRAYING AND ITS EFFECT TO QUALITY OF LIFE IN AGING**  
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Aging in Indonesia now reach 11% of total population. so it is needed to increase his/her quality of life (QOL), to reduce the burden of worker dependent ratio. Since Moslem is 85% of the population, and aging condition tended to raise the spirituality and moreover its enthusiasm is better in women aging, the research was conducted in organisation of fatayat (special for women moslem adult), affiliated to the Nahdlatul Ulama, which was the biggest Moslem NGO. Research question: what is the effect of regulatory night praying in aging? Is there any difference effect with in teens/adult like Psychoneuroimmunology theory? We conducted the quasixperimental pre-post design study and this was analysed in multi variate and would become as preventive treatment to worsen condition in aging. All of respondent are 43 member of board of east java branch of fatayat NU, who live in Surabaya, and more 60 years old. All was informed consent and agreed to volunteer. They agree to conduct night praying for 2 rakaat (the essential unit of praying ritual) every night at 2.00-3.30 dawn for 3 months. before and after intervention we examined the clinical and laboratory. We used telephone survey to ask the conduct of night pray and its symptom effect. Only 19 women could night pray for 1 month regulatory, (regarding to not accustomed, too fatigue etc) and only 11 could passed this intervention. So, the grouped was divided to 2 part, ie. used to be and not to night pray. There was correlation between clinical and laboratory examination result between night pray and not, and between the aging women who have degenerative illness or not. The complaint of pain was reduced, the degenerative illness was less, and cortisol was increased in women who night pray, which means they were eustress, sincere. it could raised the serotonin, epinefrin and endorphin, then give to well psychological effect. It suggest the confirmation between the effect of psychoneuroimmunology in all years of old, and would conform spiritual practice could be as a tool to raise the quality of life in a cheaper way and every day life.

**PC7 664 SOCIAL SUPPORT AND WELL BEING IN PERUVIAN OLDER ADULTS**  
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The last ten years in Peru implied a breakthrough in practice, policies and research in gerontological work, however living conditions in the country show us a great inequality among Peruvians. Our study examined social support (SP) and well-being (WB) in a community dwelling older adults sample in Lima- Peru, and also types of SP. **Methods and Materials:** Participants were 639 older adults who attended senior clubs from different counties of Lima., 60% women , range of age 60-79 , with no cognitive problems assessed with the Minimental. These persons were interviewed to assess four domains of social support ( informational, emotional , tangible and integration) and well being. We used a

spanish version of the Social Support Scale by Neal Krause , previously adapted and a Spanish version of the Morale Scale by Powell Lawton also previously adapted to this population. Correlations between SP and WB were examined within age groups (60-64, 65-69, 70-74, 75-79) and across ages. Results: Initial findings show that correlational analyses revealed positive significant relationships between all four types of SP and WB and also that older adults received more emotional and informational support from their families than tangible and integration support. Conclusion: Our findings initially suggest that SP has an important implication for the psychological WB of older adults, specially in our country with 70% of older adults that do not have real social protection and thus, they are an invisible group for our society and also that people like to advise and encourage other persons very easily but when real help is needed the motivation to aid older adults begin to diminish. We have more data to consider policies and more research to address these social problems.

**PC7 665 THE ROLE OF FAMILY AND FRIENDS IN BEREAVEMENT PROCESS: A QUALITATIVE RESEARCH WITH OLDER WIDOWS AND WIDOWERS LIVING ALONE IN JAPAN**  
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Loss of the spouse is a common life event in late life. Older people who live alone are in a high-risk group for social isolation and it is an emerging issue in Japan to understand the life of older widow(er)s living alone and to provide appropriate support to them. However, little research has been conducted on older widow(er)s who live alone in Japan because traditionally older people who lose their spouses live with their adult children. Recently multi-generational family becomes less common and more and more older people live by themselves. The aims of this study were to examine the stresses older people face after the loss of spouses, and to understand the role of family and friends in bereavement process. Semi-structured in-depth interviews were conducted with fifteen older Japanese living in Tokyo metropolitan area who lost their spouses recently. Grounded theory approach was adopted. The result showed that the common stresses just after the loss of the spouses were financial matters and grief. At this period, children provide various kinds of support to their parents, and friends sometimes caused negative stress, rather than providing support. After a period of time, however, the role of friends appeared to become important. Going out and having fun with friends could distract them from mundane loneliness. They could find new hobbies and new social network through their friends. These functions were hard to be obtained from their children. The study suggested the unique role of friends in the bereavement process. A community program which provide opportunity for social interactions among older people might work as an alternative for the widow(er)s who do not have close friends. In the future study of bereavement, much more attention should be paid to the function of friends.

**PC7 666 ALLOCENTRIC AND SEQUENTIAL EGOCENTRIC NAVIGATION: NEUROPSYCHOLOGICAL CORRELATES AND IMPACT OF AGING**  
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Our aim was to explore if normal aging has an impact on the choice and performance of navigation strategies. 50 healthy subjects (22-89 years old) were evaluated on neuropsychological tests, and on the virtual version of the Starmaze labyrinth. In this task, participants had to learn to navigate to a hidden location having the possibility to use either an allocentric or a sequential egocentric strategy, or both. The task comprised training and probe trials: during the former, subjects were free to use sequential egocentric or allocentric strategies, whereas modified departure points in probe trials allowed to dissociate both strategies according to the performed path. During three following trials, subjects were forced to use egocentric, and then the allocentric strategy. The results showed that it took older adults longer than younger ones to locate the goal (13 vs. 9 training trials) but performance was identical for all age groups at the end of the task. The correlation analysis with neuropsychological tests revealed that the observed slowdown is due to executive and mnemonic deficits. Young subjects used only sequential egocentric or allocentric strategies throughout the task, whereas half of the older adults used either mixed or unorganized strategies in the first part. By the end of the task, distribution of sequential egocentric and allocentric navigation strategies were equivalent. During the following imposed trials, all subjects were capable of correctly using not spontaneously used strategies, showing that old adults were capable of conjoint strategy encoding. Overall, results show that older adults reach exact same performance as their young counterparts after extensive training. This suggests that age affects learning speed but not final performance or strategy choice. We are evaluating use of navigation properties as early indicators of cognitive impairment, by studying navigation performance in normal subjects and MCI patients.

**PC7 667 AGE-EFFECTS IN DISTRACTIBILITY: A MATTER OF PERCEPTUAL OR CONCEPTUAL INTERFERENCE?**  
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Introduction: According to the inhibition deficit account, inefficient attentional control weakens older adults' resistance to distraction (Hasher, Zacks & May, 1999). Distracting information can thus withdraw attention from relevant stimuli. Distractibility has experimentally been measured by comparing response times in control-conditions (target and distractor), with response times in single-target-conditions (target only). Control-trials and single-target-trials differ, however, in both perceptual and conceptual features. In the current study, we examined whether age effects in distractibility stem from visual or conceptual distraction. Methods and materials: Participants were forty younger ( $M = 25$  years,  $SD = 2.5$ , 28) and forty older adults ( $M = 67$  years,  $SD = 4.7$ , 22) not differing in verbal intelligence nor health-status. Participants had to name a green target line-drawing, while ignoring a red distractor. A  $2 \times$  (age group)  $\times$  2 (trial-condition)  $\times$  2 (distractor condition) design was used. Trial condition consisted of control-trials (CO, target and distractor) and single-target trials. Within the single-target trials, distractor condition varied as a nested between-subjects factor (target alone, ST, or target superimposed with nonsense line-drawings, ND). Results: Reaction times on targets were analyzed in a  $2$  (age group)  $\times$  2 (trial condition)  $\times$  2 (distractor condition) analysis of variance. The most important result was a three-way-interaction for age group by trial condition by distractor condition  $F(1, 76) = 9.1$ ,  $MSE = 711.4$ ,  $p < .005$ . The difference in reaction time was greater for older than for younger adults, when CO was compared to ST, but not, when CO was compared to ND. Conclusions: Age effects became obvious, when trials differ in visual features (CO vs. ST), but not, when trials were paralleled for visual features and differed only in conceptual competition (CO vs. ND). It is thus reasonable to conclude that age effects in distractibility stem from visual distraction.

**PC7 668 WELL BEING IN OLDER AGE: FROM FLOW TO EUDEMONIA AND HEDONISM**  
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Introduction: The importance of positive experience, specifically the analysis of the components and determinants of one's well-being, has gained increased recognition by scholars. According to empirical research, well being is related with better coping, lower morbidity and lower mortality. Because of that, in older age well being assumes an increased importance. Recently, some scholars have defended that well being is a multifaceted construct composed by an eudemonic dimension, which focuses on meaning and self-realization, an hedonic dimension, which focuses on happiness and on pleasure attainment and pain avoidance, and by a third dimension which involves the presence of an intrinsically motivated state that results in a deep and intense involvement on the task, the flow. Considering these well being dimensions, the main goals of this study are to analyse the well being levels of the elderly in each one of the three dimensions (subjective well-being, psychological well-being and flow), and to examine the correlations between them in order to explore their conceptual relations. Methods and materials: Participants were 30 elderly (mean age of 71 years old; 46% men and 54% women) recruited on Portuguese senior associations. Data were collected using self-report measures (Portuguese versions), namely the Flow Questionnaire, the Scales of Psychological Well-Being (Ryff, 1989), and the Satisfaction with Life Scale (Diener, 1985). Results: Two types of results are presented: first, a characterization of the levels of satisfaction with life, psychological well-being and flow (measured through the individual levels of involvement, enjoyment, control, concentration and interest), experienced by the participants; second, the correlations between the levels of flow and the others two well being measures. Conclusion: Positive experiential profiles in old age are discussed, considering differences and similarities on well-being dimensions. The role of flow and optimal experience in old age is highlighted, concluding about its impact in healthy life trajectories and in individual and social well-being.

**PC7 669 NATURE OF COGNITIVE DEMANDS MODULES AGE-RELATED REORGANIZATION**  
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Introduction: Neurofunctional reorganization is associated to successful cognitive aging. This reorganization follows both inter- or an intrahemispheric pattern. Cabeza (2002) proposed the HAROLD phenomena to account for the fact that the brain activity of elderly tends to be less lateralized. At the same time the intrahemispheric pattern is also reshaping. Davis and colleagues (2007) reported the presence of a Posterior-Anterior Shift in Aging. Finally, Banich and colleagues's finding (1998) which suggests that the interaction between the two hemispheres represents a flexible mechanism allowing them to couple for high-demanding conditions. Based on these findings, we hypothesized that the aging is characterized by a greater hemispheric coupling in older adults and that intrahemispheric pattern could also be modulated by task difficulty. We thus investigated age-related changes in activation patterns during the performance of a letter-matching task with several levels of complexity using functional Magnetic Resonance Imaging (fMRI). Methods: Sixteen healthy youngs adults and 16 healthy old adults were submitted to an active and a control task. The active one has several levels of complexity based on a "high" and "low"

cognitive level across two variables: decision complexity and attentional load. The control task was a letter-case judgment, similar to the stimuli in the experimental task. Results and discussion: Preliminary analyses show that increasing attentional load is associated with a bilateral activity of the putamen and the middle occipital gyrus (area 18 and 19) in the young adults whereas older adults showed significant activity for additional sites in right and left Parietal Lobe (area 7). For the high condition of decision complexity a direct group comparison showed a greater activation in a number of areas (right insula superior temporal gyrus and superior frontal gyrus) for the older vs. the younger adults suggesting an occipital to temporo-frontal reshaping in aging.

#### **PC7 670 RELATIONSHIP BETWEEN SUBJECTIVE ISOLATION AND SOCIAL CAPITAL**

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Introduction: The purpose of this study was to explore community-related factors associated with subjective isolation among older adults in Japan. Method: The survey was administered between July and September 2008 in Wako-city, Saitama prefecture, Japan. The south area of this city lies next to Tokyo. Data were collected from 25.6% of the whole community-dwelling older adults aged 65 years and over (n=9886). Questionnaires were distributed and returned by mail or by hand of residents in local welfare commission. We asked variables related to local community such as social capital (Fujisawa et al., 2007: civil trust, mutual help, secure and pleasant community environment, etc), neighborhood environment (problems associated with community living such as traffic, access of public transportation, etc) and residential term. Results: 70.1% of residents responded (n=1772, mean age $\pm$ SD: 73.3 $\pm$ 6.3, male: 47.9%). Within subjects who answered to the subjective isolation status, 43.9% reported that they almost never feel isolated from others, 41.7% reported they less likely feel isolated, 14.4% reported they sometimes or often feel isolated. Simple correlation analyses demonstrated that subjective isolation significantly correlated with social capital score, several variables of neighborhood environment and duration of residence, in addition to age, mobility capability, depressive symptom (Geriatric Depression Scale), working status, family composition. After adjustment with other variables (age, sex, depression level, etc), social capital score was still significantly associated with subjective isolation. Conclusions: This study showed a strong relationship between older resident's subjective isolation and social capital. Our results suggest that quantity or quality of community environment including social capital might have an effect on mental health. Considering the possibility that physical and psychological vulnerability increases with age, exploring the most necessary social capital element in communities will be an important theme for further research.

#### **PC7 671 THE INFLUENCE OF HAVING CHILDREN AND THEIR SUPPORT FOR SUBJECTIVE WELFARE OF ELDERLY WHO LIVE ALONE**

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Introduction. In general the relationship between the elderly and the people close to them involves mutual assistance, in addition to that the family relations also meet social and emotional needs. Methods and material. The initial sample consisted of 1805 potential respondents living alone, i.e. approximately 3% of all elderly over 65 living in one-member households in Estonia. The current study (2004–2005) analyses the questionnaire responses of 427 persons. When conducting the research the proportion of the gender and the place of residence distribution of the whole population was taken into account. The data has been analyzed as frequency distributions. Results. Among the respondents 34.8% were men and 65.2% were women. 73.9% of elderly who lived alone had children, incl 75% of men and 71% of women. The children live in the same town or parish for 60% of men and 64% of women. 28% of elderly fathers and 30% of elderly mothers are visited by their children once a week. 38% of elderly men and 27% of elderly women visit their children on average once a month. The children are also those people with whom all men and 99% of women wish to communicate the most. Financial support is received from children by 19% of men and 36% of women. The children (and grandchildren) are also the persons to whom the elderly turn most often for help: 29% of men and 46% of women. When evaluating their state of mind: when they had children 66% of men and 42% of women felt happy; when they did not have children then 7% of men and 33% of women felt happy. In conclusion. Having children (and their support) guarantees for the elderly subjective wellbeing, it is especially important for elderly men.

#### **PC7 672 NEGATIVE PRIMING – EFFECT OF TARGET SELECTION OR RESPONSE GENERATION? A STUDY WITH YOUNGER AND OLDER ADULTS**

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Introduction: In our project we investigate aging effects of selective attention using the negative priming paradigm as investigation tool. Negative Priming (NP) describes the phenomenon of prolonged reactions when people have to respond to a target stimulus that was the distractor stimulus at the previous prime trial. A central problem of interpretation of the NP effect is the lack of agreement about the underlying mechanism. However, the complex pattern of results does not clearly favour inhibition or retrieval based theories. In order to reveal which of the theories can account for the pattern we created a computational model of NP. The model attempts to consider all relevant mechanisms. Various NP experiments have been done to validate the assumptions of the model. One major problem of interpretation of empirical data was that at measures of reaction times target-selection and response-generation processes are confounded. Methods: Therefore we developed an experimental method based on the measurement of eye movements with EOG-electrodes, which allows us to separate the target- and response-selection stage. In our study 32 younger and older adults were instructed to select the target at the priming stimulus at first and after the glance down read the comparison word and respond as quickly as possible. Results: The analyses of target-selection and response-generation times revealed that in general both processes seems to be involved in NP effects. The magnitudes of NP effects are different depending on the factors of aging and response repetition condition. Conclusion: Because a functional aging difference in processing an NP task emerges only at target-selection time, especially older adults have obviously more problems than younger adults to handle distracting information. Concerning the response-generation time the NP effect emerges only if the required response changes from prime to probe independent of the age of the participants.

#### **PC7 673 PERCEIVED SOCIAL SUPPORT IS ASSOCIATED WITH ALLOSTATIC LOAD DIFFERENTLY BY MEN AND WOMEN**

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Introduction: Social support may influence the accumulation of physiologic dysregulation or allostatic load (AL). Puerto Ricans in the United States experience a number of health problems and share many of the characteristics of disadvantaged immigrant groups. Methods: Using linear regression analysis, we examined associations between perceived social support and allostatic load in 1360 participants, aged 45-75 y, in the Boston Puerto Rican Health Study. AL score (range 0-11) was the sum of indicators of high cholesterol, waist circumference, glycosylated hemoglobin, diastolic and systolic blood pressure, plasma c-reactive protein, urinary epinephrine, norepinephrine and cortisol; and low HDL cholesterol and DHEA-S. Characteristics of social networks and perceived benefits from social support were measured using the Norbeck Social Support Scale. Results: Controlling for age, gender, acculturation, and income, social network size or length of relationship to existing members were not significantly associated with AL. Interactions with gender were significant for perception of emotional support (PES) from network ( $P=0.008$ ) and approached significance for perception of tangible aid (PTA) from network ( $P=0.06$ ). PES (mean 14.0 +/- 3.0, range 2-40) was significantly associated with lower AL in women ( $b=-0.053$ ,  $P=0.011$ ) but not men ( $b=0.053$ ,  $P=0.16$ ). PTA (mean 5.8 +/- 2.1, range 0-20) was significantly associated with greater AL in men ( $b=0.17$ ,  $P=0.001$ ), and approached significance in the protective direction for women ( $b=-0.05$ ,  $P=0.10$ ). Conclusions: Perception of support appeared as more important than size or length of connection to social network in relation to AL in these older Puerto Rican adults. However, perceptions of support from social networks differed by gender, with protective effects for women, particularly for PES, but greater AL with greater perceived support among men, particularly for PTA. These results may reflect differing stress responses by gender to the need for and acceptance of assistance. Further studies are needed to clarify these relationships.

#### **PC7 674 AGING AND THE EFFECTS OF EDUCATION ON THE INTER-HEMISPHERIC DYNAMIC FOR WORD PROCESSING: A NIRS STUDY**

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Introduction: Over the last years, education has been consistently related with better cognitive abilities in aging. Recent neuroimaging research showed the presence of a brain's compensatory mechanism in high-educated older adults suggesting the presence of alternative networks subtending the preservation of cognitive abilities in successful aging. However, there is no evidence concerning the effects of the education on hemispheric asymmetries for language during aging. This study investigated the effects of education on hemispheric dynamics of words during aging using Near-Infrared Spectroscopy (NIRS). Method: Ten high-educated younger adults, 10 high-educated older adults, and 10 low-educated older adults participated in this study. All of them were healthy, right-handed and native speakers of French. Participants performed a lexical decision task. Both sources and

optodes of NIRS were placed bilaterally over frontal and temporal regions of brain. NIRS parameters (oxyhemoglobin [O2Hb], and deoxyhemoglobin [HHb]) were analyzed using an event-related paradigm. Results: Behavioural results showed higher error rates for low-educated older participants compared to high-educated young and older participants. NIRS data showed differences occurring in each hemisphere. For the right hemisphere (RH), an O2Hb increase was observed for both young and high-educated older adults relative to low-educated older adults. An HHb increase was also observed for both low- and high-educated older adults relative to younger adults. In contrast, no difference was found in the left hemisphere (LH) between groups of participants for both O2Hb and HHb. Conclusion: These findings provide evidence of the effects of both education and age on brain's hemodynamic parameters. The increase of O2Hb and HHb in the RH for high-educated older adults is compatible with the idea of the presence of a compensatory mechanism allowing to maintain their performance. In conclusion, the increased involvement of the RH for language with age might be linked with preserved performance.

**PC7 675 COGNITIVE ENHANCEMENT AMONG OLDER ADULTS: AN INTEGRATED APPROACH**  
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Cognitively healthy older adults are likely to have a better quality of life and hence may be able to afford independent living and successful aging. Researchers, after decades of work, across disciplines, have produced convincing evidence demonstrating positively influences of cognitive capacities and performance among older adults. Henceforth, the "theorem that cognitive decline is inevitable" may not necessarily be true." Latest research proves that brain has plasticity character, which can be enhanced through physical, mental, and social activities that in turn directly/indirectly engage cognitive abilities (Mahncke et al., 2006; Yang, Krampe & Baltes, 2006; Salthouse, 2006). Physical activities such as aerobics, fitness exercises, yoga, walking, etc. are linked to improved cognitive functioning, self-confidence, better coping strategies to stress, and psychological well-being (Singh-Manoux, Hillsdon, Brunner, Marmot, 2005; Taylor, Salles, & Needle, 1985). Brain-plasticity-based training programs produced significantly superior improvement in generalized measures of auditory, attention and speed processing (Smith, et al., 2006). Creative and intellectually engaging tasks are positively correlated to psychological well-being, dealing with life stressors, and healthy living. Social interaction (social contact) was found to be a significant predictor of cognitive functioning. Also, physical activity, social networks, and engagement have positive influences on cognitive functioning and social competence (Vance, Wadley, Ball, Roenker, and Rizzo, 2005). Positive/supportive social interactions can significantly improve working memory and speed processing abilities of the brain (Ybarra, et al., 2008). These research trends will have immense impact on gerontological practice models, which need to be conceptualized in an integrated way. The current approaches to research and practice are fragmented and lack unified perspectives on cognitive aging. The presentation is based on the content analyses of research studies focusing on physical, mental (cognitive), and social (including civic) engagement activities involving older adults. Summarized results of the analyses of past research are conceptualized into an integrated model for practice with older adults.

**PC7 676 AGING AND THE CONVIVIALITY WITH THE CONTEMPORANEOUS TECHNOLOGIE IN THE COMMUNICATION**  
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L. GIORDANO

The technological innovations have been allowed to enlarge and to differentiate the communications that are more and more sophisticated, so they bring inquietude and social and cultural changes. It is questioned: how it is to age at the beginning of 21th century, considering the conviviality with the advance of the technology in the communications? This question was cut out of the research: "Space of Memories – images, words and feelings: body/sexuality and the subjective position in aging at the beginning of 21th century", it is characterized for being a qualitative study. The delineation of this research was its transversal cut study. The participants (30) had been selected by intentionality, in view of criteria: the aged with more 60 years old, professors and/or students in an university of the Northeast Region of the Rio Grande do Sul. The semidirected interview was an used technique in view of objectives of the research: to identify the present subjective position in aging, regarding oneself as the social conviviality with the fast development of the technology in the communications to propose actions and interventions that promote the creative and responsible subject for its health in aging. The findings are being treated and they are interpreted from the communication and psychoanalysis' theoretical contributions. The partial results point two subjective positions of aged: (a) unrest generated by conviviality with the digital technology; (b) autonomy and engagement with the innovative process of communication.

**PC7 677 ADULT LITERACY AND LEARNING IN HEALTHCARE**  
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The relationship between literacy and health outcomes are well documented in adult medicine, yet specific causal pathways are not entirely clear. Despite an incomplete

understanding of the problem, numerous interventions have already been implemented with variable success. Many of the earlier strategies assumed the problem to originate from reading difficulties only. Given the timely need for more effective interventions, it is of increasing importance to reconsider the meaning of health literacy in order to advance our conceptual understanding of the problem and how best to respond. One potentially effective approach might involve recognizing the known associations between a larger set of cognitive and psychosocial abilities with functional literacy skills. We review the current health literacy definition and literature and draw upon relevant research from the fields of education, cognitive science, and psychology. In this framework, a research agenda is proposed that considers an individual's health learning capacity, referring to the broad constellation of cognitive and psychosocial skills patients or family members must draw upon to effectively promote, protect, and manage theirs or a loved one's health. This new, related concept will ideally lead to more effective ways of thinking about health literacy interventions, including the design of health education materials, instructional strategies, and the delivery of healthcare services to support patients and families across the lifespan.

**PC7 678 SPEED OF INFORMATION PROCESSING AS A GOOD PREDICTOR OF AGE-RELATED EXECUTIVE DECLINE IN NORMAL ADULTS**  
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Aging of executive functioning is actually well documented and considered to be informative about adult age differences in cognitive functioning. Executive functioning can be broadly defined as control processes responsible for planning and monitoring other elementary cognitive operations. Miyake et al. (2000) have argued that executive functioning can be fractionated in at least three separable component processes: updating of working memory, shifting attention between tasks or task elements, and behavioral inhibition. The real contribution of executive functioning in age-related cognitive decline is controversial and still questioned (e.g., Salthouse et al., 2005). According to the micro perspective of cognitive aging, frontal executive functioning would be specifically impaired by aging. By contrast, the macro perspective considers that the age-related effects on cognitive tasks can be explained by the decline of a broader factor such as speed of information processing (Salthouse, 2004). The aim of this study was to determine the percentage of variance explained by speed of information processing in age-related decline observed in several executive functioning tasks. Twenty eight elderly (17 females and 11 males,  $M = 70.8$  years) and 28 young adults (17 females and 11 males,  $M = 22.7$  years) performed a battery of nine tasks. The "inhibition" function was evaluated through the random number generation test, the Stroop task and the stop task. The "updating" function was assessed through the letter running span task, the spatial running span task. The "shifting" function was evaluated through the Wisconsin card sorting test and two reaction time tasks involving switching between two tasks. The speed of information processing was measured with a highly compatible two-choice reaction time task. Results showed that choice reaction time performance explained the major part of the variance of age-related cognitive decline observed in all the tasks involving executive functioning except for the spatial running span test.

**PC7 679 INHERITANCES GAMES: DONORS AND HEIRS MATERIAL VALUES IN INTERACTION**  
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Introduction: Material inheritance distribution involves donors and heirs in a process that comprises practical decisions but also constitutes a crucial course in the family development of the sense of continuity and identity. Literature suggests the need to develop comprehensive approaches to understand the factors influencing this process, like attitudes and (material) values. Previous research has focused on descriptive variables, neglecting donors' and heirs' perceptions and expectations. This exploratory study examines donors and heirs material values and how those values impact their relationship in the context of the material inheritance management. Methods and materials: Data from 100 subjects (50 donors and 50 heirs) were obtained through a questionnaire involving the following instruments: i) Material Values Scale (Richins & Dawson, 2004); ii) Money Ethic Scale (Tang, 1995); iii) Money Belief and Behavior Scale, (Furnham, 1984); iv) affective valuation of possessions adapted from the Self-Confrontation Method (Hermans, 1992). Data were analysed through descriptive, comparative and correlational statistics. Results: Main findings suggest that: i) material possessions are connected to self-actualization motivations, expressed in feelings such as self-esteem, personal strength and happiness; ii) donors tend to be more materialistic, relate possessions to success and are centred in money savings; iii) heirs are less materialistic than donors, relate possessions to happiness and also emphasize the money saving (but less than donors). Conclusion: Emotional experiences towards possessions are willing to frame the interactions between donors and heirs in a silent game of entitlement and obligation where each part attempts to satisfy their (financial/emotional) motivations and needs. This game may launch the family in a context of distrust, insecurity and veiled resentment (misunderstanding), activating

conflicts and family dissatisfaction; however it also represents an opportunity to express filial and parental maturity.

**PC7 680 RELATIONSHIP BETWEEN WORKING MEMORY AND EMOTIONAL EPISODIC MEMORY IN JAPANESE OLDER ADULTS.**

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**INTRODUCTION:** Some studies revealed that the cognitive function enhances retrieving positive information. This study examined the correlation between working memory and emotional episodic memory. **METHODS and MATERIALS:** The participants were 42 older adults (Mean age= 71.7). The material was 90 non-emotional words and 90 word-paired emotional pictures. The pictures were selected from the International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 1995). All stimuli were equally divided by the standardized emotional valence of pictures into positive, negative, and neutral conditions. The participants were asked to remember the 45 paired stimuli (15 positive, 15 negative, 15 neutral) from each condition in leaning session. In learning session, the stimuli were presented in every 5 seconds at random. After the learning session, participants asked to recall the presented words. Working memory was assessed by the arithmetic and digit span, letter-number sequencing in WAIS-III. **RESULTS:** There was not significant difference at memory performance in the negative condition ( $M=3.12$ ) and in the positive condition ( $M=3.71$ ). However, there was significant positive correlation between working memory and memory performance in the positive condition. **CONCLUSIONS:** These results suggest that older adults need more working memory when retrieving positive information than when retrieving negative information.

## Track D - Social Research, Policy and Practice

**PD7 681 THE CONCEPT OF LIFE PROJECT IN GERIATRICS**  
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The project is very fashionable nowadays, and the aged personnes are no exception. The most part of rest homes or long care units laud today the life project, in its collective or individual form. One can wonder what is the meaning of that very contemporary preoccupation, in a World that generally mistreat its elders. The residents of a nursing home have been questionned about objectives of their life project, in order to add it to their living contract, to improve care and life quality. More than thousand « projects » or « wishes » have been collected. As only a few personnes could answer (because of age or disease), most of the time, the nurses ought to formulate the project they thought the residents had. We have classified and analysed the results by theme, frequency and redaction. We found four large project types, care projects rather than life projects, that are corresponding to the fundamental needs of human being that are described by the first care theorists, long ago. Only nine projects should be considered as real life projects, according to the characteristics required : space, time, conception and realisation. Our analysis brought to light the difficulty for aged personnes, especially when they are diseased and enclosed, to have and formulate a project, and also the very important impact of collective representations on the way the nurses imagine the life project of a resident. The observations emerging from that study are showing the way our society considers its elders, bringing to light the contradictions between project and retirement, individual liberty and collective constraints, life project and near death. Finally, the project is rather societal, rehabilitating an ethic reflexion that could give sense to the concept of life project of very aged personnes.

**PD7 682 PSYCHO-SOCIAL FACTORS AFFECTING ELDERS' MALTREATMENT IN LONG-TERM CARE FACILITIES**  
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The purpose of the current study was to examine and analyze the major variables affecting elders' maltreatment in nursing home residents. The study was based on two theoretical paradigms (Theoretical model for predicting causes of maltreatment elderly residents developed by Pillemer (1988) and the Theory of Reasoned Action developed by Ajzen & Fishbein, 1980) for understanding decisions made by staff to mistreat older nursing home residents. The research population consisted of staff of 22 nursing homes in Israel. Six hundred questionnaires were distributed to these facilities and 510 were completed and returned. In addition, 24 questionnaires were distributed among directors of the facilities, and 22 were returned. The findings indicate that slightly more than half of the staff sampled reported abuse of elderly residents over the past year, involving one or more of types of maltreatment. The total number of various types of maltreatment reported was 513. About two-thirds of the cases were incidents of neglect. 70% of the respondents reported that they had been present at incidents in which another staff member abused an elderly resident in one or more types of maltreatment, while in such situations mental abuse and mental neglect were the most prevalent forms of maltreatment. The findings show that staff attributes, i.e., the degree of emotional burnout and resident traits, i.e., their

cognitive status (dementia) impact physical and mental abuse; while institutional features, i.e., staff turnover rate and staff characteristics – their level of emotional fatigue – impact physical and mental neglect. Finally, resident traits, i.e., their dementia, are the most significant variable influencing the total number of maltreatment cases. This is the first study that examines elder maltreatment in the long term care population in Israel. The research findings lead to an expanded and improved research model for investigating maltreatment of elders.

**PD7 683 VIOLENCE AGAINST AGED PEOPLE: OCCURRENCES, VICTIMS AND AGGRESSORS**

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**Introduction** Collecting data from Health, Police, Public Ministry and Aged-dial in the 27 Brazilian state capitals. Violence is relational and complex, both in the structure and institutions as well as in the familiar relations, in a relation of asymmetric force that denies the other and brings suffering, in general, kept in silence. **Method** The descriptive research of violence incidence against people over 60 was carried out in quantitative and qualitative way in database of 27 capitals with occurrences, victims and aggressors. Results In 2005 there were 61,930 occurrences in general with diversities of profiles in each capital. The death rate by external causes in aged people in hundred thousand inhabitants varies from 65,75 to 272,29 (2000), being traffic accidents that kill more men than women and admission in hospitals caused by falls affect more women. There were 15,803 occurrences of intrafamilial violence: physical violence places between 30% and 75% of the denunciations in 10 capitals; psychological violence between 20% and 50% in 14 capitals; the financial violence places in 12 capitals between 20% and 50%; the abandon is situated between 10% and 19% in 10 capitals and negligence between 10% and 50% in 13 capitals. Most of the victims are women 60%. There are aged victims from 60 to 101 years. Most of the aggressors (57,46% in average) are their sons and daughters, followed by grandsons and granddaughters with variations from 4,5% to 23,9% and the average of 9,45%. **Conclusion** The types of denunciations vary according to the denunciation place with predominance of physical violation in the police, financial violence in the justice and the abandon in the Social Assistance. The social violence expresses itself in the mortality and admission in hospitals by external causes and intrafamilial violence, multiple and complex.

**PD7 684 HOW COMPETENT ARE HOSPITAL CLINICIANS PERCEIVED TO BE IN MANAGING THE CARE OF OLDER PEOPLE?**

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**Introduction:** The extent to which anecdotal reports of unsafe hospital clinical management practices concerning older patients occur were surveyed along with long-term care providers' views on whether standards set in national statements on best practice for hospital care of older people are met. **Methods and materials:** A national survey of aged care service providers sought information on safety and quality associated with local hospitals providing acute health services to residents. 371 responses from across Australia and including metropolitan and regional areas (Estimated response rate 55%). Mixed method approach included descriptive analysis using SPSS and thematic analysis of optional comments. **Results:** Quantitative - Problem areas identified by health professionals external to hospitals include: Timing of patient transfers from hospitals (70.89%); Coordination problems (51.21%); Information on patient's condition (72.51%); Appropriate hospital management of mental confusion (41.42%); Nutritional status of patients on discharge (28.30%); Skin integrity status of patients on discharge (66.04%); Adequate documentation of clinical treatment in hospital (78.17%); Information provided by hospital clinicians to families (50.67%); Medication regime prescribed prior to patient discharge (63.43%). Concurrent evaluation of hospital performance against national standards revealed an equally poor result. Qualitative - Accounts of clinical care in specific situations indicate a perceived culture of dismissiveness by nursing and medical clinicians of the care and safety needs of older patients. Justifications used to respond to these examples of neglect include workload pressures and clinician judgements of older patients' eligibility for hospital access. The larger the hospital the more likely these attitudes are observed by colleagues external to the hospital. **Conclusions:** Responses by aged care professionals provide insights on hospital performance related to care and safety of older people. The issues identified here provide a basis upon which to build effective consultation and safe care.

**PD7 685 HEALING BROKEN WINGS – BEST PRACTICES FOR TACKLING ELDER ABUSE OUTCOMES OF AN INTERVENTION MODEL**

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Dealing with elder abuse calls for a diversity of interventions (psychosocial treatment, legal intervention, supportive services, etc.). The presentation describes findings and outcomes of an evaluation study of an intervention model developed and implemented in Israel from 2005–2008. **Goal:** To examine the implementation of the model and its contribution to the reduction of elder abuse and the collateral damage. **Population:** (1) 558 elderly victims exposed to abuse and neglect who participated in the program; (2) 22 professionals – social workers and professional partners in the community.

Instruments: Intake questionnaires; periodic evaluation questionnaires; in-depth interviews with victims, abusers, and professionals; observations of a supportive group; multidisciplinary teamwork. Findings: The most widespread type of intervention is therapeutic counseling (victims and abusers). Over a third of the victims received supportive services. Legal intervention was used in a similar percentage of cases. In almost two-thirds of the cases, an improvement was reported. Victims described the improvement in terms of reduced offending behaviors and of being more assertive towards abusers. The abuse stopped altogether in 20% of the cases. In cases of neglect, there was a 72% improvement. Legal intervention yielded the highest improvement rate. Social workers reported they had acquired expertise and knowledge. Their work became more methodical and they implemented a range of interventions. Partnerships between social workers and other professionals in the community were enhanced and strengthened. Conclusion: Calling on a multidisciplinary team of professionals using a combination of diverse intervention methods and a variety of services can lessen the damage caused by the abuse and help to heal victims' wounds. Key words: Elder abuse and neglect, intervention model, evaluation, outcomes.

**PD7 686 GEOGRAPHICAL VARIATION IN HEALTH OUTCOME AND HOSPITAL SERVICES UTILIZATION AMONG THE ELDERLY IN HONG KONG**  
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Introduction: Geographical variation in health outcome has been explored relatively rarely in relation to the hospital services usage. The purpose of this study was to capture the spatial variations in health status and health services utilization in the elderly population using Hong Kong data. Materials and methods: A secondary analysis on a database from the Hospital Authority (HA) which covers 98% (N=243,245) of the total deaths in Hong Kong during 1999 to 2005 was conducted. Deaths at age 65 and above (N=184,671) were included in the analysis. Standardized mortality ratios (SMRs) adjusted for age and sex were calculated for each of the 18 districts in Hong Kong. The variation in utilization by the elderly was analyzed across districts in terms of the utilization ratios determined by the length of stay in HA hospitals, number of inpatient admission, numbers of visits to specialist outpatient clinics, and attendance at accident and emergency department. Results: Deaths at age 65 and above contributed to 77% of the total deaths in the dataset. The number of deaths varied from 1% to 9.1% across districts. Spatial analysis of SMR showed a significant variation in mortality: SMR in districts such as Yuen Long, Kowloon City and Tsuen Wan were almost 30% higher than the average of Hong Kong, while the SMRs of Islands, Sai Kung and Kwun Tong districts were 20% lower than the average. Health services utilization varied geographically with a difference in utilization ratios ranging from 35% to 44%. However, the pattern of these variations depended on the types of service being analyzed. Conclusions: Mortality and health services utilization in the elderly citizens demonstrated substantial spatial variations in Hong Kong. This descriptive geographical analysis may help signposting to the locations where further public health investigations can be beneficial to them.

**PD7 687 WHAT SHAPES THE DWELLING-TYPE CHOICES OF OLDER CANADIANS? AN INVESTIGATION USING THE AGING AND SOCIAL SUPPORT SURVEY (GSS16)**  
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Introduction As the Canadian population ages, a growing proportion of people will enter their elder years. Naturally, this will have many consequences, and has become an area of growing policy concern. There have been extensive debates about the impact of this change, ranging from discussions about issues that directly affect seniors, such as how health and wellness will be maintained in the face of increased longevity, to issues that affect all Canadians, such as the pressure that an aging population puts on the health care system, other government services, and the Canadian labour market. This study determines how an aging population will impact housing in Canada. Methods and Materials The purpose of this study is to identify some of the factors that predict the distribution of Canadians 55 and older across three private residential dwelling types. It uses the 2002 Aging and Social Support Survey (GSS16), multinomial logit regression, and cohort-component projection techniques to identify how social support networks, health, and economic characteristics can be expected to shape the residential choices of older Canadians in the coming years. It focuses in particular on the distribution of 55-75 year olds across three private dwelling types from 2002 to 2022: 1) general community living; 2) age-restricted housing; 2) age-restricted housing with nursing care. Results The main conclusion of this study is that social support characteristics are the strongest predictors of dwelling type. Individuals appear to choose their dwellings according to their social needs and wants, rather than just their economic or health characteristics. Conclusion There will be increased age-specific demand for all dwelling types in Canada in the future, but a

reduction of over 2 million people leaving dwellings without an age requirement between 2002 and 2022. Public policymakers have done little prepare for this crisis.

**PD7 688 RECENT TRENDS IN MORTALITY RATES FOR CEREBROVASCULAR DISEASE IN THAILAND, 1998-2006**  
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Introduction: In Thailand, the mortality rate for coronary heart disease (CHD) or cerebrovascular disease (stroke) has increased between 1991 and 1996. Especially, stroke has become the more frequent cause of disability in the older age groups. Thai older population is also growing faster than the growth of the total population. The increase in the Thai population aged 60 years and older might have been expected to precipitate an increase in absolute number of death and disability from stroke. It affects health and long-term care needs. This study aimed to examine trends in age-specific and age-standardized mortality rates for stroke in Thailand. Methods and materials: Mortality data during 1998-2006 were analysed based on ICD-10 for stroke from Bureau of Health Policy and Planning, Ministry of Public Health. Both five-year age-specific and age-standardized mortality rates per 100,000 were calculated and descriptively analyzed for trends. Results: During 1998-2004, age-standardized mortality rates for stroke increased from 10.29 to 38.93 in male and 7.66 to 29.93 in female. Thereafter it shows sharply decline trends in 2006. For each year, stroke mortality rates increased with age and peaked at age-group 60-84. In 2006, the highest mortality rates were 24.44 and 19.37 for male and female, respectively. Conclusion: The stroke mortality rates had increased at least twofold in 8 years for both sexes. Interestingly, the mortality decline during 2004-2006 has been attributed to the use of antihypertensive agents. The increase in mortality might be explained by increased risk factors such as hypertension, smoking, obesity, and aging population. With the high stroke mortality rates, Thailand should increase its effort in controlling and reducing the coronary risk factors by promoting healthy behaviors such as physical activity and healthy diet.

**PD7 689 CENTENARIANS AND HEALTH IN AUSTRALIA**  
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•INTRODUCTION: The global phenomenon of ageing societies highlights the need to understand the health implications of and for our very oldest citizens. Many key actors including governments, policy makers, service providers and families will benefit from increased knowledge of the health status of the oldest old. As there is a dearth of information on this topic in Australia, the purpose of this paper is to begin building an information database on health and ageing of the aged population, especially those in their 9th, 10th and 11th decades of life. The current work in progress focuses on centenarian functional status, living arrangements and aged care service use. It also compares centenarians with octogenarians and nonagenarians. •METHODS AND MATERIALS: The data are drawn from confidentialised records of the Australian Aged Care Assessment Program and include first assessments for 14000 persons aged 80+, including 109 centenarians. Descriptive statistics are used to illustrate their characteristics and service recommendations. Logistic regression is used to identify predictors of living arrangements and recommended services. •RESULTS: Reflecting differential survival by sex, centenarians are predominantly female and widowed. More than half are mobile (60%), continent (51%) and aware of time/place (65%); these functional abilities are correlated with each other but are not related to sex and marital status. Disability, especially continence, is associated with institutional residence. Marital status is also a predictor of institutional residence unless multiple disabilities occur. Centenarians are more disabled than octogenarians but not always more so than nonagenarians. Age is a significant predictor of recommendations for several aged care services for centenarians living in the community after controlling for living arrangement. •CONCLUSION: Further research is needed to understand the relationships between age, functional ability, living arrangements and recommended aged care services for our oldest old citizens.

**PD7 690 A RESEARCH ON THE EFFECTS OF THE CLOTHES OF OLD WOMEN ON THEIR PSYCHOLOGY IN TERMS OF SOCIAL RESPONSIBILITY**  
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 G. ABANOZ(1) - (1) University of Düzce (Düzce, Turkey)

Consequently, although it was impossible to stop the ageing process, it was observed that human life was lengthened through health policies. When the improvement in living conditions and the increase in average life span are considered, it is clear that the problem of clothes will affect specific consumer groups more. It is not an acceptable that individuals having separate life stories and experiences are isolated and forced to withdraw to seclusion. The process of ageing brings along numerous physiological and psychological changes. In old ages, biopsychological regression is inevitable so the quality of life can be spoilt. A lot of studies must be done to increase the life quality of old people and to make social harmony

effective and continuous. This may be a sign of the development level of that society. This research was limited to women over the age of 65 who live at homes for the elderly and in their own family environment. The data of the study include data and related sources that were obtained through a survey form of 26 questions administered to 62 women over the age of 65 in order to determine their needs and problems about clothes. The obtained data were compared using statistical methods to determine the differences between the old people residing in the homes for the elderly people and old people living with their families. While a piece of clothing is being designed, the aim should be to provide physical comfort, decrease psychological problems, increase self-confidence, and ensure their acceptance in the society and their social harmonization. In this context, it is crucial to determine the problems, demands and needs of old women that form a special consumer group related to clothes, and designing and manufacturing clothes of optimal functional characteristics for them.

**PD7 691 AGEING, EPIDEMIOLOGIC TRANSITIONS AND DEMENTIA IN FOURTH WORLD ABORIGINAL AUSTRALIA**

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Introduction: Australian Aboriginal people, both remote and urban living, have high mid-life mortality rates from systemic diseases and a large life expectancy gap of around 17 years compared to the general Australian population. Remote Aboriginal Australians in the Kimberley Region have recently been shown to have the highest recorded rates of dementia, most commonly Alzheimer's disease, in any studies in the world literature. We have reviewed and compared epidemiologic transitions in Aboriginal and in non-Indigenous Australians to examine why urban Aboriginal people, who form the large majority, have high systemic disease rates, with the hypothesis that they also have high dementia prevalence rates. Methods and Materials: Using a life cycle approach we have conducted a major literature review of Aboriginal ageing, cognition and dementia; are undertaking a NHMRC funded study examining dementia prevalence in c. 700 urban Aboriginal people aged 45 years and over assessing both social and biological determinants of health - to explore the high levels of dementia risk factors in urban Aboriginal communities. Results: From the 1990s, Aboriginal fertility is falling, survival is increasing and absolute numbers of older people are rising as a result of recent improvements in Aboriginal health; however this is occurring 50 years after the classic or western epidemiologic transition to delayed chronic systemic diseases. A new transition to neurodegenerative diseases characterises population ageing this century. A combination of persistent socio-economic and educational disadvantage in childhood/early-life and high chronic/vascular disease rates in mid-life, is likely to accelerate the epidemiologic transition to neurodegenerative diseases as Aboriginal people age. Conclusions: High dementia rates in Aboriginal Australians, occurring despite current improvement in health status, reflect the combination of educational disadvantage and a delayed epidemiologic transition to mid-life vascular diseases, producing an accelerated epidemiologic transition to neurodegenerative diseases.

**PD7 692 THE ELDERLY SUICIDAL GENRE IN BRAZIL**

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Introduction- Considering is a individual act,with a great psicological and social impact not only for the family,society,but also for the healthy professional who takes care of it,we found necessary to disseminate all the precious information we have.We choose to explore:"The Elderly Suicidal Genre",which we expected to contribute in relevance,bringing it to a never and greater visibility. Aim- To quantitatively analyze elderly suicidal mortality by genre,in selected Brazilian States,during the period of 2000 a 2005. Method- Demographic data,for individuals older than 60 years obtained from the Brazilian Institute of Geography and Statistics(IBGE),for the period of 2000 a 2005.Results-Our results show that 60% of the 16.5 millions Of elders in Brazil are concentrated in Five States: 1)Sao Paulo(23%),2)Rio de Janeiro(11%),3)Minas Gerais(11%),4)Rio Grande do Sul(7%) and Bahia(7%).From those,57%are women.16% of elderly mortality is attributed to suicide,with a predominance of males committing suicide(82%).A growth in suicide among elders in all the studied states was found,except in Rio Grande do Sul.The following,increase in females suicide is found at Bahia(25%),Minas Gerais(45%),Sao Paulo(7%) and Rio de Janeiro (7%).Conclusion: Even though a higher percentage of elderly suicide is found in male,the amount of female has grown in the period between 2000 a 2005.The dissemination of this information is extremely important for professionals who take of elders as it can play an important role in the diagnose of the conditions which contribute to risk factors for suicide.This may also aid the prevention of suicide or stimulate a creation of new public policy strategies.

**PD7 693 AN AUSTRALIAN PERSPECTIVE ON HOME EQUITY RELEASE PRODUCTS FOR OLDER PEOPLE: PANACEA OR THREAT TO AGEING IN PLACE?**

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Equity associated with home ownership can only be accessed in later life by property sale; through traditional home equity loans, which require regular payments; or through an equity release product, which requires no repayment until death or voluntary relocation. Reverse mortgages and home reversion schemes present both significant risks and benefits for older home owners. The measure of these risks and benefits appears to depend on a variety of factors, including contract terms, legal requirements, the consumer's use of the proceeds, the amount and manner in which the proceeds are paid, and unpredictable economic changes and life/independence expectancies. In addition to potential contractual issues, the type and conditions of a particular product may change a consumer's eligibility for government benefits and trigger tax liabilities. Australian reports on Ageing in place and intergenerational and intra-familial transfers indicate that a shift in values and priorities was evident with a number of older persons expecting to access home equity prior to death. Reverse mortgages and home reversion schemes present both significant risks and benefits for older homeowners. The multi-method research design employed in this Australian Housing and Urban Research Institute research project involved four overlapping phases: literature review, legislative review, data analysis, and focus groups and interviews. During each research stage, a user group (including policy makers, methodologists, content specialists) reviewed and commented on the research approach and the model development. This presentation reports on the potential advantages and disadvantages of our current equity release products by comparing them with outcomes and by making international comparisons. A synopsis of outcomes based on data triangulation will be used to comment on how policy initiatives could be better employed to shape equity release products outcomes for older consumers in order to maximise well being and ageing in place outcomes.

**PD7 694 EVALUATING POLICIES THAT SIMULTANEOUSLY TARGET SEVERAL CHRONIC DISEASES IN AUSTRALIA'S AGEING POPULATION**

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Introduction: Chronic diseases - eg heart disease, cancer, diabetes - affect around 80% of older Australians, are the main causes of disability and premature death, and account for 70% of health expenditures. Australia's population is ageing, so in future both the prevalence of chronic diseases and the related treatment costs are expected to increase considerably. We will report on a new person level model-system able to account for multiple chronic diseases (comorbidities) that Australians may acquire as they age. Under different assumptions about the rate at which Australia's population ages, we will simulate policy interventions that simultaneously target several chronic diseases. Methods: The chronic disease model-system we developed links disease-specific progression sub-models to an 'Umbrella' microsimulation model representing the Australian population. The current version considers type 2 diabetes, cardiovascular disease (CVD), and CVD as a complication of diabetes. It projects 20 years ahead and accounts for individuals' demographic, socioeconomic and health-risk-factor characteristics; progression of their health status over time; their number of chronic diseases; their quality of life; and health-related expenditures. Also, it estimates the costs and the benefits of simulated policy interventions. Results: Under different assumptions about the rate of population ageing, we will report on simulations of a 'life-style-change' policy intervention. The simulations will simultaneously account for people with diabetes only, CVD only and with CVD as a complication of diabetes. We will estimate the extent to which intervention-induced adoption of healthier lifestyles is likely to attenuate the impact of population ageing. Conclusion: Accounting for multiple chronic diseases at the level of the individual allows improved predictions of the health, quality of life and expenditure implications of population ageing.

**PD7 695 LONG-TERM CARE INSURANCE IN GERMANY IMPLIES PATTERNS OF LINKAGES AMONG BENEFITS AND SOCIO-ECONOMIC INDICATORS**

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Introduction: This study examines the public Long-Term Care Insurance program in Germany in view of socio-economic indicators, and shows linkages among benefits and socio-economic characteristics. Methods and materials: A principal component analysis was conducted using variables related to LTCI from Statistisches Bundesamt Deutschland. Results: Four interpretable significant principal components were found. Component I; High positive loadings had "nursing-home staffs", "monthly income of white-collar and blue-collar workers", "nursing-homes at care level 1, 2 and 3" and "nursing-homes". High negative loadings were "unemployment", "females and male needing care" and "home-care service facilities". This demonstrated a relationship between individual economic strength and care. Component II; High positive loadings were "home-care services at care level 1 and 2", "home-care service staffs" and "home-care service facilities". High negative loadings were "care allowances" and "population". It was associated with the availability of home-care services. Component III; High positive loadings were "nursing-homes at care level 1 and 2" and "nursing-homes". A highly negative loading was "home-care services at care level 3". This expressed factors related to the use of nursing-homes. Component IV; Positive loadings were "males and females needing care" and "using nursing-homes at care level 3". A highly negative loading was "aging of population". It

was related to aging and the need for care. Conclusion: Economic strength appears to be the most important factor in deciding care in Germany by Component I. People with economic strength seemed to prefer care at nursing-homes to care at home by Component I and III. People seemed to prefer using professional care at home to using care allowances at home by Component II. The number of people needing care tended to decrease, though the aging population continues to increase by Component.

**PD7 696 COST OF THE TREATMENT OF HYPERTENSION IN A GERIATRIC POPULATION: EPROSARTAN VERSUS DIURETICS**

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**Background:** Diuretics are considered as first choice in treating hypertension in the elderly because of their clinical efficacy and especially due to their low cost. This feature has been used by health resources managers to promote their use. However, it is necessary when considering the costs of treating hypertension in a population to assess also the side effects that diuretics produce, particularly in the elderly. **Methods and Materials:** Treatment costs of hypertension were analyzed in 220 hypertensive geriatric patients (male and female over 65, mean age 71,8) from the GP office and the Renal unit, distributed into two groups: the first group (N=90) treated with diuretics and the second group (N=130) treated with eprosartan, an angiotensin II receptor antagonist. Patients were followed up for 1 year. **Results:** The response to the antihypertensive therapy was similar in both groups. The costs related to the acquisition of the drugs and the costs derived from the secondary adverse events were included in the analysis. In the case of diuretics, the adverse events increase the use of health care resources due to urinary incontinence, purchase of adsorbents, hyponatremia, and two cases requiring hospital admission. The patient/day cost was 1.05 € for the group treated with diuretics and 0.97 € for those treated with eprosartan. **Conclusion:** When talking about diuretics in the geriatric population the price of the drug over the counter, is not representative of the actual antihypertensive treatment expenditure. According to the results obtained in our study, eprosartan, despite having an acquisition cost higher than that of diuretics, the overall costs of the treatment are not altered; This favours its usage safety, which may possibly contribute to improved prescription compliance. This conclusion should be taken into consideration when thinking about the economic restrictions on the use of drugs.

**PD7 697 BALANCE IN AGED CARE CONSUMER CHOICE OR ECONOMICS OF GOVERNMENT POLICY**

J. PRETTY\* (Aged & Community Services Association NSW & ACT, RHODES, Australia)

**Introduction :** Australia's aged care system is dominated by residential care, with 75% of Government funding and most of its policy initiatives being directed towards this type of care. By contrast, consumer research says older people wish to age in their own home, wherever they determine their home to be. **Methods:** A survey by Aged and Community Services Australia found vacancies occurring in residential care, with consumers indicating their preference to remain at home. A research project the LEK study indicated that the cost of care provided within the community was more expensive than that provided in a residential setting. **Results** A comparison of the outcomes of these results will be discussed along with the choice and demands of future Consumers. The key points discussed in this paper will be: •The changing consumer needs for services. •The appropriateness of current government policies focusing on inflexible models of care. •The future impact of community care, with specific reference to programs providing a very high level of care within the home environment and programs targeting post acute care transitions. •The consumer and government positions on user pay service delivery. •Arguments about the cost of care in residential and community settings. •The separation of care and accommodation to allow informed choices by consumers. **Conclusion** The paper will conclude that there will be a continuing requirement for both forms of institutional care and community based care. However, if services are to meet the needs of an ageing population, government policies must address the economics of the provision of care to meet these needs and allow services to develop that are flexible and will meet the needs of future consumers both for those who are financially secure as well as those who are disadvantaged.

**PD7 698 TITLE: USING PARTICIPATORY TECHNIQUES AS A QUALITATIVE METHODOLOGY WITH GROUPS**

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**Background and Context:** The presenters of this paper have recently trained in participatory research techniques (PRA). PRA research techniques are particularly useful when the researcher needs to gain an 'Emic' understanding of the contexts in which the participants inhabit. Using examples from their own work with older women and Filipino nurses they will demonstrate a variety of techniques will be demonstrated and explained as to where in the research process they may be useful. **Methodology:** PRA research

techniques will include how to develop an understanding of an individual or a group's greatest problem using pie charts. Gain an insiders view of an individual or groups understanding of various social contexts using Emic questioning techniques. Finally using a matrix to find possible solution to causes and problems Analysis: PRA techniques can also contribute to analysis. Each technique must be analysed before moving on to another technique so that an appropriate technique will be used. For example Pie Chart analysis can assist the researcher identify relevant categories in which to carry out a survey or in the development of an interview schedule. Likewise, a matrix can provide the analysis of possible solutions to a problem which has been identified from participants.

**PD7 699 SUPPORTING LIFELONG LEARNING ABOUT HEALTH AND HEALTHY AGING THROUGH DIGITAL TECHNOLOGIES**

L. TREY\* (The University of British Columbia, Vancouver, Canada)

The purpose of this presentation is to address issues of low health literacy among seniors in Canada and the potential of digital technologies to contribute to health literacy. The Canadian Council on Learning (2008) reports that more than 80% of seniors have inadequate health literacy skills. With the development of the web as a source of health information, digital (i.e., multi-modalities of image, sound, text) literacies are vital in sustaining health literacy. With the expectation for seniors to be informed about their health conditions and to be able to participate in decisions about health options, learning how to use web and mobile resources can be critical. The aim of this study is to investigate the value of facilitating seniors' (ages 65 and older) development of digital literacies for accessing and using health services. In this study, a digital literacies workshop (twelve weekly classes) is offered at the National Academy for Older Canadians. Data collection consists of semi-structured interviews, recordings of conversations about health and digital technologies, video observations documenting the nature of seniors' interactions with technologies, and Internet logs. Detailed examination of the interviews and artefacts gathered during workshops provides foundation for identifying (1) factors influencing seniors' learning about health, (2) practical strategies used for enhancing health literacy; (3) the effectiveness of online learning strategies (e.g., web reading about health services, communicating with medical professionals through websites, participating in online community support groups) for accessing health information. The findings will inform and guide educators and policy makers in developing lifelong learning curricula and community programs to address seniors' health and information needs.

**PD7 700 PREPARING THE REMOTE PRIMARY HEALTH CARE WORKFORCE FOR WORK WITH OLDER PEOPLE AND PEOPLE WITH DEMENTIA**

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P. KUIPERS(1) - (1) Flinders University (Alice Springs, Australia)

**Introduction:** There is a need to develop appropriate models of care and service responses for older people in remote and Indigenous communities, and a resultant need for workforce development to facilitate these new approaches. Knowledge translation offers insights into the processes involved in facilitating the uptake of research evidence into practice. **Method:** This paper discusses the challenges present in developing professional development programs for the remote primary health care workforce, drawing on two recent learning programs developed, implemented and evaluated in the Northern Territory, Australia: 1) assessment of client need for home and community care services and 2) recognising and responding to dementia in Indigenous communities. **Results/conclusions:** The paper addresses key considerations for knowledge translation for these settings such as: • characteristics of remote areas (particularly where the needs of older people may not be a priority due to basic public health concerns and the high prevalence of infectious and other chronic diseases); • cross-cultural contexts; • the profile of the primary health care workforce; • difficulties in responding to workforce learning needs where a public knowledge base is inadequate and an evidence base is lacking or emerging; and • challenges presented by geographic and professional isolation. The importance of developing a research and education agenda that is relevant for working with older people and people with dementia in remote and Indigenous communities is highlighted. The paper concludes by proposing key principles for effective knowledge translation which will facilitate changed practice and service development.

**PD7 701 THE ROLE OF THE SOCIAL COMMUNICATIONS DEPARTMENT OF OPEN UNIVERSITY OF THE THIRD AGE, RIO DE JANEIRO STATE UNIVERSITY – UNATI/UERJ IN THE DIFFUSION OF EDUCATION, EXTENSION AND RESEARCH**

M. TEODORO\* (University of the State of Rio de Janeiro, Rio de Janeiro, Brazil)

The information management in an organization is extremely important, since it is a chief means of productivity. Nowadays governmental institutions, corporations and individuals have in their press relations a solid base to better integrate their objectives with their target audiences. Since 1993 UnATI – a Portuguese acronym for Open University of the Third Age – has been developing at UERJ a program aimed at people over 60 years old as a way to contribute to the betterment of not only their physical and mental conditions, but also of their sociability through a number of possibilities made available to them at the University. Given the huge flow of information at UnATI/UERJ, the existence of a formal structure of

communications is justifiable. In order to rationalize and publicize this informational flow produced by either UnATI/UERJ or society, the Social Communications Department was thus implemented in 1998 and, ever since, both formal and informal communication canals between UnATI/UERJ and its target audiences have been successfully developed. To such an end, communication tools are produced, as press-releases and didactical materials used by the university's multidisciplinary teams. By means of a regular and systematic evaluation of routine activities, the Social Communications Department of UnATI/UERJ can be regarded today as an effective tool for the integration of UnATI/UERJ and their target audiences, which has already led to UnATI/UERJ's better social communications as an institution dedicated to education, extension and research. All the activities developed by the Social Communications Department of UnATI/UERJ are therefore seen as real projects considering their magnitude and importance in dealing with issues related to the human aging and elders' dignity as a whole –subjects that are now in vogue among the media.

**PD7 702 FROM RESEARCH TO PRACTICE: KNOWLEDGE TRANSFER IN AGING**  
P. DONAHUE\* (Renison University College, Waterloo, Canada)  
S. HIRST(1) - (1) Faculty of Nursing, University of Calgary (Canada)

Despite the wealth of gerontological research that exists today, there are still problems with getting this knowledge into the hands of policy makers, program developers and health and social service providers. These individuals need this information most to work with and on behalf of older adults and their families. To address this gap, the National Initiative for the Care of the Elderly (NICE), is working to translate existing gerontological research into practical tools that can be used by groups, professionals, and individuals to improve the care for older adults. This is being accomplished through the development of a number of "Theme Teams" working on aging-specific issues. Using a case study approach, this presentation will review the NICE Network's "Caregiving Theme Team" to illustrate one way in which NICE is carrying out knowledge transfer. Highlights will include the process of theme identification, group formation and functioning, the tool development process, and lessons learned.

**PD7 703 CREATING AN ACADEMIC SHIFT IN GERONTOLOGICAL NURSING EDUCATION**  
S. HIRST\* (University of Calgary, Calgary, Canada)  
P. DONAHUE(1), Y. HANEY(2), B. STARES(3) - (1) University of Waterloo - Renison College (Canada); (2) Fraser Health Region (Canada); (3) University of Alberta (Canada)

The population of Canada is aging. Increasing numbers of older Canadians require that today's health care professionals – registered nurses, social workers, and medical practitioners – have a strong educational foundation that focuses on client centred care of older adults. Yet, at the same time, caring for older adults is challenging and complex work that is sometimes plagued by a negative image. Described in this poster is an innovative partnership between the Faculty of Nursing of the University of Calgary, the Brenda Strafford Foundation, and the National Initiative for Care of the Elderly (NICE) to create an undergraduate curriculum for nurses. The outcome is an undergraduate degree program that promotes and celebrates care of older adults. The primary work in developing standards for gerontological education was completed by NICE. A Delphi process was used to identify from the standards, the core content and clinical experiences required by undergraduate nursing students. This knowledge informed the development of a new four year curriculum. In this curriculum, care of older adults is both a thread woven throughout most courses of the program and a distinct theory and clinical course. Faculty members responsible for this initiative quickly realized that they needed to interact with instructors who work with students in the clinical setting, to ensure that they too were informed about gerontological standards of care. Included in this poster is a description of the Clinical Instructors Day designed to both promote content knowledge and positive attitudes in those who work with students.

**PD7 704 THE 3 C'S: COMPETENCIES, CURRICULUM, AND CREDENTIALING**  
B. PIANOSI\* (Huntington University, Sudbury, Canada)

A gerontology dialogue on the challenges of gerontology's future: competencies, core curriculum, and credentialing. Participants contribute to the ongoing debate. There is considerable debate, in the context of a growing older population, regarding the appropriate training and certification of gerontology professionals who will be responsible for providing high quality and safe care to an increasing population of seniors. A major component of this debate is determining what constitutes high quality and safe care, the specific training and competencies needed by gerontology professionals and the possibility of credentialing such a profession. Enlarging on a comprehensive review of the current literature and the investigation of community agency perceptions of the competencies needed to provide high quality and safe care to seniors, this discussion will look at the pros and cons of credentialing gerontology professionals and what the implications of such development would be. Are we ready to make changes to policies, so that organizations and agencies providing services to seniors are mandated to have at least one "credentialed" gerontologist working in their organizations. What would that mean? Objectives of the

session: 1. To discuss the pros and cons of credentialing for gerontology professionals. 2. To outline possibilities for policy development in the employment of professional gerontologists.

**PD7 705 THE QUESTION OF COMPETENCE AND EDUCATION FOR PERSONNEL IN ELDERLY CARE SERVICES**  
P. AHNLUND\* (Social Work, Umeå University, Umeå, Sweden)

Introduction Elderly care has undergone structural changes during the last decade in Sweden. In the case of care for elderly, the 1990s is characterized by restrictions concerning the allotment of help and support. Consequently, elderly care has become more exclusive e.g. fewer elderly are granted support and the care includes more elderly with extensive care needs. The recruitment of care workers has been a problem for Swedish municipalities for some time. The combination of large-scale retirements among care workers and a declining interest in health and care education among students has led to a more general and national concern for future recruitment. Methods and materials The results are based on a qualitative interview study with 29 persons working in the care for elderly. Six of them work as middle managers and 23 as care workers. The aim of the study is to analyze the abovementioned persons' understanding of the meaning of education for care workers. Results and conclusion In relation to the national recommendations established for care personnel with regard to training and education, middle managers in elderly care are in favour to the idea that all care workers should have the auxiliary nurse qualification. However, in the practical work of recruiting staff, the interpretation is that the education lacks legitimacy because it is not that skill which takes priority. The majority of the personnel interviewed agree on that the auxiliary nursing qualification serves no purpose in elderly care. This is surprising, as elderly care has changed character over the recent decades with the result that the work has become increasingly formalised in order to include care for the "oldest old". There is a lack of consensus concerning how general knowledge can be applied in concrete terms and of how the concrete knowledge can be used in practice.

**PD7 706 METHODOLOGIES AND PEDAGOGICAL ACTIVITIES DURING OLD AGE**  
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Introduction: The project aims at Education for the Elderly, evaluating educational techniques and resources available, providing a better way of learning for this kind of group, legitimating intellect improvement, self-esteem and resocialization. More than 100 activities are offered to people who are over 60. They are divided into four thematic areas: Education for Health, Art and Culture, General Knowledge and Foreign Languages, Specific Knowledge on Old Age. Besides the pre-registration in the free courses carried out via modules, more than a thousand vacancies are offered annually. Methods and materials: The practice of checking the learning process by activities developed in the classroom shows that students are aware of what they have learnt. Whenever they have any difficulties, they can ask for the module repetition. The students' reality is dealt with in the courses, and the problems that affect the elderly in their exclusion from society, their construction and reconstruction of knowledge are discussed. Freire's pedagogy is highlighted in the activities, also favouring knowledge that converges to Piaget and Vygotsky, in the student's construction and development during his/her learning stages. Results: The courses are evaluated annually. Teachers are asked to hand in reports according to their disciplines. With the data supplied, there is documentation. The students answer questionnaires, make comments on the discipline taken, give suggestions for the next year and etc., producing a report about the courses' reality, which will legitimate methods, strategies and ways of learning that best adapt to the group. Therefore, there is the opportunity to improve the students' development and the teacher staff's recycling. Conclusions: Significant contribution to the improvement of old people's life quality, by means of several free courses. Thus, raising awareness that old age can be healthier and happier.

**PD7 707 DEVELOPING EFFECTIVE POLICIES AND PRACTICES FOR SENIOR ADULT LEARNERS AT UNIVERSITY**  
J. COOK\* (Australian Catholic University, Brisbane, Australia)

Introduction Increasingly, senior adult Australians and their international contemporaries are choosing to attend regular University undergraduate and post-graduate courses to fulfil their lifelong learning needs. In contrast to younger students, they are less concerned with vocational training, and more with studying for interest and pleasure. Therefore, there is a need for Universities to attune their policies and practices to this growing cohort. This paper discusses an approach for developing an insight into the existential world of senior adult learners at University, their needs, their wants, and their insights, with the view to the development of senior-friendly policies and practices. Methods and materials Using individual interviews with a diverse range of senior adult learners at a major Australian University, a collective picture of their lived reality will be developed from each of the rich descriptions provided by the participants. The Gerontagogy approach will be used as it situates the research in the 'sciences' of education, using gerontology, and andragogy as part of a collection of multidisciplinary tools. Results Discovering what senior adult learners

think about their university experience may be of benefit to students and educators, to the institution they attend and to the community. The findings can be used to both remediate and modify practices which inhibit full and meaningful participation in university life, or to illuminate and promote those elements that encourage senior adults to participate in and enjoy the benefits of a university education. Conclusion Research about senior adult learners typically considers them within a framework of 'ageing' rather than as an older student. Rather than linking education to ageing, this research seeks to focus on the lived experience of individuals, allowing senior people to have a voice in the research process that may ultimately inform or generate policies that improve the quality of their life.

**PD7 708 TRAINING PROFESSIONALS FOR DELIVERING INGREATED HEALTH CARE TO THE AGED: THE INTERDISCIPLINARY EXPERIENCE OF NAI -UNATI/UERJ**

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C. CALDAS(1), M. ASSIS(1) - (1) UERJ (Rio de Janeiro, Brazil)

The training of professionals in the field of healthcare for the aged is one of the priorities of the national policy for the aged in Brazil due to the accelerated aging of the population. The Núcleo de Atenção ao Idoso (NAI), a unit of the Open University of the Third Age/UERJ (UNATI/UERJ) develops an educational program in this field, based on practical care delivery with emphasis to inter-disciplinarity and teamwork. The program includes different training levels and modalities: Residency, Specialization, Professional Practice and Graduation. The program includes an introductory course in gerontology and geriatrics common to all areas, and specific theoretical-practical qualification coordinated by the professional staff from the respective areas. The practical activities occur in different sceneries: long term care institutions, health promotion educational settings, outpatient facilities and the university hospital. Interdisciplinary thinking and acting is a continuous exercise, and the team should be open to innovative strategies. The experience is a contribution to the increasing social demand for qualified professionals committed with the principles of the Unified Health System and integrated health care.

**PD7 709 HOW AN ELECTIVE COURSE ON GERONTOLOGY NURSING INFLUENCES THE PREPARATION OF STUDENTS TO CARE OF OLDER PEOPLE**

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Introduction: Demographic changes and health care problems create new enlarged roles for nurses in order for them to respond to the needs of older people. Attitudes of nurses seem to affect the preference of working with older people and the quality of care provided to them. Several studies state how education affects attitude. Therefore, this study examined the impact of an elective gerontology nursing course on the knowledge and attitudes of nursing students towards older people. The hypothesis was that an elective course on gerontology nursing that includes clinical practice with healthy, autonomous older people, would affect positively the attitudes and knowledge of nursing students. Methods and Materials: A two wave longitudinal study (3 years apart) conducted. Nursing students (N=175, mean age=20.95 at second wave) completed a self-report questionnaire that included demographic questions, the Kogan's Old People Attitude Scale and the Palmore's Facts on Aging Quiz for the measurement of students' knowledge before and after the course studies. ANOVA and Linear regression analysis were used. Results indicated that students who did not undertake the elective course of gerontology nursing presented a less favourable disposition toward older people, whereas nursing students who have taken gerontology nursing showed more favourable attitudes towards them. Furthermore, students who did not follow the elective course of gerontology nursing had more misconceptions about older people than those who followed it. Conclusion: This study points out that further gerontology courses aiming to increase the nursing students' knowledge about ageing and older people's care could improve students' attitudes toward older people, motivate them to prefer working with them and thus, increase the quality of care offered.

**PD7 710 A MODEL FOR CREDENTIALING THE EDUCATION OF GERONTOLOGISTS**

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Introduction: Gerontology programs, students, graduates, and the community have suffered in a variety of ways because gerontologists have not been certified, licensed or credentialed by a national organization. Students are less likely to choose a field of study offering no certification or license. More comprehensively prepared gerontology graduates have often struggled to compete in the professional marketplace with other health and human services graduates who are credentialed. Without a credentialing process, the general public has had no way to evaluate the skill level of people hired to work in services for elders. In fact, the absence of credentialing has allowed opportunists to move into the field and represent

themselves as trained gerontologists. Methods and Materials: To address the lack of credentialing of gerontologists a group of gerontology leaders studied various credentialing organizations in other disciplines, selected best practice standards and formed the National Association for Professional Gerontologists (NAPG), a non-profit organization: <http://www.napgerontologists.org>. Results: The creation of NAPG has resulted in a credential model that is comprehensive and exacting. It consists of a five-level, peer-reviewed credentialing process, including a special membership category for current students, as well as continuing education opportunities for professionals, a code of ethics for gerontologists and a professional network. Conclusion: Although begun in the United States, NAPG welcomes the graduates of European (EuMag), and other international programs to apply for credentials. There remains the need for mechanisms to accredit academic gerontology programs. The NAPG poster provides a graphic model of the interrelationship between credentialing and accreditation; highlights the negative consequences of a lack of program accreditation; and offers a strategy for enhancing the discipline of gerontology. Both credentialing and accreditation are essential because only the discipline of gerontology can synthesize the field's many realms of knowledge.

**PD7 711 SHATTERING THE SILENCE: ELDERLY WOMEN TALKING ABOUT URINARY INCONTINENCE IN LONG-TERM CARE**

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L. BUTLER

Urinary incontinence (UI) is a prevalent health issue affecting the quality of life of many elderly women living in long-term care. Attention has been primarily focused on the physiological complications of UI and the associated symptom management, with minimal consideration given to understanding the lived experience from women's perspectives. What it means to experience UI and its impact on quality of life, given the management strategies imposed on residents in long-term care facilities, is a critical concern for the delivery of quality nursing care. This qualitative study using one-to-one interviews, explored elderly women's experiences with UI while living in long-term care facilities. Data were analyzed using thematic analysis that revealed three themes related to the meaning of UI to the women, physical implications of UI, and institutional culture of UI in long-term care. Within these three themes, the women expressed common concerns. The results of this study provided information that could influence changes in nursing practice related to individualized UI care, empowering women experiencing UI, and dispelling ageism in long-term care. The study also suggests opportunities for improving health care education related to the quality of life of women who experience UI, and the need to make the experience more visible and openly discussed as a health issue rather than the traditional condition of aging. Incorporating content regarding UI into core curriculum of health care professionals' learning, particularly nurses and physicians is critical for change to occur. Within, long-term care facilities it is imperative to ensure that licensed practical nurses and personal care worker programs provide appropriate knowledge and education on UI. This study provided a voice for women's stories and supported the expression of personal concerns, attitudes and feelings related to such an intimate and silenced topic.

**PD7 712 STAFF RESIDENT COMMUNICATION PRACTICES IN RESIDENTIAL AGED CARE – STRATEGIES FOR ENHANCEMENT**

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Introduction This paper draws on a study involving four residential aged care facilities. The aims were to explore staff beliefs and attitudes concerning residents' communication and social needs; identify barriers to communication; and develop and pilot communication training materials for staff. Methods and materials Interviews were conducted with two senior managers from each site and staff were surveyed for views of their current practice; staff development and communication training programs; and perceptions of barriers to communication with residents. The second stage involved focus groups to explore staff understanding of communication issues, and observation and mapping of normal staff routines and communication practices. In the third stage, communication training materials were developed and staff training workshops conducted. The evaluation stage will include a repeat of the staff survey and analysis and comparison of data. Findings Staff demonstrated a generally high awareness of residents' communication needs. However, they expressed frustration about the competing demands of care task fulfilment and emotional support of residents, regretting that the latter tended to receive lower priority. Key factors in staff ability to address communication challenges were explicit organisational values; training; management support and team loyalty. Despite staff awareness of communication needs, the project has highlighted the need for ongoing training about the progression and impact of dementia to ensure that all staff understand the behavioural and psychological symptoms. A practical research finding was the difficulty experienced in recruiting staff, indicating a need for more time and contact with the staff to raise awareness of the research goals and engage them in the research process. Management support is crucial in this. Conclusion Many staff have the awareness and

skills to recognise and try to meet residents' communication needs, but because of time and other constraints can feel burdened by the need to prioritise physical care over emotional.

**PD7 713 THE DA VINCI PROJECT: COLLABORATIVE DEVELOPMENT OF A UNIVERSAL GERONTOLOGY CURRICULUM WITH THEORY AND PRACTICE**  
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In March 2007, Gerontology International Synthesis Meeting was held in Okinawa, Japan. Later in September 22nd 2007, AU-NCSA Gerontology Center was inaugurated in Andhra University of Andhra Pradesh State. This Center will develop glocal (global + local) activities as a universal model of collaborative research, learning and practice center of Gerontology. The author calls its collaborative learning curriculum as "Yoga Gerontology Collaborative Learning Curriculum". The basic idea of Gerontological collaborative learning is to help people become able to spend time wisely. 'Manuke', a Japanese word that means "fool", consists of two words: "Ma", which means "time" or "temporal sense", and "neke", which means "lacking" or "unconscious". A person that is "unconscious of time" is called "manuke". Such a person cannot sense the atmosphere, or in other words, lacks awareness (kigatsuku). The word "yoga" originated from the Sanskritic word "yuz", which means "to put a yoke". A yoke is a crossbar that is put behind the neck of cattle when pulling a cart. "Yoga" means to put the yoke on, that is to connect the cattle and the cart.<sup>1)</sup> In Japanese, this is called "kizuna". These characters originated from the rope to tie down farm animals. This is similar to another rope, which can be represented by the word "kigatsuku" (awareness), that is hard to observe unless the wavelength of one's heart is synchronized with that of the universe. Some people are well aware while others are blunt. Therefore, the goal of Da Vinci Project 2012 is to seal the people with the sense awareness from universal observing point. Based on the Proclamation of Gerontology International Synthesis Meeting 2007 in Okinawa, and by the cooperation of Association for Gerontology in Higher Education and International Association for the Scientific Study of Intellectual Disabilities.

**PD7 714 SENIORS LEARNING IN SOCIAL NETWORKS IN EUROPE (SELERNET)**  
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Introduction: Older people of low social status tend to live socially and spatially segregated. This action research project, to be carried out simultaneously in Germany, Austria, Romania, Bulgaria and Greece, aims to integrate older people into educational processes. This integration is to take place by means of the development of social networks. The project aims to show how the establishment of social networks can lead older people who do not actively pursue education to participate in learning and educational processes. The target group will improve their learning and behavioural skills, allowing them to play a more active role in community life and contribute to social change. The fundamental assumption is that older people who do not participate in education are prepared to become involved in social networks and thereby to learn when they can expect their activities to lead to an improvement in their quality of life. Methods and materials: On the basis of social area analyses, which include both district inspections and area-related interviews, indicators are to be developed which relate to the quality of life of older people. The aim is to identify indicators which allow low-threshold access to social networks. The social networks which thus develop should then be used to establish bottom-up learning processes. This methodological approach is an attempt to follow in the tradition of action research, with both quantitative and qualitative processes being tested. Results: The social area analyses show space as a social product, with processes of both inclusion and exclusion becoming visible. On the one hand local relationships between public areas transfer into private living spaces (leisure, education, social relationships); on the other hand, there is reduced spatial dependence. The space loses its homogeneity in terms of social relationships.

**PD7 715 INTERNET USE AMONG OLDER PEOPLE IN GERMANY – THE PREDOMINANCE OF COHORT EFFECTS**  
M. DOH\* (Institute of Psychology, Heidelberg, Germany)

Across the past decade the Internet use spread tremendously in modern societies. In Germany, two thirds of the total population, but only one quarter of elders over 60 are onliners. Often reported predictors of internet use are socio-demographic factors (education, income, gender, occupation) and psychological factors (intelligence, technology attitudes, personality), particularly important in old age. The aim of this presentation is three-folded. First, is the digital divide about to be bridged? Second, is there a dynamic trend among elderly people to adopt the internet? Third, is the exclusion of the

"fourth age" particularly due to a cohort effect? Data was drawn from the (N)Onliner-Atlas, a nation-wide internetstudy, comprising 6 annual surveys (2002-2007, N=50,000 each, aged 14 to 99). Multivariate logistic regression models were computed to examine the impact of socio-structural predictors and the effect of cohort on internet use. The "Digital-Divide-Index" shows slow decline of the access gap from 2002-2007, however the gap between young and old continues. Due to the logistic regression results, the relevance of socio-structural predictors increases among older cohorts. Furthermore the results suggest a substantial effect of cohort, dominating the age effect. The adoption of the internet seems to be predominantly affected by cohorts, in that older cohorts show no significant development in the adoption process in contrast to younger cohorts. Thus, accordingly to the theory of Rogers diffusion of innovations older cohorts are late adopters, obviously cohorts of the "fourth age" are permanently offliners. In addition to the concept of Schäffers generation-based "culture of media practice" offers implications for social and education policy: for cohorts of the "third age" the internet can be attracted in terms of development resource and health prevention whereas cohorts of the "fourth age" may be addressed in terms of health intervention programs.

**PD7 716 AN INNOVATIVE WEB-BASED APPROACH FOR HELPING COMMUNITIES BECOME MORE**  
A. SCHARLACH\* (University of California, Berkeley, Berkeley, United States)

This presentation describes an online educational initiative to help communities respond more effectively to the needs of their aging populations, by (1) facilitating dissemination of emerging knowledge regarding community change processes, (2) sharing best practices, and (3) promoting peer networks and cross-learning designed to help communities become more "aging-friendly." Live and pre-recorded presentations began on February 13, 2008, and continued for three consecutive weeks, followed by a Community of Practice (CoP), a structured networking and knowledge-sharing process that continued for more than six months. Participants had access to more than 30 presentations by experts on community development processes, an extensive Resource Library containing more than 300 reports and best practices guidelines, and ongoing networking opportunities through a variety of online communication modalities, including instant messaging, virtual meeting rooms, and structured collaborations. Nearly 2,000 individuals from 17 countries participated in one or more of the online activities. Participants included senior citizens, policy makers, community organizations, foundations, businesses, local governments, urban planners, and transportation and housing experts. For 75% of these participants, this was their first online conference of any kind. Respondents to an online evaluation questionnaire indicated that the initiative had provided access to new resources (95%), expanded knowledge (90%), or promoted useful peer interaction (84%), and 72% reported specific plans to use the information gained in a current or future project. Respondents were most satisfied with the expert presentations (95%) and the Resource Library (91%), and somewhat less satisfied with opportunities for peer interaction (67%). This innovative online educational initiative contributed to information dissemination designed to help communities in 17 countries respond more effectively to the needs of their aging populations. Quantitative and qualitative evaluation data suggest critical implications for improving virtual communication and knowledge sharing in a Web 2.0 environment.

**PD7 717 TAIWANESE MEDICAL AND NURSING STUDENT INTEREST LEVELS IN AND ATTITUDES TOWARDS GERIATRICS**  
Y. CHI HUA\* (Chung Shan Medical University, Taichung, Taiwan)  
L. MENG CHIH(1) - (1) Chung Shan Medical University (Taichung, Taiwan)

Introduction: To investigate the attitudes of medical and nursing student towards the older Chinese population in Taiwan. Methods and materials: A reliable and valid Chinese language version of Kogan's Attitudes toward Older People (KAOP) with 17 matched item pairs (34 items) was completed by 275 medical and nursing students. Descriptive data analysis was employed. Results: Participants reported slightly more positive attitudes (Mean:  $144.30 \pm 17.89$ ) than those reported from studies in other countries (Jordanian: Mean:  $110.6 \pm 21.79$ ). Students who were females (Mean:  $148.27 \pm 18.97$ ), younger (Mean:  $146.01 \pm 18.59$ ) and studying nursing (Mean:  $156.86 \pm 17.56$ ) were more likely to report more positive attitudes than older (Mean:  $140.04 \pm 15.31$ ), males (Mean:  $140.47 \pm 15.93$ ), studying medicine (Mean:  $138.77 \pm 15.04$ ). Conclusions: Results show that students may have greater ambivalence attitudes on 10 out of 17 matched item pairs which provides useful information for faculty involved in aged care curriculum design. Working as a volunteer in the university hospital may increase students' interaction with the elderly and this may positively influence attitudes towards the elderly.

**PD7 718 PROMOTING EVIDENCE-BASED PRACTICE OF "HOW TO" KNOWLEDGE IN MULTIDISCIPLINARY WORK CONTEXTS**  
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**Introduction:** Promoting evidence-based knowledge throughout in-home care is a huge challenge. Providers representing multiple disciplines and agencies work autonomously within loosely networked "teams". **Methods:** To promote an evidence-based partnering approach in one Canadian jurisdiction, heterogeneous groups ( $n = 14$ ) of researchers, decision-makers and practitioners ( $n = 253$ ) used participatory action to develop and test a knowledge translation model, implementing two action cycles over 2 years. Baseline and end-of-cycle surveys measured learning readiness (supportive context; self-efficacy; self-motivated learning), partnering (job motivation; empowerment; team functioning) and partnering outcomes (partnering effort; job satisfaction; perceived effectiveness). A purposeful sample of audio-taped meeting transcripts and observations, analyzed using an editing approach, identified barriers/facilitators (Cycle 1). Social phenomenology was used to construct the model (Cycle 2). **Results:** Quantitative: gains in learning readiness, knowledge uptake and application, including: supportive context ( $p = .001; .001$ ), self-motivated learning ( $p = .001; .001$ ), job motivation (no change;  $p = .001$ ), team functioning ( $p = .08; .028$ ), partnering effort ( $p = .085; .016$ ) and perceived effectiveness (no change;  $p = .001$ ). Qualitative: barriers/facilitators included the organization's priorities and resources; team communication and coordination, and individuals' attitudes and practice patterns; four strategies comprised effective implementation: overcoming barriers and optimizing facilitators through integrated effort amongst people representing the macro-, meso- and micro- components of the organization; transcending "science push" and "demand pull" through social interaction; synthesizing the evidence with tacit and experiential knowledge; and integrating knowledge translation throughout everyday work. **Conclusions:** With consistent effort and supportive resources throughout a service infrastructure, this model fosters agency in co-creating knowledge applications, a "level-playing field" for mutually refining the context for KT, and transformative leadership in integrating KT within everyday work. Researchers and decision-makers need to forfeit control of outcomes, attending instead to nurturing the process. (Funder: CIHR)

**PD7 719 LIVE HER AGE® WOMAN EDUCATIONAL PROGRAM FOR HEALTHY AGING OF WOMAN IN MURCIA REGION**

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**INTRODUCTION:** Women's Institute of Murcia Region (WIMR) has been development a specific educational program on gerontology (Living her Age: Woman), following recommendation of WHO: "Active Aging". The main objective is educational, looking for avoiding or anticipating pathologic aging. We have to remember that Gerontology is the best adapted discipline on prevention of pathologic aging, fragility and illness. **METHOD AND MATERIALS:** Descriptive study from 2003 until 2008 with 1440 women population (mean age 61.2; Minimum: 38 Maximum: 84) With 48 centers which depending on WIMR. Each center imparts this educational program (theoretical and practices contents) during 18 hours, this program has the six unit: Biology of Aging, Physical Exercise and Health, Urinary incontinence; Diet and Aging, Stress, Memory and Aging, and Osteoporosis. At the end of the Educational Program we ask them for answering a test for evaluating the program and teachers **RESULTS:** We have a media of attendance of 30 pupils. 90% of women have covered more than 75% attendance and they have got the accreditation. Global evaluation of the women of the Educational program has been 4.6/ 5 on item selection of the proposed topics and deep on teaching; 4.8 /5 teachers and educational methodology, 4.8/5 interest of the topics and 4.3/5 usefulness and impact on daily life. **CONCLUSIONS:** To consider aging like a natural process and teaching women that we can act over it, anticipating and avoiding pathological aging is the main objective of this educational program. It has been development for integrate and socialize the women, with primary endpoints on improving quality of life. We have worked with the recommendation of the WHO for Gerontology teachers and educators to promote a more positive image of aged woman in the way of avoiding social exclusion/ marginalization.

**PD7 720 IMPROVING OUTCOMES WITH STRUCTURED MULTIDISCIPLINARY EDUCATION TO IMPROVE LONGEVITY, HEALTH AND WEALTH OF HOSPITALIZED OLDER ADULTS**

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Factors associated with poor outcomes for hospitalized older adults can be found within the care delivery system. This is significant when you consider at the Health Sciences Centre (HSC) in Winnipeg, Manitoba, Canada, it is estimated that at any given time, over 60% of the adult population is over age 65. These patients can be found in most acute care areas within the centre. This presents many challenges in acute care as older adults tend to have longer lengths of stay. Coupled with this are clinicians who are often not well versed in the care of the older adult. To address challenges for hospitalized older adults, the Nurses Improving Care for Healthsystem Elders (NICHE) survey, entitled the Geriatric Institute

Assessment Profile (GIAP), was conducted in the fall of 2005. The GIAP assessed attitudes towards caring for the older adult, knowledge of guidelines for the care of the older adult and common geriatric syndromes, and perception to barriers to best nursing practice for older adult patients. Results indicated participants felt that further older adult education would be beneficial to their current practice. Nursing leadership at HSC addressed this key finding through supporting the development of the Older Adult Clinical Practice Level 1 (OACPL1) courses. This two day course, incorporating multidisciplinary presenters, focuses on common geriatric syndromes such as incontinence, falls, skin and wound care, delirium, and dementia, as well as other relevant issues. While all healthcare disciplines have been invited to attend OACPL1, attendance since OACPL's introduction in 2008, has been largely limited to new nursing recruits. Strategies to attract participants from other disciplines are being implemented in 2009. Evaluations received indicate participants find the courses beneficial and relevant to their practice. OACPL1 development, implementation, challenges and successes and future strategies for the continued evolution of OACPL1 will be discussed.

**PD7 721 CONNECTED AGEING: THE POLICY AND PRACTICE FOR PROMOTING DIGITAL LITERACY AMONG SENIOR CITIZENS IN CHINA, WITH A PLAN TO INTEGRATE INFORMATION AND SOLUTIONS THAT CAN ENABLE INDEPENDENT LIVING IN A FAST-AGEING DEVELOPING COUNTRY.**

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By the end of 2008, China had 298 million internet users, of which only 17 million are over 50 years of age. Compared to developed countries, the over 50s in urban China are having similar access to computers and broadband connection, but have a much lower penetration of internet (only 5% in China compared to over 60% in the UK, US, etc.). They have suffered from difficulties in learning how to use digital tools. Obscure theories and Chinese typing (using a keyboard) are among the main daunting tasks for them. A project launched in late 2008 by Gerontological Society of China (GSC) together with China Association of Science and Technology (CAST) has greatly lowered the barrier to educate the seniors. With only 8 hours of interactive training, a complete beginner to computer and internet can immediately acquire the skills to surf the internet, use search engines, send and receive emails, as well as connect to others via instant messaging including video chat. By helping now thousands and eventually millions of Chinese senior citizens to complete the first steps in becoming digitally literate, the project is aiming at then providing further education, possibly in many different subjects, through an integrated online platform. With an expected majority of 95% Chinese elderly to age at home, this digital literacy initiative may prove to be crucial for enabling general access to independent living-related information and solutions. Public and private efforts are to be combined in developing the online platform with a simple, senior-friendly interface. Once connected, the senior citizens can much more easily access solutions in healthcare, financial services, retirement living, home security, mobility, leisure as well as active participation in commercial and volunteering initiatives. This project may be an example for other developing countries to educate, connect and empower the seniors.

**PD7 722 INCREASING CAPACITY FOR GERIATRIC AND GERONTOLOGY CONTENT IN CANADIAN NURSING EDUCATION**

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Consistent with international findings, surveys of Canadian undergraduate nursing programs indicate limited capacity for gerontology nursing education. Gerontology content is integrated in most programs. As few as 5% of faculty have advanced gerontology education. Content is taught by non-experts. In the 2006 Canadian Registered Nurse Examination, less than half of questions related to patients over 80 years old were answered correctly. This paper describes the process of advocacy by the National Initiative for Care of the Elderly for nursing gerontological core competencies and a program that enhances curriculum and capacity for undergraduate teaching. Lessons learned from advocacy for improved curriculum through partnerships with and lobbying of professional, licensing, and accreditation organizations and nursing leaders are described. The rationale, process, and outcome of a Canadian knowledge exchange workshop is described. Nursing faculty and PhD students are participating in a 1? day workshop that will: (1) transfer new research based evidence and knowledge about care of older persons to Canadian nursing educators; (2) provide them with tools to incorporate evidence based gerontology and geriatrics content in undergraduate curriculum; and (3) engage them as knowledge transfer champions for evidence based gerontology content in nursing curriculum within their universities, provincially, and nationally. Participants conduct a curriculum survey of their program and a detailed assessment of one course. At the workshop they receive evidence based resources from the U.S.A. and Canada that can easily be incorporated into teaching, including "state-of-science" reviews produced by the American Association of Colleges of Nursing, the RNAO Educator's Resource for integrating Best Practice Guidelines, and knowledge transfer tools. They develop strategies to integrate this material in teaching, share resources with colleagues, and influence curriculum change. The workshop

incorporates multiple strategies to support non-experts who teach gerontology content to undergraduates.

**PD7 723 ENJOYING RETIREMENT**

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ENJOYING RETIREMENT To study the relationship between the program's objectives and the project of the current life of the retired administrative staff at the University of Cauca with reference to health and their social, personal and group circumstances was the purpose of this research. It was based on Robert Estaker's model which is characterized by the assessment aimed at the complex and dynamic nature of educational programs, bearing in mind various aspects and components. The fieldwork involving twelve informants had the following selection criteria: 1) The willingness to participate in the research project, 2) attendance to more than three pedagogic workshops and 3) to be retired. Profound observations and interviews have been carried out and actions were focused on focus group. The pedagogic model relates to the Adult Education and the most important result of the study were considered. There are two main areas in the pedagogical model: 1, Research of interests, needs and potential of the study population, in addition to their social and economic characteristics. 2. Pedagogic and didactic organization from flexible management which makes possible the auto-evaluation exercise and reflection on collective and individual life styles. This kind of program can't be standardized in the sense of being applicable in the same way to any context, population or person no matter how similar the circumstances may appear. It's obvious that there's a difference between the contextual proceeding, education level, occupation and gender, among other things just the very concept of quality of life or welfare. Pedagogic work strategies were focused on workshops, group activities, interaction between academic peers, etc, without forgetting integration activities and social action that strengthen the feeling of relevance and the process of individual and collective development projects for life.

**PD7 724 WORLDVIEW ENVIRONMENTAL SCAN ON ELDER ABUSE: KNOWLEDGE TRANSFER**

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P. TEASTER, T. WANGMO, L. BARRETO

WorldView Environmental Scan on Elder Abuse: A Knowledge Transfer Podnieks, E., Ryerson University; Teaster, P.B., and Wangmo, T., University of Kentucky; Baretto, L., Help Age International, Peru. The WorldView on Elder Abuse Environmental Scan was built on the recommendations from the Madrid International Plan of Action (2002) in order to collect information on the nature of elder abuse and responses to it from a global perspective. The Scan represents a first step in this important global research, leading to more in-depth investigation and expanded collaboration with international countries. The Scan gathered information about the problem of elder mistreatment, as well as information on legislation and policy, services and programs, educational resources and needs, training, and past and ongoing research. A total of 53 countries responded to the survey questionnaire, which represented the six world regions designated by World Health Organization. From these countries, 362 respondents completed 190 surveys. Findings revealed that contributors to elder abuse include changing social and economic structures, isolation of victims, inadequate knowledge of laws and services; intergenerational conflict, and poverty. Barriers to seeking resources to intervene and protect older adults included the culture of the country, language issues, literacy, stigma, lack of mobility, funding, and familiarity with and access to the internet. In this presentation, we draw attention to the enormous diversity among countries, which underscores the personal tragedy of elder abuse and the inadequacy of existing systems to effectively prevent or treat the problem. The data serve as a catalyst to take actions, both globally and nationally, while emphasizing the changes necessary to protect the rights and dignity of older adults.

**PD7 725 DISTANCE CAREGIVING AND THE ELDERLY: EMPIRICALLY BASED INTERVENTION TECHNIQUES AND ASSESSMENT.**

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Recent research suggests that maintaining contact with elderly parents and providing care for them from a long distance represent major challenges for a burgeoning number of families across the globe. In the United States it is estimated that approximately seven million family members currently provide long distance care and that these numbers will double in the next fifteen years. Therefore, we need to provide caregivers with information that can be used to prepare and empower those who are geographically separated from their elderly family members. Over the past several decades, research on caregiving for older family members has focused primarily on caregivers who live close to or with the elderly family members. There have not been few studies that have examined the impact of geographical distance on the caregiving role. However, the studies that have been done indicate that distance not only complicates the quality and quantity of care, but we lack

well controlled studies that have evaluated the efficacy of these distance caregiving programs/interventions. Therefore, we first examined research on distant caregiving to provide an understanding of the key issues facing caregivers and their elderly family members. Second, we identified existing resources and guidelines that are followed in the intervention and practice literature as it relates to distance caregiving. Finally, we discuss the results of an evaluation of a distance caregiving program and the implications of these results for distant caregivers and their families. We conclude by discussing how professionals can assist caregivers to prepare for a distance caregiving role and to assess the merits as well as the resources needed to fulfill this role. We argue that future research needs to identify relevant and meaningful categories of distant caregivers for service providers and the number and nature of the complicating factors associated with this role.

**PD7 726 PALLIATIVE CARE IN NURSING HOMES: THE IMPORTANCE OF ARTICULATING FUNCTIONAL DECLINE IN ADVANCED CHRONIC ILLNESS**

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The 21st century will witness the impact of major changes in the demography of dying. Throughout the world more people will die within the context of advanced chronic illness than ever before, and much of this dying will be among older adults. Current standards of care related to medical treatment and emotional care for people who are considered to be dying do not necessarily reach people with advanced chronic illness. This is because "dying" is operationalized as "close time until death" rather than "high risk of being dead; time uncertain." This is especially true in long-term care settings. This session will discuss the need for more attention to the palliative care needs of older adults with advanced chronic illness in long-term care settings (in particular in the nursing home setting) in the U.S. The role of nursing home social workers in providing psychosocial care—as part of palliative care—to older adults with advanced chronic illness will be discussed. With more emphasis on anticipating and documenting physical and/or cognitive frailty, the transition to an emphasis on palliative care may be more smooth.

**PD7 727 LIFE IN OLD AGE**

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Introduction Growing old can mean different things to different people. Several studies focus on age 60 and over and very few of them look beyond 80 years old. This study is to explore older people's life experiences and meaning beyond 80 years old. Methods A phenomenological research methodology was used to have better understanding and insightful interpretation of life experiences. Open-ended interview questions and thematic analysis were conducted to have deeper insights into people's life experiences. Twenty people ages 80 and older participated in the study. Results In this study, participants were actively engaged in communities despite their losses and physical limitations. A sense of worth through volunteer work and social networks helped them connect to communities. They were satisfied with their lives and appreciated what they had. Faith and religion gave them peace and fulfillment. The majority of them felt they were not old and expressed the beauty of being their age. They viewed people several years older than them as old. Comparison to others who were worse off made them feel blessed with their health. Their perception on "who is old" depended on a person's health, feelings, and attitude. They had mixed feelings about "end of life." Some of them anticipated preparation or expressed uncertainty for their future to come. Others were not ready to give up because there were new things that they wanted to see and do. Conclusion Having strong faith, positive attitude, flexibility, and a purpose in everyday provided them with a comfortable and contented life. Although they continued to cope with challenges of later life, their optimism and motivation kept them going. Getting back to communities and connecting with others were important as long as they were capable. Regardless of their health status, they looked forward to learning, sharing, serving,

**PD7 728 TESTING SELF-EFFICACY AS A PATHWAY THAT SUPPORTS SELF CARE AMONG DEMENTIA FAMILY CAREGIVERS IN A PSYCHOEDUCATIONAL INTERVENTION**

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This study investigated the impact of a psychoeducational intervention on health risk and self-care behaviors of dementia caregivers (N=325). Moreover, this study investigated the extent to which changes in self-efficacy explained changes in health risk and self-care behaviors. Our findings revealed that family caregivers experienced reductions in health risk behaviors, and improvements in exercise, stress management, and relaxation activities. Improvement in self-efficacy was linked with reductions in health risk behaviors, and increased involvement in stress management and relaxation activities. We discuss implications in terms of the need to understand the mechanisms by which interventions influence family caregivers.

**PD7 729 THE IMPACT OF PARENT-CARE TRANSITIONS ON THE MARITAL QUALITY AND WELL-BEING OF ADULT DAUGHTERS AND SONS**  
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This study prospectively examines the impact of parent-care transitions using data from the US National Survey of Families and Households (NSFH). It uses three waves of data to assess the effects of transitioning into and out of the role of parent care on the marriage and well-being of adult daughters and sons. The sample consisted of 317 participants: 129 recent caregivers, 72 veteran caregivers, and 116 former caregivers, all non-caregivers at baseline (mean age=39.8 years, SD=8.0; 58% [n=184] female). Two indicators of marital quality – marital happiness and marital inequity – and two well-being indices – depressive symptomatology and life satisfaction – were the primary study outcomes. 3-way mixed-MANCOVAs (caregiver-transition group x caregiver gender x time; covariates: age, race, education, and number of children) were used to compare differences on marital quality and well-being. The primary findings include a significant main effect of caregiver-transition group for marital happiness ( $F[1,307]=4.03, p<.05$ ) and marital inequity ( $F[2,307]=3.90, p<.05$ ) and a significant 3-way interaction for depressive symptomatology (multivariate  $F[2,307]=3.10, p<.05$ ) and life satisfaction (multivariate  $F[2,307]=3.32, p<.05$ ). On average, recent caregivers reported greater marital happiness and less marital inequity than veteran adult-child caregivers. Depressive symptomatology varied over time across parent-care transition groups but only for caregiving daughters, with veteran caregiving daughters reporting a significant increase in depressive symptoms over time. On life satisfaction, former caregiving sons, but not daughters, experienced higher levels after exiting the parent-care role. Results regarding marital quality are consistent with the stress and coping literature and those for well-being can be understood by taking a gendered view of the wear-and-tear model of caregiving.

**PD7 730 THEMES FROM LIFE STORIES OF OLDER EARTHQUAKE SURVIVORS: 13 YEARS AFTER THE GREAT HANSHIN EARTHQUAKE**  
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**INTRODUCTION:** Thirteen years have gone by since the terrible disaster caused by the Hanshin Earthquake (magnitude 6.8) hit Kobe City, but its effects seem to hit older adults to this day. In 2006, 62 suicide cases were reported as deaths resulting from the effects of the earthquake. Growing old after a terrible disaster seem to have a prolonging effect on older adults. Hence, this study investigates the memories of the earthquake and how living survivors view life after the quake. **METHODS:** Semi-structured interviews were conducted with older survivors 65 years and older living in Kobe (n=8), and then transcribed for thematic analysis. **RESULTS:** Unique themes have surfaced from the interviews. Particularly, findings suggest that resilience is a key to coping losses and overcoming negative memories of a terrible disaster. **CONCLUSION:** Strengthening older survivors' capacity for resilience is an important practice issue for geriatric professionals. Furthermore, continuing investigation of older adults who experienced the Hanshin Earthquake is warranted particularly to identify needs which still remain unanswered after 13 years.

**PD7 731 AGING IN THE COMMUNITY: HEALTH AND FUNCTIONING PROFILES OF ELDERLY LIVING IN THE COMMUNITY ACROSS FRANCE, CANADA, THE U.S. AND JAPAN**  
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One objective of the International Classification of Functioning, Disability and Health (ICF) is to create a "common language" for measuring and monitoring functioning. This proposed pilot project begins the process of core sets development of profiles of aging populations living in the community across different countries. Key Issues when applying the ICF in medicine involve practicability and usefulness for research and clinical practice, how to link the ICF to the International Classification of Diseases and how to maintain comparability across conditions and settings. The development of ICF Core Sets addresses all these challenges. The ICF Core Sets are categorical profiles to describe and classify functioning in people in a determined context and/or with a health condition in research and clinical practice. ICF Core Sets for different health-care situations and for different health conditions including musculoskeletal and neurological conditions have already been developed. The ICF Core Set for the elderly is missing until now. With this new development, it will be possible to address the needs of elderly persons in relation not only to body functions and structures but also in relation to activity and participation. It will also be possible to identify relevant environmental factors which contribute to better levels of functioning and less disability. In the first phase of the research the author and collaborators in other countries will follow several groups of elderly living in the community to determine those factors that indicate a risk of functional decline. Then, ICF will provide a tool for comparing the functional status of the participants.

**PD7 732 THE IMPACT OF LONG-TERM CARE INSURANCE ON FAMILY CAREGIVING IN KOREA**  
Y. PARK\* (Kangnam University, Yongin-si, Kyunggi-do, Republic of Korea)

Long-term care has emerged as one of the most critical issues in rapidly aging Korean society. In 2008, Korean government implemented a new social insurance on long-term care

insurance for elderly, and this has started to change the landscape of family caregiving in Korea. The purpose of this research is to delineate the process of socializing care in the elderly services in Korea, and explore its impact on family caregivers. Results from qualitative study of families receiving home help and daycare services will be presented. Policy implications for developing a balanced model of long-term care will be drawn as well.

**PD7 733 USING A FOCUS GROUP STUDY TO EXPLORE EXPERIENCES AND PERCEPTIONS IN SENILE DEMENTIA PATIENTS' FAMILY CAREGIVERS**  
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**Introduction** The immense and lasting attending need demented persons require will effect great challenges to families as dementia population increases in global aging. Caregivers of dementia patients, in particular, usually endure unsurpassable stress during the course of accompanying as care taking approaches for dementia patients differ from those for patients of other illnesses. For all these reasons, the purposes of the research are to explore the senile dementia patients' family experiences and perceptions on their care giving involvements. Understanding their perceptions is very important in order to design effective nursing interventions for enhancing health family functions. **Methods & Materials** A qualitative study using a focus groups and participant observations were conducted to obtain the experiences, perceptions and coping strategies by process recording from eleven senile dementia patients' family caregivers. Two focus group sessions were held and each lasted from 2.5 to 3 hours until no new data was forthcoming. Content analysis was used for data analysis. Results Volunteer participants included five females and six males aged from 35 to 60, with an average age of 47.8. The mean time of their care giving involvements was 6.1 years, ranging from 10 months to 30 years. Through an inductive content analysis, four themes and seven sub-themes were named and defined in this study; included: 1. Shared Memories: A sense of loss, 2. Through It All – Misunderstood and Burdens, 3. A Long Road to Go – Responsibilities, On call, and Challenges, and 4. Not Alone – Role reversal and Sharing. **Conclusion** The study found that senile dementia patient's family members need assistance in various areas to help them undergo the complex and uncertain processes of care giving. Interactions with other family caregivers and exchange of care giving information have positive influences on both situational responses and stress management.

**PD7 734 FACTORS INFLUENCE THE CHANGED FAMILY CARE-GIVING PATTERNS IN TAIWAN: AN INVESTIGATION FROM RELIGION AND SOCIAL REPUTATION PERSPECTIVES**  
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With more women enter the work force and fewer children, the nursing home placement become one of the options of looking after the older relatives. Literature (Butcher, Holkup, Park & Maas, 2001; Kim & Lee, 2003) that addresses the decision making for nursing-home placement, underscores how difficult it is to make this decision and adjust. There is seldom research addressed the cultural issues such as religion and social reputation impact on this nursing home placement of older relatives' process and this care-giving pattern. These issues are important and should be addressed as family caregivers in Asian have to be challenged by traditionally culture values. However, these cultural role and responsibility might have changed with time. This paper provides findings that elicit the social-cultural factors which including adult children's responsibilities, religion and social reputation influencing family caregivers' decision when they deciding nursing home placement of older parents. These findings stem from a phenomenological study, conducted in two nursing homes in Taiwan. Data were collected from 5 nurses and 7 adult children by interviewing and observations conducted amongst family caregivers and nursing home staff. Data were thematically analysed consequent on the reading and re-reading of field notes and interview transcripts. The results have revealed some family caregivers were concerned about their reputation and the judgments of other people when placing their parents into nursing home. It is considered shameful and unfilial. Family caregivers were challenged by societal pressures. In term of religion, family caregivers often used often used Karma to explain their feelings and responses to nursing home placement of their older parents. The findings of this study have demonstrated family caregivers of nursing home residents in Taiwan were confronted by pressures from society. However, these society values were seen to be emerging as Taiwanese society was undergoing changes.

**PD7 735 ADULT DAUGHTERS AND AGING MOTHERS: CAREGIVER ROLE IDENTITY DISCREPANCY, GUILT AND BURDEN**  
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Although guilt is identified as being a common emotion experienced by family caregivers in the clinical literature, it has only recently emerged as a construct in the empirical research focused on identifying predictors and/or outcomes of caregiver distress. Thus, in this study, we draw on role theory to explore the relationship between adult daughters'

appraisal of their "caregiver role standards"—the degree to which they feel they meet, exceed, or fail to meet these standards—and their experiences of caregiver guilt and burden. Our data are drawn from the Mills Longitudinal Study, a representative sample of 142 members from the senior classes of Mills College (a women's college) in 1958 and 1960. Our analysis uses the wave 5 (age 61 assessment) dataset. At age 61, the women not only completed self-report mailed surveys, but also participated in 2 to 3 hour face-to-face interviews which (with participants' permission) were audiotaped and subsequently transcribed. Our sample is based on the 66 women who spoke about their mother-daughter experiences in the open-ended questions in the parent care section of the interview. Hierarchical regression analysis revealed guilt was positively correlated with burden and that it accounted for a significant amount of the variance in caregiver's sense of burden even after contextual and caregiver stressor variables were controlled. Using role theory, we begin to explore how adult daughters construct a "caregiver identity standard" and internalize a set of meanings and rules that define which behaviors or actions are appropriate for acting in the caregiving role. Our research suggests the importance of clinicians seeking to understand how daughters judge their caregiving performance and targeting negative self-appraisals, which affect their mental health, for change.

**PD7 736 TRENDS IN THE RELATIONSHIP BETWEEN FORMAL AND INFORMAL CARE OF OLDER PEOPLE WITH FUNCTIONAL DEPENDENCIES LIVING AT HOME IN BRITAIN (1980-2001)**  
D. PATSIOS\* (University of Bristol, Bristol, United Kingdom)

**Introduction** The number of older Britons needing assistance with Activities of Daily Living (ADL) such as washing, dressing, cooking and cleaning has increased considerably in the past 25 years. Most care is provided by 'informal unpaid' caregivers, predominantly close relatives and friends, but some also receive assistance from health and social services or pay for help privately. This research examined 'how' and 'why' the relationship between formal and informal care for functionally dependent older people living at home in Britain changed between 1980 and 2001. Methods Data were restricted to people aged 65 and over who responded to the Elderly People in Private Households 'trailers' in six General Household Survey (GHS) years (1980, 1985, 1991, 1994, 1998, and 2001) and who reported at least one functional limitation (N=5,513). Seven typologies of care were constructed using combinations of Primary and Instrumental Activities of Daily Living (PADLs and IADLs) and specific source(s) of care (eg. spouse/partner, health and social services). GHS data combined with publicly available health and social services data was pooled and analysed. Government Actuary's Department (GAD) population estimates were used to estimate the number of older people falling into each typology of care. Multivariate statistical analyses were then used to establish the most important predictors of different typologies of care over time. Results and Conclusions Increasing numbers of older people received care solely from informal caregiving networks and paid private help, with fewer numbers receiving support from health and local authorities. Individual and household predictors (eg. age group and living arrangement), period (eg. sample year) and need variables (eg. level of dependency) played a greater role than system-level (eg. community care staff) variables in accounting for variation in the relationship between formal and informal care over time.

**PD7 737 MIDLIFE MARITAL HAPPINESS AND ETHNIC CULTURE: A LIFE COURSE PERSPECTIVE**  
B. MITCHELL\* (Simon Fraser University at HC, Vancouver, Canada)

**Introduction:** It is well established that marital relationships remain integral to individual and family health and well-being and that some marriages are happier than others. Indeed, those in happy marriages tend to report better health and subjective well-being (such as lower rates of depression and psychological distress), while those in "unhappy" marriages glean less favorable benefits. Continuing high rates of immigration and changing family structures also contribute to increasingly diverse marital patterns in North American society. Drawing from life course theory, the purpose of this paper is to further explore cultural, socio-demographic, and relationship factors and their association with midlife happiness in aging families. **Method:** Data are drawn from in-depth interviews with a sample of 390 middle-generation married mothers and fathers (ranging in age from 40-78, with an average age of 56.4) living in Metro Vancouver, British Columbia, Canada. These respondents self-identify as belonging to one of four cultural groups: British, Chinese, Indo/East Indian, and Southern-European. **Results:** Both quantitative and qualitative results reveal that most respondents report relatively high levels of marital satisfaction. However, a significant minority of respondents report being in less than very satisfactory marriages. Similarities in midlife marital happiness are also found across the four cultural groups, although perceived marital stressors underlying unhappy marriages vary across groups. Moreover, relationship dynamic factors, fewer competing demands, immigration status, and religiosity are associated with greater marital happiness. **Conclusion:** Relationship dynamic factors (i.e., intimacy satisfaction, doing activities together) and the experiences associated with competing demands on time (i.e., caring for other family members, paid work) surface as the most significant predictors of marital happiness. Implications for

aging parental marital relations and community supports are also highlighted, with emphasis on those at greater risk for relationship stress, strain, or crisis.

**PD7 738 BRAIN FITNESS ACTIVITIES: HEALTH AND COGNITION AMONG OLDER COMMUNITY SENIOR CENTER PARTICIPANTS**  
S. BUSHFIELD\* (New Mexico State University, Las Cruces, United States)  
T. FITZPATRICK(1) - (1) McGill University (Quebec, Canada)

Few studies have examined brain fitness activities and their relationship to mental and physical health and cognitive abilities. With increasing numbers living well into their nineties and the advent of the baby boom generation turning 65 years old, the number of individuals expected to develop Alzheimer's Disease will increase. Data were collected from nine French and English Senior Centers in the Montreal, Quebec area. A self-administered survey, translated in both English and French, was used among a sample of older women (N = 257) to assess brain fitness activities' influence on physical and mental health. In order to measure the major variables in the study, a modified version of the Psychological General Well-Being (PGWB) Schedule (Dupuy, 1984) was used. To measure cognitive/brain fitness activities, 13 different independent variables were included, representing cognitive activities such as travel, computer and computer labs, volunteering, cultural activities, strength training, speakers, group work, languages, career decisions and so forth. Five dependent variables representing self-reported mental and physical health were assessed using two items from the survey questionnaire. Qualitative data based on a phenomenological approach was also obtained from face-to-face interviews to further capture the meaning of cognitive functioning on mental and physical health. Multivariate Analysis (MANOVA) with post-hoc Bonferroni-t-tests revealed that activities such as aerobics, strength exercises, career decisions, working for pay, participating in a computer lab, learning new languages, group work and listening to speakers were significantly related to the physical health indicators of self-reported health and chronic conditions. Activities such as laughing together, career decisions, working together on a project, and strength exercises were significantly related to mental health indicators such as overall feelings (spirit), happiness and an interesting life. The results have implications for practitioners and future research in healthy aging.

**PD7 739 ASSESSMENT OF INFORMAL CAREGIVERS**  
D. JORGENSEN\* (The University of Auckland, Auckland, New Zealand)  
M. PARSONS(1), S. JACOBS(1) - (1) the University of Auckland (Auckland, New Zealand)

**Introduction:** Australasian pioneering spirit has stressed the need for the individual to cope with as little assistance as possible, except at the beginning and end of life. It is only when families are no longer able to cope with demands and needs of the disabled person that they seek formal assistance. It is hardly surprising that informal caregiving has been cited as one of the most stressful social situations. **Aims:** To investigate the causes of stress in caregivers; what measures can be put in place to assist caregivers and disabled people; implications for funders and policy makers. **Methods:** Mixed methods framework was used to ensure that multiple perspectives and views were considered. The study involved hour long interviews focussing on the type of support received and experience of caring. Caregivers Reaction Assessment and Depression (CES-D10) scales were used to assess sense of burden and screen for depression. **Results:** Carer stress was significant (mean score was 70 out of 120) and was higher in mothers and female partners. Depression was evident in caregivers aged 30 to 50. The qualitative analysis themes included: financial hardships, lack of information, social isolation, battling for everything, poor respite care and the inability to receive adequate physical support for the disabled people. **Conclusions:** A sequential model was developed from the themes. By far the majority of caregivers needed extra support of some kind.. The support wanted by caregivers ranged from financial, physical and emotional, including a listening ear. The majority of caregivers were happy to offer suggestions, such as a one-stop-shop for information, and more flexible funding and respite options particularly for children and younger adults. This large mainly qualitative study offers policy makers and funders a clear insight into the present needs and vulnerability of informal caregivers of people with disabilities.

**PD7 740 RESILIENT AGEING IN PLACE: IMPROVING THE LIVES OF OLDER PEOPLE LIVING IN NEW ZEALAND COMMUNITIES**  
L. KIATA\* (University of Auckland, Auckland, New Zealand)  
J. WILES(1), N. KERSE(2) - (1) Social & Community Health, University of Auckland (Auckland, New Zealand); (2) General Practice & Primary Health Care, University of Auckland (Auckland, New Zealand)

In many countries including New Zealand, community living has been promoted as desirable for older people. In this study we are exploring use of participative qualitative research strategies including interviews and photo-elicitation to understand what factors make a community environment acceptable to diverse older New Zealanders. Everyday environments shape well-being and health. By focusing on older people living in two New Zealand communities, we are investigating how elders live in ways that are suitable for them. Our questions revolve around what physical, social and emotional factors make a community environment that is stable and acceptable, and whether this is the same for all

groups of older people? How do we understand in useful ways the day-to-day lived worlds of older people? What are the factors that keep older people connected in positive ways to their communities? What are some of the barriers to ageing well in the community? By better understanding what older people and their support networks want and expect from their communities, we can maximise the benefits of a stable environment on health, while acknowledging the difficulties associated with growing old. To this end, we are working with older people to seek their perspectives about what 'resilient ageing in place' means. In this presentation, we will report on the processes and initial findings of the study, highlighting the use of participant-led focus group interviews and the contrasts and similarities between the needs of older people from diverse cultural groups including European New Zealanders, Maori, Pacific, and other ethnic groups.

**PD7 741 MEALTIMES AND CHANGE IN THE CONTEXT OF DEMENTIA**

R. GENOE\* (University of Waterloo, Waterloo, Canada)

S. DUPUIS(1), H. KELLER(2), L. SCHINDEL MARTIN(3), H. REIMER(2), G. EDWARD, C. CASSOLATO - (1) University of Waterloo (Canada); (2) University of Guelph (Canada); (3) Ryerson University (Canada)

**Introduction:** The Eating Together Study is a three-year grounded theory study exploring the meaning of mealtimes among persons living with dementia and their primary care partners. Although little is understood about mealtimes in the context of dementia, they can be stressful for families as changes in eating patterns and preferences occur with the progression of dementia. This presentation will report on findings of the study focused on one of our emerging themes: Evolving Life. **Methods and Materials:** Twenty-seven community dwelling persons living with dementia and their care partners were recruited through Alzheimer Society chapters using both theoretical and purposive sampling. Participants engaged in annual individual and dyad in-depth interviews with one of five trained interviewers. Data were analyzed simultaneously using initial and focused coding and constant comparisons to identify a substantive theory on the role of mealtimes in the dementia context. **Results:** Evolving life is a process that participants use to adapt to changes in their lives. First, awareness that change has occurred is triggered. Once participants become aware of change, they assign meaning to change. Next, participants transform as a result of change in a way that meets the needs of both members of the dyad. While some families are able to use this process for adjusting to change, others have more difficulty, finding themselves resisting change, and struggling to transform. **Conclusions:** Mealtimes both reflect and provide insight into the changes that occur among persons who are living with dementia and their care partners. Those who are able to adjust to change with relative ease find new ways to live their lives to the fullest. Those who find it difficult to transform in response to change experience increased physical and mental health issues as a result of the added stress of living with dementia

**PD7 742 MEALTIMES AS "THE WAY WE ARE": THE MEANING AND EXPERIENCE OF MEALTIMES IN THE DEMENTIA CONTEXT.**

H. KELLER\* (University of Guelph, Guelph, Canada)

S. DUPUIS(2), L. SCHINDEL MARTIN(3), R. GEONE(2), H. REIMER(1), G. EDWARD(1), C. CASSOLATO(1) - (1) University of Guelph (Canada); (2) University of Waterloo (Canada); (3) Ryerson University (Canada)

**Introduction:** Eating Together Study I is a longitudinal (3 years) grounded theory inquiry into the meaning and experience of mealtimes for families living with dementia. There is very little information on the mealtime process and concerns for these families. However, the limited literature indicates that the stresses of family care are associated with eating behaviours that affect mealtime, often resulting in weight loss for the person with dementia. This presentation will present the Mealtime Theory which has resulted from this research program. **Methods & Materials:** 27 families living in the community and experiencing dementia were recruited through Alzheimer Society chapters using purposeful and theoretical sampling. In-depth interviews were conducted yearly with the caring dyad together and individually for the care partner and the person with dementia. Team analysis was concurrent with data collection, as per grounded theory methodology, with analysis informing the focus of subsequent interviews. Interviewers completed initial coding and memos and these data were shared with the rest of the team in regular meetings to define concepts in more focused coding, theoretically saturate categories and develop a substantive theory on mealtimes. **Results:** Mealtimes 'mirror the way we are' and reveal the essence of what it is to be human while living with dementia. Mealtimes reflect how these families were being connected, honouring identity and adapting to an evolving life. These three subprocesses influence each other and impact the 'way we are' which can be a continuum from existing with dementia to living life as fully as possible. **Conclusion:** This is the first substantive theory that explains the meaning of mealtimes to families, specifically in the dementia context. Understanding what is meaningful and important at mealtimes can help to identify what activities and processes need to be supported to promote positive experiences and family relationships.

**PD7 743 REFUGEE WOMEN FROM CENTRAL AMERICA: REMEMBRANCES OF COUNTRY OF ORIGIN AND ENVISIONS ABOUT AGING IN CANADA**

N. HRYCAK\* (University of Calgary, Calgary, AB., Canada)

**Introduction:** The major goal of this research is to discover knowledge about the help-seeking processes and the problems and strengths of the Canadian health care system from

the emic perspectives of Central American refugee women and their families in Canada. To appropriately care for the growing population of refugees, knowledge dissemination about their practices across the life span is essential. **Method:** This qualitative research study was designed to thematically analyze the process of help-seeking from the experience of six Central American refugee women and their family's experience with the health care system in Canada. Information from the participants indicates that the Central American forced migration experiences pose an important clinical challenge for both physical and mental health services throughout the lifespan. Theirs is a language of negotiation and to some extent resistance to some of the practices and changes they find in Canada. **Results and conclusions:** The findings from this study provide a greater understanding on the effectiveness of the health care system in reaching the ethno cultural communities, while providing data on the groups' physical and mental health care needs and reasons for seeking care. The remembrances of experiences of cultural identity and practices including health and well-being from birth to old age offer concrete accounts of where and how they lived and what was meaningful to them to retain in old age. The study provides a worthwhile contribution to the literature in the education of health care personnel to be responsive to the needs of people experiencing forced migration. The participants' reminiscent experiences about their life in their home country and what they need in Canada are vital to what they envision as healthy and meaningful in old age. Policy makers too need to consider cultural variation throughout the lifespan in health systems.

**PD7 744 PSYCHOLOGICAL INTERVENTIONS IN DEMENTIA CARE: EFFECTIVENESS AND IMPLEMENTATION**

I. CANTEGREIL\* (Hôpital Broca, Paris, France)

Alzheimer's disease (AD) obliges families to make major decisions in care-giving (i.e. institutionalisation). When exploring possible ways for the future, individuals' different perspectives and beliefs have to be respected. As the issues to be addressed are very sensitive, maladaptive communication and bad relationships within a family may induce major conflicts impacting negatively on the person who is suffering from dementia. When family conflicts hinder decision making people may need professional support. Therefore, since September 2006, the Broca hospital proposes systemic therapy to families which experience or suffer a major crisis after disclosure of diagnosis. The main objective of this intervention is to help families finding constructive ways to help the person with AD. The underlying idea is that changes in interaction patterns and relationship may trigger repercussions on care-giving and decision making. The basic theory of the proposed family therapy is derived mainly from cognitive psychotherapy and systems theory. The latter claims that the behaviour of the family as a whole is larger than the sum of the behaviours of its members. Subsequently, the therapists do not work with caregivers on an individual basis but treats the family as a whole. Family therapy focuses more on how patterns of interaction and maladaptive relationships maintain problems rather than trying to identify the cause. So primacy is given to the interrelationships and not to burden due to BPSD or other typically dementia related problems. The impact of the systemic intervention has been evaluated in 2007 and currently a new research project on dysfunctional interaction patterns and communication between care-recipient – main caregiver and other family members has started end 2008. This paper presents (preliminary) results.

**PD7 745 AN INTERNATIONAL COLLABORATION IN END-OF-LIFE CARE – TRANSFERRING KNOWLEDGE INTO PRACTICE**

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NICE is an international network of researchers, practitioners and students dedicated to improving the care of older adults, both in Canada and abroad. Members represent a broad spectrum of professions. The overarching emphases of NICE are networking and knowledge transfer – that is, getting sound research into practice. NICE operates through a network of Theme Teams and Committees. The End-of-Life Issues Theme Team is working on tools to assist terminally ill persons and their caregivers. The End-of-Life Issues Theme Team has been in existence since the inception of NICE. The Team includes international members from China and South Africa. **Methods and Materials** The Theme Team has developed an informational tool dedicated to families providing care to a dying relative. Entitled "When Someone Close To You Is Dying", the brochure includes useful and timely information on what to expect, how to prepare for and how to assist someone who's dying. An entire section is dedicated to advance care planning and substitute health care decision-making. The informative brochure is available in French and English and is currently being translated in Cantonese. The tool is available online and is being distributed in its hardcopy version through a Canadian palliative care provider organization and provincial and local palliative care services. Results Families/carers using the informational tool are asked to complete a satisfaction survey. The results of the survey are used as a feedback mechanism to further enhance the informational resource tool. The preliminary feedback received to date indicates favourable outcomes/client satisfaction. **Conclusion** The objectives for this presentation are to describe NICE as a multi-professional network, to share the content of our informational tool on end-of-life care and

to discuss the challenges of its distribution, continuous improvement/feedback as well as in measuring client satisfaction.

**PD7 746 ABUSE OF OLDER PERSONS WITH DEMENTIA BY FAMILY CAREGIVERS: AN INQUIRY INTO THE ROLE OF CAREGIVER STRESS.**  
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This study examines the relation between caregiver stress and abusive behavior directed towards older persons with dementia. A total of 122 family caregivers of older persons with dementia participated in this study. Participants provided information on their demographic characteristics, care recipient's problem behavior (Cohen-Mansfield Agitation Inventory), caregiver stress (Zarit Burden Interview), and whether they directed any abusive behavior at the care recipients in the past year (the psychological aggression and physical assault subscales of the Conflict Tactics Scale). Abuse is common in this sample – 62% and 18% of the caregivers reported having verbally or physically abused the care recipients in the past year. Family caregivers who spent more days cohabiting with the care recipients ( $r=.37$  and  $.33$  for verbal and physical abuse respectively,  $p<.01$ ), observed more behavioral problems in the care recipients ( $r=.25$ ,  $p<.01$  for verbal abuse), and reported a higher level of caregiver stress ( $r=.33$ ,  $p<.001$  for verbal abuse) recounted more abusive behaviors. Results of hierarchical regression analysis showed that number of days cohabiting with the care recipient, care recipient's problem behavior, and caregiver stress were significant predictors for verbal abuse ( $R^2=.27$ ). Caregiver stress completely moderated the effects of care recipients' problem behavior on verbal abuse in this model. For physical abuse, number of days cohabiting with the care recipient was the only significant predictor ( $R^2=.07$ ). A high level of caregiver stress is related to a high level of verbal abuse but not physical abuse displayed by caregivers of older persons with dementia. Further studies are needed to examine factors related to physical abuse. Efforts to develop prevention and intervention programs for the abuse of older persons with dementia should take into account community support, education and training for family caregivers to mitigate their stress.

**PD7 747 EXPLORING THE INTERFACE BETWEEN ENVIRONMENTAL HEALTH AND GERONTOLOGY IN CANADA**  
C. HUANG\* (Government of Canada, Ottawa, Canada)

Introduction Environmental health is an important issue for older Canadians. Seniors are more physiologically vulnerable to environmental hazards than younger adults due to their reduced capacity to adapt to environmental stresses and to the presence of chronic health conditions, which can be exacerbated by environmental risks. Moreover, there is evidence that current health status can be influenced by exposures which occurred earlier in life. In 2007, the Government of Canada committed to protect the health of Canadians from environmental risks, particularly those who are most vulnerable – children and seniors. In response to this commitment, Health Canada organized a workshop in February 2008 on senior's environmental health. This presentation is based on the outcomes of the workshop and will highlight seniors' vulnerabilities to environmental risks, key issues on environmental health for seniors in Canada, and Health Canada's response to the recommendations of the workshop. Methods Sixty key stakeholders from the gerontology and environmental health communities attended the workshop which explored the relationship between environmental risks and the health of seniors. Results Recommendations developed by workshop participants related to expanding the knowledge base on seniors environmental health to inform policy, especially on pressing issues such as: the quality of seniors' living environment; the relationship between environmental exposures and physiological changes of aging; educating health care professionals in this area; and potential health risks associated with earlier exposures to environmental contaminants. Conclusion This workshop identified key environmental health issues for Canadian seniors, as well as recommendations which will help to inform Health Canada's work in developing strategies to strengthen the protection of seniors' health from environmental hazards. Health Canada will continue to work with key stakeholders and other government departments to advocate for health policies, programs and research which address seniors' environmental health issues.

**PD7 748 "WELL YOU JUST GET ON WITH IT" - EXAMINING THE IMPACT OF GRANDPARENTING A CHILD WITH A DISABILITY**  
S. WOODBRIDGE\* (Griffith University, Meadowbrook, Australia)

Introduction: The ageing of the world's population has meant that it is now possible for children born today to be part of three, four and sometimes five generation families. Each generation will have a particular view and expectation of what being a grandparent means and how that role should be played out in their family and in their culture. How a grandparent functions as a grandparent will be influenced by a number of factors including the age of the grandparent; their health status; their financial situation; their location; their own experience of being grandparented and the relationship they have with their own children. This paper presents the findings of an Australian study which identified how the birth of a grandchild with a disability impacts on the roles and relationships grandparents expected to have in their families. Method: The study conducted in-depth qualitative interviews with 22 grandmothers

and grandfathers whose grandchildren had a range of physical or intellectual disabilities, either at birth or as a result of trauma and who were under the age of 17. Results: Grandparents reported that they had experienced a range of emotional responses to the diagnosis that their grandchild had a disability and that this had impacted on their grandparenting role within the family. Grandparents reported that they fulfilled both instrumental and symbolic roles as required and that they adjusted their expectations to suit the situation. Grandparents used their knowledge and skills to assist the family reach their desired goals for the child, as well as being there for their own child when stressful and anxious times arose. Conclusion: The results of this study will inform the current knowledge on the important roles played by grandparents and makes a call for greater recognition and support within governments and the community for this important contribution.

**PD7 749 LIVING WITH PARKINSON'S DISEASE: CHANGES AND FAMILY LIFE**  
F. NAVARRO PETERNELLA\* (No, Maringá, Brazil)  
S. SILVA MARCON

Introduction:Living with a chronic illness demands changes in habits, relationships and customs. The objective of this study was to understand how Parkinson's disease patients and their family members notice lifestyle changes over time. Methods and materials: This was a qualitative descriptive study, conducted with 20 individuals residing in the city of Maringá - PR – ten Parkinson's patients and their closest family member. Data were collected between October and December 2007, by means of semi-structured interviews. Results: From the discourse analysis, we verified that in spite of the difficulties, many patients show acceptance or conformity regarding the limitations imposed by the disease, while others still experience anger and hope for a cure. Conclusion: The greatest changes demonstrated by patients and family members are regarding the question of dependence and loss of autonomy for work, daily life and leisure activities, which impact the entire family dynamic.

**PD7 750 EMERGENCY AND DISASTER PREPAREDNESS AND RESPONSE CAPABILITIES OF ELDERLY INSTITUTIONS IN PUERTO RICO**  
M. OLIVER- VAZQUEZ\* (University of Puerto Rico, Medical Sciences Campus, San Juan, Puerto Rico)  
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Introduction The 2005 hurricane season evidenced elders' vulnerability and mortality risks during natural disasters. Chronic morbidity, sensory changes, isolation and economic problems affect elder's capacity to respond and recover from an emergency or disaster. Individuals, who require medical treatments and the provision of care or food from others, such as elders living in nursing homes or enrolled in senior centers, have increased vulnerability. Therefore, careful emergency planning and preparedness must be a priority. Methods and materials This study evaluated the level of emergency preparedness and response capability in a stratified sample of 118 institutions (nursing homes, senior housing, day centers and foster homes) that serve older persons in Puerto Rico. A "risk index" by type of institutions and zone hazards was developed for data stratification and sampling. An assessment instrument was developed and validated. Face-to-face structured interviews were performed using quantitative and qualitative questions about emergency preparedness, evacuation planning, personnel training, communications and community resources. Geographically referenced information was collected to identify institutions that were located in emergency risks zones. Data was analyzed with EpiInfo 6.0 and SAS. Results Preliminary results revealed that representatives of nearly half of the institutions did not feel vulnerable to disasters or emergencies such as fires, hurricanes, earthquakes and epidemics, and 78% do not identify older adults with special needs that deserve attention in emergency situations. Although 90% of the institutions have written plans and procedures, less than half of them have performed emergency risk evaluations, only one third have established procedures to identify potential risks. Only half of the institutions communicate their emergency plans to the population served. Conclusions Studied institutions present a variety of weaknesses regarding disaster and emergency planning that must be addressed to improve emergency preparedness and response capabilities, and reduce adverse consequences for older adults.

**PD7 751 CHANGES IN THE FILIAL OBLIGATIONS OF FAMILY CAREGIVERS UNDER THE PUBLIC LONG-TERM CARE INSURANCE SYSTEM IN JAPAN**  
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Introduction: Japan's public Long-Term Care Insurance (LTCI) system for the elderly was implemented with the slogan "From Care by Family to Care by Society." We examined the changes in the perceived filial obligations of family members providing long-term care to seniors in their households and explored the relationship between this change and the caregiver's attributes before and after the introduction of LTCI in Japan. Methods and Materials: Using a sample of 611 caregivers from a city that participated in two surveys conducted before and after the implementation of LTCI, we measured the changes in filial

obligation scores with three latent variables: support for economic stability, aids for emotional satisfaction, and physical support for health. Furthermore, we conducted a multiple regression analysis using the quantitative changes as dependent variables, and the following factors as independent variables: the attributes of the senior and the caregiver, periods of care, family relationship, and filial obligation score before the implementation of LTCI. Results: The analysis revealed that the total scores and latent variables' scores were lower in the second survey than in the first. However, our analysis of the relationship between the caregivers and seniors revealed that the "daughter-in-law" was the only group in which the total scores significantly decreased in the second survey. The multiple regression analysis showed that the quantitative changes in filial obligation scores were lower for sons than for daughters-in-law in the total scores and the latent variables' scores. Compared with daughters-in-law, daughters by birth had significantly smaller quantitative changes in the "aids for emotional satisfaction" scores. Spouses demonstrated similar quantitative changes to those of daughters-in-law. Conclusion: Our results indicate that the introduction of LTCI in Japan had a significant impact on the perceived filial obligations of family caregivers.

**PD7 752 AN ANALYSIS OF INFORMAL CARE ACROSS SIX ASIA-PACIFIC COUNTRIES: A POLICY MAKERS' PERSPECTIVE**  
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R. IBRAHIM, L. KIATA, M. ONO, Q. NAN, T. ERIKA

A "greying" population is a phenomenon pervasive in Asia-Pacific regions, in tandem with a lowering birth-rate, increased urbanization, and/or changing family caregiving structures. Under these circumstances, the notion of an "informal care" system has caught the attention of policy makers and older people themselves. On one hand, informal care provides the elderly with an appealing idea of ageing in place within the context of the family and/or neighbourhood. Policy makers however, seem to have an underlying economic motive in the promotion of informal care, particularly as an effective cost-cutting measure on long-term care expenses. Despite the different motives from different stakeholders, little research has been conducted on informal care. Also scarce is cross-cultural studies across Asia-Pacific countries. Of prime importance is the issue of culture which plays a significant role in provision and expectations in informal care contexts. This research project is intended to detail the under-researched topic of informal care systems from the perspective of policy makers and/or legislators' in six Asia-Pacific countries (Japan, New Zealand, China, Nepal, Australia, and Malaysia). Nine researchers in these six countries will conduct semi-structured interviews with four policy makers/legislators to decipher rich, qualitative information concerning: a) the nature of current informal care provision and b) factors influencing provision of informal care arrangements to older people. The interview data will be transcribed in the first language of the participants and translated into English, which allows for a following cross-cultural comparison. A multi-method ecological research design will be used to highlight differences and similarities among the countries. The research team expects to address such issues as filial piety, communities, ageing in place, support networks, and/or a governmental resource for the elder care.

**PD7 753 UNDERSTANDING THE IMPACT OF CARE-GIVING ON SLEEP: A NEGLECTED DIMENSION**  
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Introduction Despite extensive research on the burdens and impact of caregiving for frail older parents, partners, and other relatives, little research has examined how care-giving at night impacts on carers' sleep quality and well-being. Methods and Materials This paper analyses qualitative interviews with 50 women aged 40-80 in Italy, and 60 men and women aged 65+ in the UK. Interviews focused on self-perceptions of factors influencing respondents' quality and duration of sleep. Results Thematic analysis identified four main ways that caregiving adversely affects carers' sleep: (1) providing direct care at night, including monitoring/surveillance, and nighttime disruptions by the care recipient, (2) sleep disruption or 'light' sleep due to caregivers' anticipation of needing to provide physical care at night, (3) sleep interruptions through worries and anxiety about the wellbeing, current illhealth, or future of the care-receiver, and (4) the 'legacy of caregiving', which interrupted carers' sleep for lengthy periods after care-giving ceased. Caregiving for parents and elderly relatives had major adverse effects on women's sleep in Italy, while caregiving for partners affected both older men's and women's sleep in the UK. Conclusion Intensive coresident caregiving for parents, partners and other relatives can severely disrupt caregivers' sleep, adversely affecting their well-being. The paucity of welfare provision for frail older people in Italy is implicated in high sleep disruption associated with caregiving for parents in Italy. Adverse effects on sleep of caring for frail relatives can precipitate residential admission, and therefore needs more policy attention. The impact of caregiving on sleep has hitherto been neglected in research on informal care. We acknowledge support from EU Marie Curie RTN (MCRTN-CT-2004-512362), and

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**PD7 754 ATTITUDINAL BARRIERS TOWARD USE OF COMMUNITY RESOURCES**

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Informal caregiving services provided to community dwelling elders by family members has become a normative familial task and is associated with high rates of stress and emotional exhaustion. While there are community based services available to assist carers in the tasks of caring, researchers have identified that only a small fraction of carers use community based services. Therefore it is important to identify variables that impede caregiver's acquisition of community based services that can support them in executing caregiving tasks. Although predisposing, enabling and need factors are most often used to predict awareness and use of community resources by carers, few studies have investigated attitudinal barriers of community resources awareness which is the greatest predictor of use. We investigated the reliability of 10 questions used to measure attitudinal reluctance and examined the relationship between demographic variables, social contact and attitudinal reluctance and awareness of community resources. Data were collected from a random sample of households with carers who were identified via phone. Of the 360 identified carers identified, 224 agreed to participate by responding to a mailed survey. Results indicated that five questions measuring attitudinal reluctance – not wanting to talk about personal matters, feeling embarrassed, families should take care of problems, personal troubles should be resolved within the family, and not wanting to be dependent on others had a reliability of .83. The results of a Pearson correlation revealed that attitudinal reluctance was related to age (-.18, p=.00), income (.21, p=.00), and awareness of social services (.18, p=.002). A regression analysis revealed that education ( $t=3.177$ ,  $p=<.001$ ), attitude ( $t=2.443$ ,  $p=<.02$ ), and IADL impairment ( $t=-2.214$ ,  $p=<.03$ ) were significant predictors of awareness of community based services. Implications of these exploratory findings for research and practice will be discussed.

**PD7 755 A POPULATION BASED STUDY OF CAREGIVING BURDEN OF CENTENARIAN CAREGIVERS IN NORTHERN JAPAN**

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This study investigated caregiving burden of the oldest old specifically focusing on caregivers of centenarians and aimed to determine if caregivers of centenarians in Japan can be considered models for successful caregivers. Data was collected from 160 people aged 80-107 and 84 of their caregivers aged 24-92 using a self-reported questionnaire survey. Caregivers of centenarians do not exhibit significantly less burden, less prevalence of depression, or higher quality of life than caregivers of 80-99 year olds. Burdened caregivers experienced poorer general health, more bodily pain, less vitality, difficulties with social functioning, and poorer mental health than less burdened caregivers. While all caregivers scored below expected Japanese average scores for HRQOL SF-36 those reporting utilization of private care services, providing care regularly, and providing care for more than five hours per day exhibited the lowest scores. Caregivers of centenarians may not represent models of successful caregivers. Caregivers showed equal distribution of light and heavy burden among recipient age groups therefore it may be inferred that as care recipient age increases it is not inevitable that they become heavier burdens on their caregivers. This is the first in-depth study to investigate the unique situation of centenarians and their caregivers in Northern Japan.

**PD7 756 SOCIAL SPACES, RURAL PLACES: AGEING-IN-PLACE AND SOCIAL NETWORKS IN RURAL SOUTH AUSTRALIA**

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Australia has a policy focus on ageing-in-place supported by family, community and service provision in the home. Hence, home and community are important environmental variables for ageing-in-place. Older people are over-represented in rural places and their proportion of the population is growing faster than in urban areas. There is often an assumption that rural regions have supportive communities with strong, localised kinship and friendship ties without any real conceptualisation of social network patterns. Methods: 223 in-depth surveys were conducted face-to-face with older people, aged 70+ living in rural South Australia. Surveys included profile information, the SF-36 Health Score, the UCLA Loneliness Score and comprehensive social network information. Utilising GIS technology data was geocoded and mapped to create spatial data about the social networks of participants. Variables such as mobility, health, gender, loneliness, living alone and location were considered when analysing social network attributes. Results: The focus of GIS analysis was the exploration of social network properties, determining where social networks (and potential support networks) were located. This was analysed in several different ways, as: • case studies of individual respondents, • layers of data for respondents

in particular towns or regions, • layers of data for particular types of respondents (e.g. non-drivers), • a method of linking locations of services and facilities to respondents and general 2006 census data. Conclusion: Identifying the spatial distribution of both the older population and their support/social networks gains importance as older people continue to age-in-place. Utilising GIS technology enables a deeper understanding of the spatial complexities of social networks. The assumption that older people in rural regions will have strong, localised social networks to support their ageing-in-place does not take into account the diversity of social network types highlighted in this study.

**PD7 757 THE NURSING CONTRIBUTION TO PALLIATIVE CARE IN A COMMUNITY HOSPITAL**

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Background: The End of Life Care Strategy (2008) sets out a framework to enable people to receive care at the end of life in a place of their choice. Choice, in this case, is assumed to be home. For many older people home care may be neither a desirable or practical choice. The increasingly ageing population will demand that care facilities will need to expand substantially, to minimise the predicted gap between future preferences and reality. Community hospitals are local hospitals, providing care for local populations. They could be important to meet this increasing demand for end of life care, yet, little is known about the contribution they make to this field. Aim: To explore the nursing contribution to those with life-limiting illness in a community hospital. Methods: Constructivism provides the structure to explore the experiences of key stakeholders, using multi-method case study design. Data collection included: participant observation, informal and formal conversation and document review. Theoretical sampling was used to select 'cases'. A case is the person with life-limiting illness and those directly involved in their care. Seventeen cases were sampled: 9 recruited and 7 explored in-depth. 'Framework' (Ritchie et al. 2006) facilitated the emerging construction through within and cross-case analysis. Results: See Steers et al. (2008) for a description of the nursing contribution. The caring environment was described as 'more like home than hospital'. This was largely due to the physical character of the community hospital, but was also found to be due to, a sense of 'homeliness' instilled into the environment from the nurses' attitudes towards caring. Conclusion: This community hospital provided palliative care for older people in a 'home-like' environment. This may mean that for those where home care is not realistic, community hospitals may be the next best alternative.

**PD7 758 SOCIAL EXCLUSION AND CULTURAL DETERMINANTS OF WELL-BEING OF OLDER PERSONS IN LEBANON: A CASE STUDY**

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As part of a psychosocial needs assessment, a study was carried out among older persons living in Lebanon in areas affected by the conflict of July 2006. Funded by the World Health Organization and supported by the University of Balamand, Lebanon, the study was carried out by a team of investigators at the Faculty of Health Sciences of the University. The study adopted a rights-based perspective to advocate the integration of older persons in planning and community interventions, with respect to their views and needs on a diverse range of health and social issues. The study intended to show how the research process can be explicitly used as a means to enhance awareness of older persons of their right to be recognized and consulted, and to advocate the rights of older persons and enhance awareness in Lebanese society at large. The methodology comprised face-to-face interviews with a random sample of 345 people aged 65 and older, living in a single district in South Lebanon. The majority were illiterate. A three part tool was used, consisting of the CANE, the EQ5D and culturally tailored socio-demographic questions. The CANE IV was explicitly chosen, since it directly solicits the views of older persons and rates their satisfaction and opinions on issues such as family care. Results showed a diversity of elderly needs and perceptions, which varied according to age and to gender, with there being increasing psychosocial needs in relation to perceived decreasing appropriate social and family support. The results call into question Lebanese cultural stereotypes of elderly being looked after by family and community networks. The study highlights the lack of governmental services tailored to the needs of older persons, and reveals the increasing isolation, depression and poverty that people experience as they age, particularly women.

**PD7 759 PERCEPTIONS OF PHYSICAL RESTRAINT BY FAMILY CAREGIVERS OF HOME-DWELLING ELDERS**

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While physical restraints (PRs) were forbidden in institutions, those in home-dwelling impaired elders have not been elucidated. Family caregivers may unconsciously use PRs, which could include or lead to abuse. Home-care providers need to grasp the conditions and specificities of PRs at home and to support family caregivers. For the first step, we investigated how the family caregivers perceive PRs. Methods: A self-administered questionnaire survey was conducted for family caregivers of home-dwelling elders: the Japanese version of the perceptions of Physical Restraint Use Questionnaire; whether or how they recognize the term "PR," PR procedures prohibited in institutions, and the

harmful effects of PRs; whether they have taken a class of PRs; and whom they consult when hesitating about PRs. Results: Through 43 care managers, 375 family caregivers responded. The recognition rate of PR was 21%, and higher in younger caregivers ( $p=0.001$ ). Newspaper/TV was the most frequent information source on PR (46%). "Binding to bed" was most recognized (50%) and "mitten glove" least (21%). For the harmful effects, "muscle weakness, joint contracture, pressure ulcer" was most recognized (74%) and "further medical treatment and economic burden" least (39%). For the reasons requiring PRs, "preventing pulling out an IV" was most perceived (40%) and "providing quiet time or rest for an overactive older person" least (2.4%). Almost all (94%) of caregivers have never taken a class of PRs. Family caregivers most prevalently consult care managers about PRs (35%), second most physicians (30%), and least nurses (8%). Conclusions: Family caregivers, particularly older, hardly recognize PRs without binding procedures as PRs, and hardly have information sources except mass communications and opportunities of attending a class of PRs. It is important that visiting nurses more cooperate with physicians and care managers in supporting family caregivers to minimize PRs.

**PD7 760 THE SPENDING PATTERNS OF THE OLD-AGE PENSION BY THE FRAIL ELDERLY**

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INTRODUCTION A specific old-age home in South Africa delivers certain community outreach services. A team of registered nurses have been delivering these home-care services since 2002, which include physical care, a meal service and a transport service. It was realised by the nurses that the elderly in their care had very little to spend on themselves despite receiving government pensions. This led to the question of possible neglect and financial abuse by their caregivers and that it could possibly be attributed to financial abuse. METHOD An exploratory design was used. The survey research, and specifically personal interviewing in accordance with a semi-structured schedule was utilised. By means of systematic sampling, 30% of the population, thus 100 old-age pensioners, were involved. RESULTS In many cases an assigned person is used to obtain the pension from the pay point. It was found that approximately 30% of the participants could not account for their monthly expenditure. Half the participants did not leave a neat and cared for impression and even showed signs of being neglected. In more than 30% of the cases financial problems were evident due to the fact that there was no food in the home, the home smelled of urine and filth, dirty laundry and bed linen were evident and windows were without curtaining. It was found that on average, the elderly participants shared a two-bedroom house with six other people. Some participants mentioned that the entire family lives on their income and that children and grandchildren only visit them on pension days. CONCLUSION Financial abuse can be expected in many cases, but the elderly did not want to admit it and tried to cover it up due to many reasons.

**PD7 761 FAMILY AND CARE GIVING FOR THE AGED IN NIGERIA: A SOCIOLOGICAL APPROACH**

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Traditionally, the extended family system is an important agent of care giving for the aged. However, this structure is gradually breaking down. Yet, there is no formal social security in place to fill this gap. Furthermore, ageing issue attracts little attention in Nigeria. This study therefore, examined the nature of care system for the aged and the coping strategies among the Esan of South-South Nigeria. The study adopted qualitative research methods: in-depth interviews (IDIs), Focus Group Discussions (FGDs) and Participant Observations. Two Local Government Areas (LGAs), Esan Central and Southeast and 4 communities in each of the LGAs (two rural and two urban) were purposively selected. In all, 32 IDIs comprising 16 aged and 14 caregivers, eighteen FGDs consisting seven groups of aged and six groups of caregivers were conducted. Data were analyzed using ethnographic technique. There was diminishing extended family ties and increasing social distance between aged parents and their adult children. The decline was associated with age-selective rural-urban migration and emerging nuclear family structure. This was linked to social changes toward westernization and coping strategies associated with decline in real income of caregivers due to the downturn of the Nigerian economy. The aged adopted various coping strategies, which included subsistence farming, night guard, selling of some personal belongings for subsistence, alms begging and petty trading. Only a few of the aged depended on pension and/or some support from children and church members. Aged care is diminishing among the Esan. This is manifested in the breaking down of the extended family network and emerging nuclear family system. There is need to re-awake the extended family social security system toward their wellbeing. This may be achieved within the framework of a creative multi-track social policy intervention that will involve government and civil society.

**PD7 762 DESIGNING WITH & FOR THE ELDERLY: A PARTICIPATIVE RESEARCH TO RETHINK THE BATHROOM**

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Understanding the real needs of the senior population concerning their interaction with the physical environment and the creation of accurate design solutions, are major concerns for

designers and occupational therapists. Despite the common interests, these fields rarely work together. In addition, collaborating with the actual users (seniors) throughout the conceptual process of a design solution has been adopted in very few occasions. This qualitative research is divided in two main sections, the first explores the current experiences lived in the bathroom by some senior participants with motor disabilities; and the second focuses on the development of conceptual ideas (through a participative design approach), to rethink the bathroom with the same participants promoting the development of comfortable experiences. Two caregivers and six seniors with different degree of motor disabilities participated in 3 different sessions each. The research was developed in a semi direct interview format. The first interview was devoted to the first section of this research while the other two sessions for the second section. An external researcher validated the interpretation of the analysis of the experience. The main ideas and the graphic results proposed by the senior participants along with the researcher-designer, were confronted in a focus group integrated by occupational therapists specialized in clinical attention. Results suggest a very complex relationship between the participants and their bathroom, where comfort does not necessarily play a fundamental role. Results from the conceptual ideas show innovative and feasible solutions that are not in the market yet and, being revised by OT's, seem very promising. One of the major contributions of this research is the process itself, as it gathers designers, OT's and users in the conceptual process of design solutions, this methodology can be applicable to other areas at home or at institutions.

**PD7 763 JAPANESE SOCIAL SUPPORT NETWORKS AMONG THE ELDERLY LIVING ALONE IN A MARGINAL COMMUNITY**

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Introduction A marginal community is defined as a community in which over 50% of the population is over 65 years old, and faces difficulty maintaining adequate function of the residents' daily lives. Difficulties facing the marginal community can include unemployment, shopping for daily necessities, managing rural agriculture, and participating in community ceremonies. As the number of youth leaving the community is increasing, the number of elderly living alone increases, and thus they face difficulty maintaining a healthy lifestyle. Methods and materials In order to address the issue of the elderly living alone in a marginal community, individual interviews were conducted. The participants were questioned about their daily lives and their utilization of social support networks. The data was analyzed using the Modified Grounded Theory Approach (M-GTA), which focused on the process of utilizing social support. Results The results indicate that the elderly in the study receive substantial emotional support interacting with each other. However, declining support from relatives and/or neighbors in the community forces them to seek support from relatives who live outside the community or to give up seeking support all together. Conclusion The study suggests that it is necessary to provide reliable instrumental support for the elderly in the marginal community. Such support should be implemented in such a way that the elderly can choose among various resources while maintaining their desired lifestyles.

**PD7 764 THE FEMININE FACE OF SOCIAL SUPPORT OF ELDERLY CARDIAC PATIENTS.**

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The action of planning social support for elderly cardiac patients is related to the knowledge of their relationships, considering that most of them are dependent on other people at some level. Family support, in Brazil, is very common but who takes effective care of the old people, and what are their needs? The objective of this research was to identify the web of social support of cardiac patients in ambulatory treatment of a Cardiology Hospital. Methods and materials: Interviews were conducted with 300 patients as they came for their periodic consultations at the cardiogeriatric ambulatory program. Patients signed consent forms to participate in the research. The instrument to collect the information was the Elderly Relationship Map (ERM) validated by Brazilian research. This shows, graphically, 5 types of assistance functions (visit, companion, personal care, aid for home activities, financial support), the frequency of the assistance and who gives the care. The data was entered in an SPSS statistical package for analysis. Results: Daughters were the most frequent source of support (weekly basis): 60% of the visits; 62% for companion; 73% for personal care; 51% for home activities; 54% for financial support; Wives and granddaughters appear in second place especially for companion and personal care. Friends and neighbors (women) appear in 21% for visit and companion. Other family members are mentioned with less frequency in all the five functions. Conclusion: The extensive contribution of women in social support of older people shows that it is necessary to create policies for supporting these cares. The multidisciplinary team needs to know what the needs of women carers are for better planning of the treatment and rehabilitation of the elderly. The society is changing. The smaller number of children per family will create a big lack of assistance for the elderly, in a few years.

**PD7 765 MODIFICATION TO THE HOSPITAL PHYSICAL ENVIRONMENT: EFFECT ON OLDER ADULT RETENTION OF POST-DISCHARGE INSTRUCTION**

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Introduction: As part of a larger project, this study looked at the influence of the physical environment in acute care hospital patient rooms on learning/ retention of post-discharge instructions by older adults. Methods: Participants (n=36) were community-dwelling men and women aged 75+ who role-played being a hip fracture and a congestive heart failure patient. Each received one set of post-discharge instruction in a "typical" hospital room and second set in a modified room (reduced visual and auditory distraction, improved lighting, more home-like decor). Order of exposure to typical and modified rooms and to the two sets of instructions was counterbalanced. To ensure consistency, instructions were administered via 6-minute video played on a bed-side "TV". During instruction, a soundscape from a typical 4-bed hospital room simulated distractions faced by "real" patients receiving discharge instructions. Retention was tested after 15 minutes using a touch-screen response system and after 24 hours via telephone. Participants made qualitative assessments of the environment and their physical movements/fidgeting were recorded. Results: Significant interaction was found between room type, instruction type and order (Immediate Test:  $F(3,32)=19.99$ ,  $p<.000$ ,  $\eta^2 = .384$ , Delayed Test:  $F(3,32)=12.63$ ,  $p<.001$ ,  $\eta^2 = .283$ ). Subsequent analyses found that the oldest participants had significantly more difficulty learning the more difficult instruction set in the "typical" room. Movement/fidget data suggest participants were less stressed receiving instruction in the modified room. Participants overwhelmingly preferred the modified room and expressed comfort with video delivered post-discharge instructions and computerized testing. Conclusion: Modifications to patient bedrooms to reduce visual and auditory distraction and video-mediated delivery of post-discharge instructions are promising ways of improving retention, especially in older old persons (80+) who may be experiencing sub-clinical cognitive changes.

**PD7 766 ASSESSMENT: RESOURCES AND THEIR MEANING FOR CAREGIVERS**

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Introduction: Family caregiving initiates changes in everyday life. Caregivers deal with the new situation in different ways and they feel more or less stressed. Actually there is little knowledge about possible causes for the stress experienced by the care givers. But there is an assumption that using varied coping strategies leads to differences in health outcomes and well-being. According to Antonovsky (1997) and Hobfoll (1989), this research asks which resources caregivers possess and use to deal with the unusual situation. In addition there is also a particular interest on resource engineering in the course of caregiving, especially loss and gain of resources. The aim of this research is to develop an instrument to identify the individual resources of caregivers. Methods and materials Development of an instrument: On the basis of a salutogenetic theoretical approach and a qualitative secondary analysis of interviews important resources for caregivers will be identified and transferred to a questionnaire. Testing: The instrument will be tested concerning validity and reliability. The sample consists of caregivers. The data collection was by face-to-face-interview. Results The testing of the new instrument reveals that it is possible to assess the resources of caregivers and allows an individual approach of resource assessment and their specific meaning for the caregiver's role and situation. Conclusions As caregiving is a phase of life with special stressors, the caregiver needs specific resources to cope with these requirements. The assessment could facilitate nurses to get to know more about the individual presence and use of resources (also (expected) loss and gain of resources) and their specific meaning for caregivers. This - in consequence -allows nurses to practice a target-oriented counseling to support caregivers in dealing with their situation.

**PD7 767 FAMILY CAREGIVER CAREER AND THEIR NEED FOR COUNSELLING – RESULTS FROM A QUALITATIVE STUDY IN SAARLAND**

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Introduction As the german population ages and individual lifespans increase, caregiving by family members has become a vital component of the health care delivery system. There has been a lot of research on long-term care focusing on the negative consequences of caregiving regarding physical and emotional strain, anxiety, exhaustion, and feelings like frustration and resignation. Existing care concepts for support and relief of the strain on caregiving are often not effective in the perspective of caregivers. The aim of our research was to identify preventive strategies for different stages in the caregiver career. The qualitative study explores and describes the perceptions of caregiver needs with regard to everyday home care. Methods and materials A qualitative research method was chosen because little is known about the needs for counselling in the different stages of home caregiving. We used semi-structured interviews. The total sample consisted of 30 primary

caregivers in Saarland. Interview were recorded and transcribed. The data analysis is based on the qualitative content analysis method following Mayring (2003). Results We distinguished three different stages in the caregiver career: entrance, enduring and exit stage. The results reveal different needs and changes in the caregiver career. The needs of primary caregivers are based particularly on the perceived burden by providing care, but also show additional needs which where independent from the perception of burden, for example a care check-up and guidance throughout the caregiving career. Conclusion A broader discussion and a greater understanding of improving a wider informal caregiving system with counselling and prevention, particularly to sustain and support family caregivers seems to be desirable and necessary. Caregiving is a complex process, influenced by the context of the care situation. According to different stages in the caregiver career we must make sure that we can improve the individual situation

**PD7 768 COMMUNICATION BETWEEN CAREGIVERS AND ELDERLIES WITH DEMENTIA IN HOME CARE IN BRAZIL**

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Objectives: To describe the communication process between main caregivers and elderlies with dementia; To identify the strategies used by the caregiver to establish communication with the demented elderly; To characterize the limits and the possibilities of the communication strategies to its effectiveness; To analyze the factors that influence the caregivers communication effectiveness with the demented elderly. The adopted theory was the process of communication proposed by Berlo. The research was qualitative, applying the Creative-Sensible method (CSM), for the data production was used two Creativity and Sensibility Dynamics (CSD). The CSD makes possible the triangulation of the data collect techniques: group discussion, participant observation, and the Freire pedagogy critical-reflexive. The people involved were 25 main caregivers and 22 demented elderlies, the neurogeriatric center program located in Rio de Janeiro-Brazil. The data organization and treatment followed the steps proposed by the speech analysis. In the Category I is discussed: 'Communication establishment: the intentions and the way to reach the desired objectives', which has the following themes discussed: The communication intention; The message formation; The cognitive disorder; and the Strategies and its results. And in Category II is raised 'The determinants of effect in the fidelity of the caregiver-elderly with dementia communication', which discussed: intrapersonal characteristics; intrafamily characteristics; and social cultural characteristics. For better categories a transversal analysis of the caregiver-elderly had been made, highlighting each stage of the dementia and its particularities. The results discussion allowed us to defend the thesis that the communication between main caregivers and the elderlies with dementia is made by the intentionality expressed by the body senses influenced by the context characteristics.

**PD7 769 COPING STRATEGIES OF CHINESE ELDERLY MEN LIVING ALONE IN SINGAPORE**

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Despite a high proportion of co-residence in Singapore (66.3% in 2000), there are increasing number of elderly living alone in Singapore. This study focuses on exploring the coping strategies of older men living alone. Empirical evidences suggest that compared to older women, older men tend to have less affectionate family relationships, they are also more socially isolated. Moreover, activities organized for elderly tend to be female-oriented. Thus this study seeks to explore the concerns faced by older men living alone, their coping strategies and the significance of social units (family and elderly centres) in their lives. The study also concludes with policy and practice recommendations to enhance the well-being of elderly living alone and in general. The research adopts a qualitative method to explore the complexities of the trajectories and circumstances facing elderly individuals. Semi-structured in-depth interviews were carried out with 30 men above age 65, and also conducted with service providers of senior activities to understand programs for elderly and their impact on elderly living alone. The study shows that coping strategies of the respondents are differentiated according to their financial ability. Those with financial needs (group 1) tend to be proactive with obtaining financial assistance, such as to apply as recipients of public assistance and other cash and in-kin donations from religious and community organizations. For those not eligible for public assistance (group 2), they have to cope with part-time work and strategize their financial investments. In terms of social networks, group one tend to have lesser contacts with kin, and rely more on social workers and neighbors. Although the respondents are mostly single or divorced, those who have children raised questions on changing norms and issues confronting the dominant ideology of family care for elderly in Singapore.

**PD7 770 FAMILY CAREGIVER COPING IN END-OF-LIFE CARE FOR PEOPLE WITH DEMENTIA**

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Introduction: Care for individuals with dementia who live in the community is typically provided by family members. These family caregivers (FCGs) often remain actively

involved in providing care as the dementia progresses. Previous research has emphasized the burdensome and stressful nature of caregiving with much less attention given to the influence of positive coping on FCGs' ability to provide care. Despite this, little attention has been given to understanding what might influence FCG coping among those providing end-of-life care at home to people with dementia. Methods: The focus of this study was to understand the nature of caregiver coping in end-stage dementia through a qualitative investigation addressing the following research question: What factors influence why some FCGs cope with palliative and end-of-life caregiving better than others? Data were gathered through in-depth semi-structured interviews with 14 bereaved FCGs who cared for someone with dementia. This study was guided by an interpretive descriptive design. Purposive sampling was used and interviews were thematically analyzed. Results: Findings indicate that five factors influenced these FCGs ability to cope with providing end-of-life dementia care: (1) the caregiver's personality or approach to life; (2) relationship between the care provider and care recipient; (3) progression of the dementia; (4) health-care system; and, (5) support systems. These factors were both self-identified by participants as well as identified by the researcher through the analysis. Conclusion: Five factors were found that influenced FCGs coping. These findings will be discussed in relation to the broader literature on caregiver coping. The implications of these findings for informing policies and services to support FCGs will be discussed.

**PD7 771 MAKING SENSE AND FINDING MEANING: EVERYDAY NARRATIVES OF LIVING WITH DEMENTIA**

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Introduction: This presentation of doctoral research examines narratives about living with dementia, by people with dementia and their caregivers. The aim of the study is to compare and contrast differing perspectives about the impact of ageing and dementia upon the lives of older people with dementia. Methods and Materials: A total of 50 interviews with six people with dementia and ten caregivers was carried out over two years. Narrative analysis was used to examine the content and structure of accounts of living with dementia. This enabled an exploration of different concepts and narrative constructions people draw upon to make sense of life with dementia. Results: Older people with dementia incorporate ageing and dementia into their continuing sense of self identity. Positive constructions of living with dementia involve the ability to lead a meaningful life that supports pre-existing social roles and relationships and active engagement within the family and community. The emphasis is on living an ordinary life while responding to challenges associated with cognitive impairment and social stigma. For caregivers, perceptions of a meaningful life depend on how the person's present identity is positioned relative to past social roles and relationships. Positive constructions assume continuity as opposed to a focus on disruption in the person's life. Perspectives are also influenced by how the person is perceived to conform to social norms. Conclusions: The narratives of people with dementia reflect their struggle to find meaning in terms of realising their sense of self within a social world that largely defines them as different and out of the ordinary. Caregiver narratives resonate with emotional difficulty, reflecting their struggle to make sense of a life that is not represented as essentially normal. For all, finding meaning in everyday life depends upon making sense of that life as normal and ordinary.

**PD7 772 PROVIDERS OF HELP WITH PHYSICAL DIFFICULTIES – WHO AND WHAT FOR? OBSERVATIONS FROM THE ENGLISH LONGITUDINAL STUDY OF AGEING**

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Introduction: Informal care, especially from spouse and adult children, is a key element of provision of care in England, especially as the population ages. This presentation describes the sources of help people for specific types of daily activities experienced by people aged 55 years and over. Methods and Materials. Data taken from the third bi-annual set of interviews from the English Longitudinal Study of Ageing. Results weighted for non-response. 6949 men and women in the analysis sample of whom 762 men and 1149 women reported difficulties with at least one of: moving around the house; dressing and bathing; eating or preparing a hot meal; shopping or doing work around the house or garden; telephoning or managing money; taking medication. Those who reported receiving help were asked to select from a list of possible sources. Results: Over half of those with difficulty dressing or bathing and just over a third of those reporting difficulties moving round the house or garden did not receive help. For less common problems that predominantly affected the oldest people a fifth to a quarter did not receive it. Spouses were the predominant source of help except for women aged 75 and over and, for certain tasks, for men aged 85 years and over. The physical difficulties that attracted the highest percentage of children helping were shopping or working around the house and garden. Formal sources of help were only common among the older groups, particularly the oldest women. Conclusions: Help with difficulties came overwhelmingly from informal sources, particularly the respondent's spouse. Children may focus on helping with less intimate activities. However, substantial proportions of women with difficulties who were aged 85

years and older mentioned help from formal sources; this may reflect more severe difficulties and the lack of a spouse.

**PD7 773 DEVELOPMENT OF AN INTERVENTION PROGRAM FOR ALZHEIMER'S FAMILY CAREGIVERS FOLLOWING DIAGNOSTIC DISCLOSURE**

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The purpose of this qualitative study was to develop a pro-active psycho-educational intervention program for Alzheimer's family caregivers following diagnostic disclosure. Based on a theoretical model of role transitions and a participatory approach, the study comprised four steps: (1) exploring caregiver needs; (2) developing and validating a program proposal based on caregiver-expressed needs; (3) formalizing program through intervention mapping; and (4) testing and qualitatively evaluating the program. The psycho-educational program consisted of seven individual sessions aimed at fostering knowledge and skills required to ensure successful transition to the caregiver role. The approach used in this study can serve as a guide for the development of nursing intervention programs. Intervention mapping allowed, in particular, integrating theoretical and empirical elements in a formal intervention model.

**PD7 774 DIFFERENCES IN THE CARE-GIVING PATTERNS OF ADULT CHILDREN TOWARD THEIR PARENT. -CASES WHERE THE FATHERS HAD PASSED AWAY BEFORE THE MOTHERS-**

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The purpose of this study to describe the differences in care-giving patterns of adult children toward their fathers and mothers. Moreover, this study consider not only the primary caregiver but every child who participated in any amount of care-giving, in light of the gradual change in the Japanese custom where the eldest son and his wife live together with his parents and support them. The randomly selected sample consists of people aged between 60 and 70 years who are residents of Tokyo and Iwate prefecture. Of the valid responses, 853 cases—in which both the parents were deceased and the father had passed away before the mother—were extracted for the purpose of this study. The respondents were asked about which person in the family had cared for the old, frail parents. The following findings were obtained: (1) Of the sample cases, 385 (45.1%) of the fathers and 511 (59.9%) of the mothers needed care at the terminal stage of their lives. (2) For those parents who required care, more than two family caregivers were typically indicated. (3) When the father was in need of care, about 25% of the mothers cared for them without the help of their children and about half of them with their children's help. (4) Among the children, the eldest son and his wife were most likely care for the father. Further, when the mother was in need of care, the eldest son and his wife were again most likely care for them; at this point, the care-giving patterns observed in adult children toward their fathers and mothers are similar. (5) Considering every child who participated in any amount of care-giving, daughters are seen to care for their mothers more than their fathers.

**PD7 775 PHYSICAL BARRIERS IN MARKETS FACED BY ELDERLY PEOPLE AND PEOPLE WITH DISABILITIES IN THAILAND**

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Markets are public places which should be accessible to every customer including elderly customers and customers with disabilities. This exploratory study was aimed to indicate physical barriers in markets faced by elderly people and people with disabilities in Thailand. Researchers used an accessible checklist to evaluate physical environments of 11 food markets in Bangkok and other provinces around Bangkok including Nakhon Prathom, Nonthaburi, Samut Prakan, and Samut Sakhon. Physical barriers in these markets were observed and took photos during June 2008. Themes from the data were categorized and prioritized. Researchers found consistent physical barriers among these several markets. Major physical barriers were prioritized in three categories, accessible problems, safety problems, and communication problems. Physical barriers which led to accessible problems included no accessible parking space, narrow and obstructed walkways due to goods and product placements, steps without ramps, steep ramps without handrails, no accessible restroom, and squat toilets. Physical barriers which caused safety problems consisted of uneven, wet, and slippery walkways; floor drains without covers; huge pans with hot cooking oil placed close to walkways; protruding objects such as sharp pointed meat hangers; and counters with sharp edges. Physical barriers which related to communication problems included no signage for entrances, fire exits, restrooms, alarms, and directions; no price list; and unreadable signage due to letter size, letter color, signage placement, insufficient lighting, etc. Based on the findings, physical barriers presented in

this study could be harmful not only for elderly people and people with disabilities but also for everyone who were shopping in these markets. In conclusion, physical barriers in markets should be eliminated. Building codes should be enforced and inspected strictly in markets to ensure safety environments for customers. It is suggested that further research should focus on market alterations to serve needs of elderly people and people with disabilities.

**PD7 776 CROSS-CULTURAL DIFFERENCES IN FILIAL CAREGIVERS: CANADIANS, CHINESE, AND CHINESE-CANADIANS**

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Introduction: Western and Eastern cultures vary considerably in their historic notions of filial responsibility. Western culture embraces individualism and independence; Eastern culture promotes filial obligation and respect. However, recent research in North American and Asia suggests that the traditional Eastern model of filial piety is changing in present-day society and that diasporic Asians may fall somewhere in-between the two, still different, cultures. There remains much that we do not know about caregivers within these cultures: how are they similar to or different from one another? Methods and materials: Three samples (Caucasian-Canadian, Chinese-Canadian, and Hong Kong Chinese) of filial caregivers were interviewed in-person (n = 315). All Chinese-Canadians were descendants from Hong Kong. Both sons and daughters were interviewed for on average an hour and a half. Using data on culture, socio-demographics, filial responsibility attitudes, and caregiving behaviours (ADLs, IADLs, companionship, and finances), cluster analyses compare types of caregivers. Results: Cluster analyses correctly classified 94.6% of the cases, with cultural group falling in distinct categories. Caucasian Canadians differ from Hong Kong Chinese caregivers in that they tend to be older, female, live apart from their parent, care for a parent in relatively better health, adhere less to attitudes of filial responsibility and piety, and provide ADL and IADL assistance but not financial support. Interestingly, Chinese-Canadians characterize two distinct groups where one group tends to be older, unemployed, provide help with more ADLs but not financial support, and the other group tends to be younger, employed, provide help with fewer ADLs but also provide financial help. Conclusion: Children who provide care to their elderly parents differ from one another in terms of socio-demographic characteristics.

**PD7 777 SPENDING PATTERNS OF FAMILY CAREGIVERS: IMPLICATIONS FOR AN UNCERTAIN ECONOMIC FUTURE**

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Family caregivers in the US, as in other countries, provide approximately 80% of the long term services needed by older adults. Not only do these carers provide direct help and manage needed services, many family carers also pay for goods and services and cover living expenses for the older person. A recent US survey of caregivers (n=1000) suggests that more than half of the carers in the US spend more than 10% of their annual income for the benefit of the person they are helping. Respondents reported a range of strategies to manage the costs of caregiving including; deferred savings, increasing credit card debt, cutting back on leisure time and travel and spending less on basic necessities of life. The survey also revealed a disproportionate investment of time and money by those respondents least able to handle this investment. And finally, analysis suggests that perceived level of burden of the carers was highly correlated with their level of spending. This poster will provide details about the survey, place the findings in an international context, and outline its importance to our understanding of the effect of the global economic downturn on family carers and the long-term outcomes associated with the strategies employed by carers. Policy recommendations for carers on an international level will be proposed. Additionally, the correlation between perceived burden, health of the caregiver and spending will be reviewed in terms of sustainability of family care over time.

**PD7 778 THE FAMILY CAREGIVING DYAD: PERCEPTION OF CARE BY CAREGIVERS AND CARE-RECIPIENTS AND ITS ASSOCIATION WITH DEPRESSIVE MOOD AND SELF-RATED HEALTH**

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Introduction: Studies on family caregiving for frail or disabled older persons have primarily focused upon the perspectives of the caregivers. Fewer have focused on dyadic models of caregiving to assess the interactive nature of caregiving. This study aimed to assess congruence and discrepancies between the family caregiver and the older person's assessment of care stressors, burden and family care relationship, and to examine dyadic models of caregiving: the contribution of caregiving or care receiving variables to health outcomes for each member of the dyad. Methods and materials: This cross-sectional study is the first phase of a longitudinal study. Two hundred dyads of frail or disabled older care-recipients and spouse or adult child caregivers were interviewed face-to-face. Variables included sociodemographic background, caregiving stressors (ADL and IADL; frequency of care), appraisal of caregiving or care receiving burden, family care relationships (communication and decision making), depressive mood and self-rated health. Results: Caregiver and care recipient assessment were correlated, yet significant discrepancies were

found in assessment of care stressors, and family care relationships. Controlling for gender and kinship tie, different variables were associated with depressive mood and self-rated health of caregivers or care recipients. Depressive mood of each dyad member was significantly associated with the other's depressive mood and with own appraisal of care load. The care recipient's decision making about care was significantly associated only with own depressive mood or SRH but not with that of the caregiver's. Conclusion: The findings highlight the importance of understanding the perspective in family caregiving of non-demented care recipients. By identifying patterns of family care relationships that are amenable to change, interventions may be tailored to responding to the needs of both members of the dyad.

**PD7 779 DETERMINANTS AND ECONOMIC VALUATION OF FORMAL AND INFORMAL CARE FOR FRENCH DISABLED ELDERLY LIVING AT HOME**

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Introduction: Population ageing raises challenging issues about management and financing of long-term care. Although informal care is the main source of assistance, its economic value remains puzzling. The study aims at assessing its cost, and at identifying factors associated with the type of care (either informal, formal, mixed or no care at all) received by disabled elderly. Methods and materials: The analysis uses data from a French representative survey on disability, gathered in 1999 among people living at home. The sample is about 3,500 older persons aged 60 and over, who reported needing help with activities of daily living. A multinomial probit model is performed to determine factors associated with type of care. Cost of care is valued according to the proxy good method. Results: A third of disabled elderly do not receive any care. Among those who are helped, 55% receive informal care, 25% formal care, and 20% mixed care. The socioeconomic status plays an important role, and shows difficulties that some people face to access formal care services. The economic value of informal care would lie between 6.1 and 8.3 billion euro, and would represent more than 60% of the total cost of care. Conclusion: The public financing of care for disabled elderly still remains insufficient to cover the whole costs. It may have serious implications on the health of the elderly and their carers.

**PD7 780 SOCIAL ENGAGEMENT OF OLDER RURAL CANADIANS: CONSTRAINTS AND FACILITATORS OF CHOICE.**

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Introduction: Social engagement in later life has advanced to the forefront of research and policy agendas as a pathway to aging well and resource for community development. By engaging in meaningful volunteer activities older adults are assumed to accumulate positive health outcomes while providing a service to their community. Yet underprivileged older adults may engage in helping one another or volunteer work not by choice but under conditions of duress and poverty. Methods and materials: Using a critical gerontology and a feminist political economy perspective, this paper examined whether or not older adults can choose the kind and extent of their social engagement. The data from 55 in-depth qualitative interviews conducted in 2004-2005 in three communities in rural Canada were analyzed using the method of constant comparison. Results: The analyses uncovered five factors that constrain or facilitate choices of social engagement for older adults. Two of these factors (profound engagement in care work and compulsory altruism) make older adults volunteer and help others to a greater extent than they would like, thereby crowding out other meaningful activities. The other three factors (individual resources; opportunities for social engagement; and barriers and facilitators around desired activities) selectively exclude some older adults from participating in activities they value while affording other older adults wider choices for social engagement. Conclusion: The intersectionality of gender and class determines whether these factors facilitate or constrain choices for social engagement in later life. As the market economy uploads the costs of onerous care work on persons disadvantaged by age, gender, and class characteristics, low-income older women from remote or declining rural communities experience the least choice and the most constraints to social activities they value. Meanwhile greater individual economic resources and social capital facilitate choices for social engagement for older adults from more privileged

**PD7 781 "MEMORIES ARE LIKE A DARK CLOUD": AN EVIDENCE-BASED AGED-CARE MODEL FOR OLDER SURVIVORS OF MASS TRAUMA**

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Introduction Clinical studies have shown that older people with a past history of mass trauma often require specialized attention in aged care environments. Few studies have identified successful ways to provide care for older people from such backgrounds. This project developed an evidence-based model for training aged care workers to provide services that are sensitive and responsive to the special needs of older trauma survivors. Methods and materials Qualitative research methods were used to investigate the experiences of both older trauma survivors using aged care services and staff providing this

care. The study focused on two groups of older survivors in Melbourne, Australia: Holocaust survivors and older Cambodians. Ten focus groups and 20 semi-structured interviews were conducted with direct care staff and managers from residential facilities and community care agencies. Twenty in-depth interviews were conducted with older survivors or their primary family carer. Interview data were analyzed for themes. Results Providing sensitive and responsive care for older survivors is complex and multi-faceted. It requires staff to understand both historical events and the uniqueness of each survivors experience. It also involves person-centered and culturally sensitive care. The core elements of the training model include: Knowledge (e.g., of the diversity in past trauma experiences and the impacts of trauma on older clients' lives and behaviors); Communication (e.g., developing trust), and Skills (e.g., in responding to distress and problem behaviors and avoiding triggers). Conclusion We are using the study's findings to develop staff training resources designed to improve aged care workers' responsiveness to the needs of older trauma survivors. The significance of the project for Australias aged care sector is highlighted by government figures showing that 70% of humanitarian immigrants in the last two decades had experienced torture or trauma.

**PD7 782 FAMILY PRACTICES AND INTRA-GENERATIONAL RELATIONSHIPS**

IN LATER LIFE: OLDER SIBLINGS

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Research on the everyday experience of 'doing family' and 'being in' older families is rather scarce. Detailed information of the way in which individual and/or familial biography and cohort differences impact on the multiple roles and complex relationships that are played out within families is sorely lacking. Instead, the research focus has increasingly been on a welfare model of older families, particularly in relation to inter-generational relationships, in which 'family support' has been dominant. Whilst such research is unquestionably of vital importance, it has nonetheless been to the detriment of exploration and appreciation of the qualitative experience of family life for older people as they, and their families, age together. This paper by focusing on intra-generational 'family practices' in later life, with particular reference to the author's study of relationships between older siblings, argues for a more holistic approach to the study of older families. Biographical interviews were conducted with 20 older siblings. Secondary analysis of 20 narratives of later life widowhood was also undertaken, with specific reference to family relationships. Drawing on key themes that were elicited from the data, the paper addresses the following areas: personal and collective biography; ageing together; sibling relationships in later life as 'something special'. Being' or 'having' a sibling is potentially an important contributory to the maintenance of both identity and well-being at a time when identity may be perceived to be under threat. Significantly, it would seem also that for some older people their current relationship with siblings enables them to better manage their own ageing process and ultimately their own future mortality. By contrast, for others a lack of collective reminiscence, different perspectives on the past, or broken bonds impacts on well-being and perhaps makes the past, present and future even more uncertain.

**PD7 783 END-OF-LIFE PROCESS IN A NURSING HOME IN JAPAN BY CASE STUDY**

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Introduction: In Japan, the number of deaths at places other than hospitals is increasing. My purpose is to describe the end-of-life process of elderly living in a nursing home. Methods: Case study of 22 elderly, who died between April 2007 and December 2008 in a nursing home in Tokyo. The cases were analyzed with following parameters: 1) the conditions diagnosed as 'end-of-life', 2) the physical changes until death, 3) medical treatments in the nursing home, etc. Additionally, a questionnaire was sent by mail to their families about satisfaction. Results: Mean age was 84 (72-98). Main diseases were Alzheimer's, cerebrovascular disorder, and schizophrenia. All had dementia. The number of years living in the nursing home was from 5 months to 11 years. End-of-life care started when swallowing had deteriorated in twelve cases. In four separate cases, swallowing deteriorated after acute care for serious disease. All families preferred a natural death course, so they did not request any medical treatment such as PEG. Six cases died suddenly, or were admitted to hospital because of acute change in physical conditions. The social worker or the nurse in the nursing home explained end-of-life care to the families before starting. Ten persons returned a questionnaire: two persons answered 'satisfied', and eight persons answered 'satisfied but imperfectly'. Discussion: End-of-life care in the nursing home started when swallowing function deteriorated. Nursing home care was selected by families who wished to die naturally. For satisfied end-of-life care, it is necessary for families to confront end-of-life decisions. Families must be informed of patient's conditions, and what care we can and cannot provide in a nursing home without a regular doctor or nurse on duty at night, in order to make appropriate choices.

**PD7 784 LONG-TERM CARE INSURANCE SYSTEM AND FACTORS RELATED TO STABLE CARE RELATIONS IN JAPANESE ELTERS**

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**Introduction** The Japanese long-term care insurance (LTCI), initiated in 2000, is a mandatory program in which everyone over 65 is guaranteed utilization of care services and equipments. The system brought a tremendous expansion of care programs and facilities for the elderly, and influenced the relationship between care recipients and family caregivers. Methods and materials In 2003, we began to conduct semi-structured interviews with a total of 30 care recipient-family caregiver pairs in order to investigate the ways in which elder care was affected by the new system in a working class area of Tokyo and a farming community area in Akita, a northern prefecture with the second largest percentage of elderly in the country. The follow-up interviews were carried out each year through 2007. Sessions lasted from one to two and a half hours. Results The majority of care recipient interviewees were female (72%). Their ages ranged from 65 to 92 years old, with an average of 81 years. Although wives, daughters-in-law and daughters accounted for the majority of caregivers, families were purposively chosen so that we could interview people in a variety of relationships to the elderly person, including husbands and sons. Spousal caregivers, especially wives, expressed responsibility for taking the caregiver role and behaved protectively toward the care recipient. This often resulted in separating the couple from others and isolating them from the community. Utilization of LTCI services enhanced their openness to the community and provided respite time for caregivers. Daughters-in-law were exposed to stress from other family members as well as from care recipients. Solitude and sociability of care recipients helped to neutralize conflict among them. More husbands and sons engaged in care giving, but faced, in particular, housekeeping difficulties. Conclusion LTCI programs contribute to stimulating bidirectional and multidirectional.

**PD7 785 IS ELDER ABUSE WORSE IN DEVELOPING COUNTRIES? COMPARATIVE ANALYSIS BETWEEN BRAZIL AND USA**  
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**Introduction:** Elder abuse is a growing concern worldwide, the WHO revealed that between 4 to 6% of world older adult population are victims of some type of violence. Considering the differences in social-development among societies, the aim of this study is to identify if there are disparities in degree of violence against older adults according to nation developmental status. **Methods and Materials:** Data was collected from the results of two national studies , Elder Abuse Incidence Study,1998 from the US , and Violencia Contra a Pessoa Idosa (Violence Against The Elderly), 2007 from Brazil, and compared in three categories: type of violence inflicted against the elderly, the relationship between victim and perpetrator and gender of perpetrators. **Results & conclusions:** The higher type of variations were found in the category of type of abuse committed against the elderly, in Brazil the most prevalent type of abuse found was Financial Exploitation while in the USA, the most prevalent type of abuse reported was neglect, so that variation might have its bases in the developmental status of each nation, however to affirm that violence against the elder is worse in developing countries would be premature since there are no literature comparing violence based in developmental status, and there is some restrictions regarding the process of data collection in the Brazilian survey. This study suggest that elder abuse and its degree should be understood in order to raise awareness and research in developing countries regarding the theme of elder abuse and to begin a discussion of the effects that underdevelopment might have in violence against older adult populations.

**PD7 786 STAYING ACTIVE AND PROMOTING WELL-BEING AMONG THE ELDERLY: A STUDY OF OLD AGE HOMES IN INDIA**  
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The issue of physical and mental well being of the elderly population has caught the imagination of current social scientists in India. Not only academic scholars but also policy makers and voluntary organisations are, particularly, paying attention to those elderly persons who are residing in old age homes. It is due to the commonly held notion that the elderly find it difficult to adjust to the life in old age homes in the absence of any meaningful activity in later lives. In this paper, we intend to examine the life-satisfaction of the old age home residents within the framework of activity theory of aging. The theory states that engaging in some kind of activity or work facilitates elderly people to adjust to the later years of their life. The paper is based on the study of six old age home residents in coastal districts of Orissa, a province in India Primary data was employed for the purpose of this research. A semi-structured interview schedule was constructed to tap the subjective perception of the residents of the Homes in Orissa. We found that a majority of the residents expressed their satisfaction staying at the Homes. The reasons that they cited for their feeling of happiness was that the Homes took care of their basic requirements such as food, accommodation, shelter and medical facilities. The constant touch with friends, good friendship with the co-residents and engagement in activities within the Homes were also contributing factors towards their satisfactory lives in the Homes. The finding also corroborated the assumption of the activity theory that engaging in various roles, not only

improves the physical and mental health of the elderly but also instils in them a sense of self-esteem. **Keywords:** Elderly, Old age home, Activity, Satisfaction, India

**PD7 787 POLICY IN THE FACE OF RAPID CHANGE: THE CASE OF KOREA**  
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South Korea is regarded as one of the economic tigers in Southeast Asia. Modernization has occurred at an unparalleled pace but it is creating a generational storm in the face of a silver tsunami. Korea is faced with strong cultural traditions that may be unable to keep up with 21st century aging. There are changing mores and changing policies as the country grows older at an extraordinary pace. The authors bring together findings from a major survey of unmet needs and integrate them with recent policy quandaries facing the elderly and the country as a whole. Having faced innumerable challenges in the past, Korea is ready to rise to the occasion and is funding a world class initiative at Hallym University to bring international scholarship, research, and applied knowledge to bear on looming difficulties. Working with top-ranked Korean gerontologists and a panel of international experts, the initiative points the way to viable intervention strategies relevant to the sweep of Asian Aging and aging in other developing countries. Presenting a conceptually grounded approach to policy research based on national and personal needs, this paper highlights recent efforts to break new ground.

**PD7 788 THE RELATIONSHIP BETWEEN HEALTH AND SES IN SOUTH KOREA**  
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**Introduction:** The relationship between health and socio-economic status (SES) has not yet been established in developing countries, such as South Korea, while the lack of a social support program and the existence of large economic inequality suggest an even stronger health disparity across SES than that which exists in developed countries. **Methods:** We investigate this relationship, using multiple, objective measures of health and SES, including self-reports of doctor-diagnosed disease prevalence, clinical prevalence of diseases based on biological markers, and a physical performance measure of frailty. The samples are drawn from two newly available, nationally representative sets of data from the 2006 Korean Longitudinal Study of Aging and the 2005 Korean National Health and Nutrition Survey. **Results and Conclusions:** A strong health and SES gradient is found based on both self-reported and clinical prevalence of diseases, co-morbidity, and frailty. Among SES, the education gradient is particularly strong, and household income and net-worth are also significantly associated with individual health outcomes. We also examine whether retirement influences co-morbidity and frailty, using the mandatory retirement provisions of the Korean labor force to identify a pathway to retirement that is not a consequence of poor health outcomes. We find that mandatory retirement is not associated with subsequent co-morbidity and frailty, while poor health is the primary reason most frequently reported for retirement.

**PD7 789 A COMPARATIVE STUDY OF SOCIAL INCLUSION AMONG ELDERS WITH A DISABILITY IN SHANGHAI AND HONG KONG, CHINA**  
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**Introduction:** This study aims to understand the life circumstances and social exclusion experienced by older adults with disability in Shanghai and Hong Kong; it also aims to study how changes in social exclusion affect the quality of life of older adults with disability in the community of the urban Mainland China context and Hong Kong context. **Methods:** There are 460 older adults from one community in Shanghai, and 250 older adults from a compatible community in Hong Kong, participated in the questionnaire interview. Both the sampling processes in Shanghai and Hong Kong are representative despite the different interview approaches, as stratified sampling was employed in Shanghai while multi-step random sampling was employed in Hong Kong. **Results:** The quality of life of the older adults was significantly affected by their functional capacity and disability. This also implied that social environment was not inclusive for the older adults with disability in many ways. Neighborhood exclusion stood out to be the most significant form of social exclusions that the older adults with disability faced both in Hong Kong and Shanghai. Respondents of older adults with disability from Shanghai suffered more significant social exclusion in all forms of exclusions compared to older adults with no disability, especially in terms of basic services and financial exclusion. Furthermore, the social exclusion had a partially mediation relationship with disability and quality of life. **Conclusion:** Although disability is now more and more commonly understood as an element of human diversity, it is still quite ideal to consider the people with disability an inclusive body of the society. There are yet many environmental barriers as well as a mixed interplay of social conditions to fulfill community inclusion for this cohort. Suggestions on how to achieve an inclusive society especially for this cohort of people were discussed.

**PD7 790 HERBAL MEDICINES FOLLOWING THE ELDERLY PERSPECTIVE: FOOD, NOURISHMENT AND MEDICINE**  
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**Introduction:** From time immemorial, herbal medicines have been popular among the elderly and their families as typical traditional household medications. The understanding of how the elderly perceive and define herbal medicines will provide the appropriate manners to care for the elderly, themselves and/or by health care providers who can inform and encourage the elderly and providers to use the most beneficial herbal medicine.

**Methods and materials:** To depict how the Thai elderly use herbal medicine according to their basic perceptions, the questionnaire of the benefits of herbal medicine perception was used in this study on the Thai elderly (60 years and older) of 419 participants in different areas: rural, suburban, and urban. The elderly were chosen among those in Thai senior club in opportunistic random.

**Results:** Almost participants (97.4%) had known and used herbal medicines according to how they prepared them and why they used them. The study depicted that the Thai elderly used herbs in daily cooking because they perceived herbs as food and medicine as well. They also used herbs in form of fresh herbs (32.5%), herbal tea (21.5%), herbal hotpot (23.4%) and adaptogens (43.9%). They believed the adaptogens strengthen the body in non specific ways with the final goal of being more resistant to disease and stress. By the way, they did agree with high level that they thought herbal medicines could provide nourishment, cure diseases, relieve symptoms especially pain, and provide good health maintenance. They also thought that herbal medicines are useful and valuable as ancient Thai folk medicines.

**Conclusions:** Thai herbal medicines are a traditional medicine which has been current used in Thailand not only because of their cost but also of their accessibility and general acceptance by the Thai population.

#### **PD7 791 ELDERLY SERVICE NEEDS IN HONG KONG FROM THE USERS**

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**Aim:** To identify elderly service needs in Hong Kong from the users' perspective. **Background:** As Hong Kong population is ageing rapidly, it is important to identify the needs for care of the elderly. Although a wide variety of medical and social services have been provided to meet the needs of the elderly people, there has been little evaluation from the users' perspective regarding what the needs are and how well current service provisions match their needs. In recent years the importance of patient centred care has been emphasized, where patient's expectation of care have been given a central role in guiding and improving the provision of health. However few studies have been carried out with respect to services for the elderly. **Design:** To identify the service needs, a focus group study was conducted. Both service providers and elderly people were interviewed. **Method:** Data were collected by running eight focus group discussions. Interviews were transcribed and themes were identified. **Results & Discussion:** The study identified several areas for improvement in elderly services, covering adequacy and accessibility of medical services, coordination of health and social care, quality of long term care, negative perceptions, and training needs. Similar to other studies of what patients want of their health services in other countries, the themes of fast access, continuity of care and smooth transition, affordability, provision of information of available health and social services appear to be universal. **Conclusions:** In addition to other objective outcomes, changes in service provisions towards improvement should be evaluated from the users as well as professional care providers perspectives. The present study used the qualitative research method of focus group to provide an insight into the elderly service, generating rich information which could be used to inform elderly care service development.

#### **PD7 792 CHINESE ELDERLY PEOPLE'S PERCEIVED IMAGE AND SELF-IMAGE: AN EXAMINATION OF LOOKING-GLASS-SELF THEORY**

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**Introduction:** Positive self-image is beneficial for elderly people to keep physical, psychological and social functioning health, thus exploring the determinants of self-image is fundamental to foster a positive ageing process. However, opinions are often divided on how the elderly would react to the common negative age stereotypes. Some insist that through long exposure, elderly people might internalize those stereotypes, whereas others contend that the downward comparison process may make negative stereotypes potentially benefit the elderly. Despite the extensive research on societal age stereotypes and self-image of the elderly in western societies, relatively little is known about the situation in China. To fill this context gap, this study sets out to unravel the relationship between Chinese elders' perceived image and their self-image in terms of their physical, psychological and social functioning dimensions in the framework of Looking-glass-self Theory.

**Methods and materials:** Employing multistage cluster sampling method, we conducted quantitative questionnaire surveys on 199 elderly people from both urban and rural areas in Wuhan. Data analysis took place in several stages using SPSS10.0. **Results and Conclusion:** This study, to some extent, supports the "internalization effect". Elderly people's self-image is found to be positively associated with their perceived image ( $r=0.38^{***}$ ) and shows different correlation coefficients in the dimensions of physical health, psychological status and social functioning. Moreover, such "internalization effect" is found to work differently for different categories of elderly participants. Male elderly

with higher socio-economic status are less likely to internalize perceived image as part of their self-image. The incremental OLS regression models further identifies educational level, chronic health conditions, perceived image in physical, psychological and social functioning domains as significant predictors of elderly people's self-image, with the final adjusted  $R^2 = 0.329$ .

#### **PD7 793 DEFINITIONS ABOUT QUALITY OF LIFE: BRAZILIAN OLDER ADULTS PERCEPTIONS**

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**Introduction:** The aim of this study to explore the older adults perceptions about the significance of the quality of life (QoL) and identify, as well, the most referred QoL categories. **Methods:** descriptive and cross-sectional study developed as a result of an open question: "What does QoL mean to you?". This question where applied to 260 community dwelling persons aged 60 or more, in a city in Southern Brazil. The software Qualitative Solutions Research NVivo (QSR NVivo) 2.0 was used to support the qualitative and quantitative content analysis. The pre-established categories were based on the facets from the Brazilian version of the WHOQOL-100 questionnaire and WHOQOL-OLD module. The project was approved by the Research Ethics Committee of the Federal University of São Paulo. **Results:** for the majority QoL signifies to have health. Following, the more representative categories were: positive feelings, personal relationships, food, financial resources and leisure opportunities. **Conclusions:** The findings reinforce the idea that QoL is a multidimensional concept and can be analyzed by subjective and objective parameters.

#### **PD7 794 PERCEPTION OF AGING EXPERIENCE BY SENECALESE WOMEN: A PHENOMENOLOGICAL STUDY**

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**Introduction.** The aging of women has become an object of concern in developing countries (WHO, 1999). In Senegal, the number of aging women is progressively increasing. This requires reorganizing the health system to meet their health care needs (Couderc, 2004). Such a reform should take into account an understanding of aging, from the women's own perspective. The purpose of this study is to explore the meaning of aging experiences amongst senegalese women, living in the community. **Méthods and materials.** This qualitative study used a descriptive phenomenological approach. In-depth interviews, with ten women aged 60 years old or more, were realized, in Dakar. One open-ended question asked the women to describe their most significant aging experiences. **Results.** Giorgi's (1997) phenomenological method guided the data analysis and revealed eight meaningful findings reflecting the lived experiences of aging: 1) Being pleased about earning the privileged status of the aged woman, 2) Adopting new roles valued by the family and the community, 3) Being confronted with a physical vulnerability, 4) Facing obstacles to health care accessibility, 5) Facing greater psychological vulnerability, 6) Experiencing economical vulnerability, 7) Having to adapt to a lifestyle which varies between traditional and modern and, 8) Giving a main importance to religion. **Conclusion.** This study showed that aging is, for Senegalese women, a fulfilling experience, in spite of physical, psychological and economical vulnerability, which in turn, leads to an existential reflection. It also showed that aging women need appropriate social and health measures to promote the elders well-being.

#### **PD7 795 EFFECTS OF SOCIAL EXCLUSION ON DEPRESSIVE SYMPTOMS OF ELDERLY CHINESE LIVING ALONE IN CHINA**

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**Introduction:** The number of the elderly Chinese who are living alone in China increased has in recent years. However, research on depressive symptoms of older people living alone in China is limited. Social exclusion is an emerging concept to examine the disadvantaged groups and some evidence has shown the connection between social exclusion and an increased risk of mental health problems in later life. This research examined the effects of social exclusion on depressive symptoms in elderly Chinese in China. **Methods:** Data were obtained between August and October 2008 through face-to-face interviews, using a structured survey questionnaire, from a stratified proportional random sample of 228 Chinese aged 60 years and older who were living alone in one of the aging communities in Shanghai, China. Depressive symptoms were measured by a 15-item Chinese version of the Geriatric Depression Scale. **Results:** Over 30% of elderly Chinese that were living alone reported having symptoms that indicated that they had mild or above mild level of depression. When controlled for the demographics and health variables in hierarchical multiple regression, social exclusion variables represented by lower financial adequacy and lacking of social support were significantly related to more depressive symptoms. The social exclusion variables were more important than the health variables in explaining the variance in depressive symptoms. **Conclusion:** There is a relationship between social exclusion and depressive symptoms among the Chinese elderly living alone in Shanghai. Social policies and programs to reduce various forms of social exclusion

should be developed. In addition to providing better financial support, services to facilitate the development of better social support are also essential.

**PD7 796 THE ELDERLY LIFE ADJUSTMENT AND DEMAND FOR THE MENTAL SUPPORT IN TAIWAN**

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**Introduction:** Elder people have to adjust constantly for facing the sense of loss in the aging process. However, finding out the elderly' support demand is actually very important at the adjustment stage. This study attempted to explore the support demand of life adjustment among the elderly, and took the psycho-cognitonal prospective to search for the demand of management methods and information when the psychiatric problems arise. Methods and materials: The subjects were from the metropolitan area for the consideration of health related information accessibility. The healthy elderly who live in Kaohsiung city located on the Southern Taiwan were selected, and the sampling numbers depended on the elderly population's proportion of the 11 districts. The total numbers were 498 that exclude the cases of unqualified and incompletely data. Data collected by the questionnaire with face to face interview. Descriptive analysis indicated the elder samples need more supervised information of suffering experiences management, leisure activities plans and money management. Results: This result also showed that the elderly need someone to provide the information of the management methods about loneliness, depression and stress in life (the mean is 3.2). The multiple regression line pointed out that the more mental support needed the more information demand of self adjustment needed. Conclusions: The mental health maintenance for the elderly is urgent and vital. We suggested the policy of community mental health should increase the mental social services for the elderly.

**PD7 797 THE ELDERLY INFORMATION DEMAND FOR DISEASES AND SELF-CARE IN TAIWAN**

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**Introduction:** The prolonged life expectancy made the elders have to face more health problems led by the chronic diseases and physical function decline. It would be helpful for them to get the elder's health maintenance and self care ability in daily lives if the elderly' reorganization and awareness of health problem are improved. This study aims to explore the health related information that is required by the elderly, and to discover their actual demands for the knowledge of various diseases and self-care methods. Methods and materials: The subjects were from the metropolitan area for the consideration of health related information accessibility. The healthy elderly who live in Kaohsiung city located on the Southern Taiwan were selected, and the sampling numbers depended on the elderly population's proportion of the 11 districts. The total numbers were 498 that exclude the cases of unqualified and incomplete data. Data collected by the questionnaires with face to face interviews. Results: Results showed that most of the elderly live with family (82%), but over half of the participants' health was not good and had several diseases (53.4%). The majority participants demand more for self-care information than for the disease-related information, and the highest need was nutrition information (the mean was 3.3), the second and third needs were medication information (the mean was 3.2) and medical care information (the mean was 3.1). Conclusions: Since the health care information was so crucial for the elderly, the enhancement programs of primary geriatric medical services and home visit of primary health service of government were highly recommended.

**PD7 798 DEVELOPING USER-DRIVEN APPROACHES TO RESEARCH AND DEVELOPMENT FOR AMBIENT TECHNOLOGIES**

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Emerging information and communication technologies (ICTs), such as "pervasive computing", "ubiquitous computing" and "ambient assistive living" have considerable potential for enhancing the lives of many older people throughout the world. However, research and development in this area has to deal with a number of challenges, not least being how should we explore, visualize and map out this uncharted area in order to exploit this potential. Important questions include: What are the important directions for research and development? How can we ensure that older people benefit from these technologies? How can we ensure that some people are not excluded from accessing these technologies? What are the potential disbenefits and how can these be avoided? How can we improve the design and development process to ensure that new technologies are "user-driven"? The paper draws on the author's experiences within a number of ICT development projects to develop a framework for user-driven R&D. INDEPENDENT examined technologies to enhance the quality of life of people with dementia. The Care in the Community project developed and tested a system for monitoring the health and well-being of older people living at home. A new EU-funded project SOPRANO will be developing technologies within the framework of "ambient assisted living". A key concern within this work is to move away from technology-push and problem-focused approaches

to researching technology and ageing to an approach that is driven by gerontological concepts and theories.

**PD7 799 INTERPROFESSIONNAL CONTINUITIES IN THE PROCESS OF DETERMINING THE INCAPACITY OF AN ELDERLY PERSON**

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This abstract presents the results of an interdisciplinary research on the interprofessionnal practices encompassed in the process of determining the incapacity of an elderly person. This process may be deemed interprofessionnal since it is characterized by strong pragmatic continuities that compensate, in some measure, for some epistemological discontinuities relative to the idiosyncratic conception of the incapacity concept of each domain. This "interprofessionnal" deploys itself in favour of a reflexive and anticipatory practice notwithstanding the lack of a common working ground to the three professional groups involved. Practices of professional actors of the judicial, medical and psychosocial field were studied in the light of their continuities and discontinuities. We carried out 43 interviews with professionals of these three fields and proceeded to an interview of explanation on the practice with each of them. This specific type of interview aims at supporting a speech very near to the professional's effective practice by leading him to have access to what the cognitivists refer to as the concrete memory. These interviews led us to a set of thematic analysis that we are exposing here in order to allow us to focus on the main subject. This analysis has allowed us to understand how continuity was being constructed from the professional actors' point of view and also to modelize its insertion into the services' integration concept.

**PD7 800 AGENCY FOR INTEGRATED CARE: A SYSTEM APPROACH TO BRIDGING ACROSS CARE SITES IN SINGAPORE**

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Elderly often have complex needs, especially so for those who have just discharged from the hospital. Studies found that they are considered as "high risk" because they occupy almost two-thirds of hospital beds and are twice more likely to be admitted to hospital compared to the entire population. With a rapidly ageing population, it becomes more acute to contain the demand for hospital beds through timely and appropriate placement of patients to the community. While timely discharges for elder patients are desired, it has not been as smooth as it often hides the complex social, cultural and familial relations, and fragmented services that sustain the self-management patients. Furthermore, the construct of "community" is often treated as a monolithic entity which very often is not the case. This poster illustrates how Singapore has established a centralized body, Agency for Integrated Care (AIC) to integrate long term care (LTC) services in the community to tackle some of these issues. Result: To ensure safe and appropriate care of our elderly, Singapore Government has established AIC whose roles are: to coordinate referrals from hospitals to LTC services; oversee the hospital-community transition care and discharge planning; and provide hospitals with case management teams to optimize the transition of patients after discharge. Poster will illustrate its operations; how it has improved the coordination of patients from hospital to LTC services; and foster closer interagency collaborations. Preliminary results show that since its inception, AIC has coordinated more than 16500 nursing home, home care and day rehabilitation applications; reduced the waiting time to nursing homes; fostered interagency collaboration across 59 agencies; and improved access to services for patients. We hoped that this case study will illustrate how our approach to integrate services across levels of care can be used as a lesson for others.

**PD7 801 OUTPATIENT CARE FOR ELDERLY PEOPLE: A STUDY OF DEMAND AND OFFER.**

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The quick growing of elderly people in Brazil causes an important impact for the whole society, especially to the Public Health Politics. Therefore, the services from this area need to be prepared with required infrastructure to receive the demand of this age group, related to installation, specific programs and human resources not just in quantity but also in quality. The present work was carried out with the purpose of identifying the demand and the offer of public health service rendered to the elderly people from Cascavel-PR in 2007. 141 elderly who live in the surroundings of UBSs were interviewed to identify the potential demand and the functional capacity of elderly. In the first stage, it was carried out the demographic characterization of Cascavel, highlighting the evolution on the growth rate, elderly people distribution and epidemiological profile during 1990 to 2005. The results showed a higher growth of elderly people compared to general population, with predominance of the female gender, and more concentration of elderly in the urban zone. Most elderly (85.2%) claimed to present more than one chronic disease, with prominence of Arterial Hypertension and its complications, as well as going to the UBSs for medical attendance. The health services showed deficiencies such as: inexistence of workers with

graduation in geriatric and gerontology and delay in the schedule of medical appointments and exams. The relation between the offer of health service and the demand of elderly people unmasked, on one hand, the necessity of evaluation, local planning, reorganization of flow and the resolution of the produced service and on the other hand, the use and difficulties of elderly to accomplish the requested medical attendance.

**PD7 802 DEMENTIA CARE NETWORKS: FACILITATORS AND BARRIERS**

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Introduction: Care for persons with dementia is complex and requires multidisciplinary collaboration within dementia networks. Dutch National Dementia Programme (NDP, 2005-2008) aimed at supporting the formation of regional dementia networks in order to provide multidisciplinary, co-ordinated and systematic dementia care. The present study explores facilitators and barriers in this process. Objectives: To gain insight into main facilitators and barriers for the successful formation and functioning of dementia care networks. Methods and materials: Focus group (FG) discussions were set up with the members of the three regional NDP-workgroups. In addition, two interviews were performed with participants from other two regions involved in this process. The discussions and interviews with different health professionals, managers and informal caregivers were audio-taped and transcribed. The content was coded using Atlas-ti programme. Results: Qualitative analysis of the FG discussion shows that some facilitators and barriers are region-specific, while others are common for all participating networks. Main common facilitators are client-centred approach of the NDP, and multidisciplinary cooperation. Main common barriers are lack of commitment at management/administration level, and competition between different dementia care providers. Incentives for competition, established by the government and the insurance companies do not serve the clients' best interest. However, our study also shows that despite the actual competition at organizational level, the professionals in direct contact with clients are inventive in getting around it, and finding good solutions for the clients. Conclusions: Client-centred approach, collaboration between health care professionals and the commitment at management/administration level are experienced as strong motivators and facilitators for the formation and functioning of dementia care networks. In order to improve the quality of care for people with dementia, incentives for competition should be replaced by the incentives for collaboration.

**PD7 803 MEDICAL AND SOCIAL HOME HEALTH CARE INTEGRATION FOR COMMUNITY DWELLING ELDERLY IN DEVELOPING COUNTRIES. EXAMPLE OF IRAN "PSGIDI".**

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Context: Ministry of Health in Iran confirmed the health transition in I.R. Iran over the last few decades. Aging of the population, insufficiency of Health Services & Strategy for future dependency among old people besides special culture in Middle East Countries as Iran conducted us to do this study to design a new model of elderly care for helping their families as formal care giver & make aware local policy makers to see another shape of care for elderly except Iranian's Hospices. Method: We designed and established a new model of Integrated Home Health Care for elderly in Karaj, a city in the North of Tehran. In this model (French-influenced Programme de Soin Gérontique Intégrés à Domicile en Iran) comprehensive geriatric assessment of referred old people have been done by a multidisciplinary team at home. Kahrizak Charity Foundation for Disabled and Elderly as the biggest support NGO for elderly in Iran had chosen to collaborate with our Gerontologic Center. Results: 275 community dwelling elderly were evaluated by two multidisciplinary teams in their homes. After some qualitative and quantitative analysis, PSGIDI was effective at three levels: Micro, Meso and Macro levels. We proved old people performances on ADL, IADL, Nutrition, Cognition, Balance, Mood and behaviors of families as micro level results after one year intervention. Experience of Geriatric Interdisciplinary Team Working considered as meso level. Finally, financial help of social welfare organization to old people who benefit from geriatric home health care programs is established. It's a successful step at macro level. Conclusion: In developing countries the elderly remain a neglected population in health and social studies. Developing integrated

care networks by practicing of model projects is one of the most frequently applied strategies to highlight ageing as a problem of public health in the future.

**PD7 804 INDICATORS FOR TARGETING SERVICES TO COMMUNITY-DWELLING OLDER PERSONS**

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Introduction: A typology was previously established with 5 categories, regarding formal and informal sources of help used at different disability's levels in ADL/IADL [1st and 2nd regrouped informal or formal sources respectively to accomplish a single task. 3rd is composed of informal sources for multiple tasks. 4th used mixed sources and 5th involved formal sources only, both for multiple tasks]. The objective of this study is then to identify which indicators characterize the belonging of an elderly to each category. Methods and materials: Two different francophone samples, composed of 1500 community-dwelling elderly persons each, were considered for our analysis. Based on Pescosolido's social network model, we looked at five blocks of independent variables to identify our indicators. To do so, logistic regression was performed. In addition, we used multiple logistic regressions to define a predictive statistical model. Results: The principal indicators were found to be: Age, gender, living alone, numbers of chronic diseases and of disabilities. The increase in the number of pathologies, of functional limitations and disabilities was directly correlated with the belonging of an elderly to one of the five categories. Conclusion: These results clarify our understanding for the belonging of each elderly to the different categories. Also, Pescosolido's model (which is concerned by the effect of health on individual's networks) illustrates clearly the evolution of the relation between the health condition and the resources used through our different categories. Public policy can then be adapted to address specific needs and can better target proper services to community-dwelling older persons in relation with these indicators.

**PD7 805 CREATION AND ADEQUATE USE OF PERFORMANCE INDICATORS FOR THE VULNERABLE ELDERLY: THREE YEARS OF EXPERIENCE IN THE NETHERLANDS**

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Problem In the Netherlands, there was very little national information available about the quality of care for the elderly. Hence, it was difficult for clients, health care professionals or management to improve their care based on data and it was equally difficult to compare the quality of health care providers. For this reason several parties, such as the health care inspectorate, the Dutch patient organisation for the elderly and several professional health care boards, created a vision on quality and made a set of 40 performance indicators. Method In the last three years, more than 2000 health care organisations for the elderly (nursing homes and community care) measured performance indicators and filled in a questionnaire. All data was analysed and presented on the internet. Instruments Two kinds of instruments were used. Indicators gathered by the health care provider such as pressure ulcers, incidents of falling, failures in the providing of medication, depression and fixation. A patient survey will be based on the Consumer Assessment of Healthcare providers and Systems (CAHPS) with information on subjects such as the professionalism of the health care professional, the living conditions and the communication. Conclusions The data show us a range of outcomes. Especially the huge differences between the performance scores are interesting data to analyse. Learning objectives - After this presentation it will be possible to • Understand the impact of making performance indicators with different health care organisations. • Understand how to handle the data adequately (do's and don'ts). • Determine the success and risk factors for using performance indicators in care. • Understand how the Dutch Health Care Inspectorate is dealing with the results of the data to improve the quality of care.

**PD7 806 SUPPORTING ELDERS IN VARIED CULTURAL CONTEXTS: THE ROLE OF GOVERNMENTS, MARKETS, AND CIVIL SOCIETY IN SOCIAL POLICY**

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As nations around the world face the common prospect of aging populations, they also encounter unique circumstances in their specific societies that provide the parameters within which they must strive to meet the needs of older citizens. In this presentation, we examine how the intersecting roles of a) government programs, b) the economic markets, and c) civil society factors (such as the individual, family, volunteer organizations, etc.) operate in 4 different countries (Israel, Japan, Sweden, and the United States) as nations work to adapt to aging populations. In addition, we will analyze how these three factors have changed over time (better to give a time frame, like the last two decades). For example, Japan's elderly have traditionally been taken care of by the family, with limited roles of government and market forces. However, in the last part of the 20th century, as the

government foresaw the coming changes in age and family structures, the role of the government drastically increased through programs such as the Golden Plan. More recently, with economic stresses, the roles of the market place and civil society, through neighborhood and other NGO organizations, have increased. In contrast, in the United States and in Israel, elder care has been more traditionally balanced between the government (playing a safety net role during the 20th century), the market (where an individual could purchase any service they desire), and the civil society (with many volunteer organizations playing a key role in helping elders). As an increasing number of nations try to design programs and policies that most efficiently and effectively address needs of older persons, we can learn from different societies how the interaction of the government, market, and civil society can create nations in which all can live and age well.

**PD7 807 TELEMEDICINE IN NURSING HOMES. NEEDS FOR RECOMMENDATIONS.**

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**INTRODUCTION.** Telemedicine is a major potential solution to face the problem of perceived shortages of doctors and nurses (Krupinski al., Telemedicine and e-health 2008;14:117). But in Nursing Homes, quality of care, patient's rights and ethical and good practices must be preserved. **METHODS.** The authors propose recommendations to the professional actors and medical staff using telemedicine and videoconferencing between Nursing Homes and a secondary care geriatric hospital, as submitted in January 2009 to the French Society for Technologies for Autonomy and Gerontechnology (SFTAG). **RESULTS.** Privacy and medical secret must be protected, and the ethical principles of autonomy and benevolence are developed. Technical considerations are developed as regular weekly programmed links permitting preventive actions, and reducing the needs for acute or emergency sessions. Networking between Nursing Homes is encouraged. A good management permits also to enhance the educational and research activities. Legal responsibilities and financial aspects remain open and sometimes difficult issues. **CONCLUSION.** Telemedicine in Nursing Homes must be a current new tool for efficacy, safety and quality of care, but recommendations for good practices and ethical issues are needed.

**PD7 808 HEALTHY, DIGNIFIED, AND HAPPY ENVIRONMENT FOR THE AGED THROUGH INFORMATION TECHNOLOGY: A U-CARE PROJECT FOR THE AGED**

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**Introduction:** The U-care project is an innovative model of care services to the aged in the Chang Gung Health and Culture Village, in coordination with the Chang Gung Memorial Hospital, the Chang Gung University, and the Ministry of Economic Affairs of ROC. Through the use of information technology, the U-care project aims to build a healthy, dignified, and happy environment for the aged as well as to slow the aging process and to enable a quick recovery, thus improving their quality of life. **Methods:** The U-care project uses information technology to develop five personalized health management service systems for the aged: (1) The personal health information management system consists of databases based on multiparameters from residents with a variety of conditions, including past histories, outpatient clinic prescriptions, diet and physiologic conditions. (2) The activities information management system can support mental care by analyzing the interactions between the aged, the communities, and the family. (3) The position and staff mobilization system can pinpoint the exact position of a resident in need of help using a Wi-Fi tag in the village. Staff members are then dispatched to help the resident. (4) The health status notification system is to monitor risk factors in advance so as to control chronic illnesses. This system also processes, analyzes, and detects physiologically significant events and provides suggestions to the staff and residents. (5) The function of the emergency medical information system integrates medical information during an emergency so as to ensure better management. **Results:** The results indicated that it is feasible to combine general care with medical services and information technology when providing care for the aged. **Conclusion:** There is potential to develop a new model of care services to the aged when general care is combined with medical services and information technology.

**PD7 809 TRUST-BUILDING WITH TRAUMATIZED OLDER CLIENTS: A CONCEPTUAL MODEL**

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With the aging population, service providers are more likely to come into contact with older adults who are survivors of past traumatic events such as war, torture, genocide, incest, and rape. The overwhelming life-threatening experience of trauma could shatter survivors trust in others, including service providers. However, self-disclosure with professionals such as counselors, psychologists, and social workers us generally considered

to be a mechanism for coping with emotional stress. However, the pain and risk involved in self-disclosure make interpersonal trust essential. Self-disclosure makes one vulnerable on the good will and motivations of others. Therefore, in disclosing personal information, the individual considers the risks of being rejected, ridiculed, and exploited. Despite the acknowledgement of the importance of trust, there is little information o trust-building. A review of literature reveals the presence f three broad approaches to trust development, each emphasizing a component of a trusting relationship: the trustee's disposition to trust, the trustee's personal characteristics, and the characteristics of the trustee-trustee relationship. This paper contends that there approaches are helpful in explaining the 'initial trust', that is the trust that encourage the client to approach and initiate a relationship with a professional. However, to make oneself vulnerable and to disclose intimate information, the client and professional need to developing a level of trust deeper than the 'initial trust'. Drawing on the theoretical insights of symbolic interaction perspective, this paper presents a fourth approach to trust-building with traumatized seniors. In this approach, trust is conceived as the outcome of a complex process involving the interpretation of the situation in which clients and professional s find themselves. This paper identifies parameters used in defining the trustworthiness of professionals and offers suggestions on how professional could become more effective in building and maintaining trust.

**PD7 810 THE ACUTE-AGED CARE INTERFACE: EXPLORING THE DYNAMICS OF 'BED BLOCKING'**

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**Introduction** In Australia, a limited supply of residential aged care (RAC) beds means that frail older people who cannot be discharged back into the community are often required to wait in the hospital setting for a bed to become available in a RAC facility. Pejoratively labeled "bed-blocking", this phenomenon is frequently cited as a major contributing factor to hospital "access block" restricting emergency and elective admissions to public hospitals. Although this issue is likely to intensify as the population ages, the extent and dynamics of the issue have not been comprehensively studied. Methods and materials Both primary and secondary data regarding the utilization patterns of hospital and RAC services by Australians aged 70 years and older were obtained in order to analyse service use and movements between services by this group. This analysis provided the foundation for a conceptual model to explain the dynamics underpinning the relationships at the nexus of the hospital and RAC sector. The model was progressively refined and developed through an extensive consultative process with experts in the field. Results A conceptual model of the dynamics at the acute-aged care interface was developed in which the pathway into permanent high care RAC is conceptualized as competing queues for available places by applicants from the hospital, the community and from within RAC facilities. The hospital effectively becomes a safety net to accommodate people with high care needs who cannot be admitted into RAC in a timely manner. Conclusion The model provides a useful tool to explore some of the issues that give rise to access-block within the Australian public hospital system. Access-block cannot be understood by viewing the hospital system in isolation from other sectors that support the health and well-being of older Australians.

**PD7 811 CARE MIX FOR THE ELDERLY LIVING ALONE IN JAPAN: WHO PROVIDES SUPPORT FOR THEM?**

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**INTRODUCTION** As the number of the elderly living alone has been rapidly increasing in Japan, it is an emerging agenda to care for the elderly living alone in the community. Depending on their needs and care preference, a wide variety of care mix will be considered individually. The purpose of this study is to examine care mix for the elderly living alone, focusing on the combination pattern of formal and informal care. **METHODS** The subjects were 2,907 elderly living alone, randomly selected from residents' registration of Itabashi Ward of Tokyo in 2007. Home-visit structured interviews were completed for 1,391 elderly (65-95 of age). We measured the actual support for daily housekeeping and their preference for formal and/or informal care. **RESULTS** 1) The respondents who received some support from others for daily housekeeping was 17%. Of them, 53.3% received support only from home-helps. 2) Over eighty percents of those who were eligible for the Long-term Care Insurance (LTCI) services utilized home-help services. 3) Only 6.4% of the all respondents utilized some other social care services than LTCI services. 4) As for the preference for formal and/or informal care, 46.9% of respondents preferred only formal care, while 48.5% preferred both formal and informal care and 5.5% preferred only informal care. 5) As for the preference for informal carers, daughters, sons and other relatives were more preferred than daughters-in-law. 6) Logistic regression analysis indicated that filial support expectation and loneliness were significantly correlated to preference of only formal care. **CONCLUSION** These findings suggest that there are variation in care mix among Japanese elderly living alone. While most of them maintain their daily housekeeping activity without any help, they tend to

depend much on formal care when they need any help. Establishing appropriate care support network for them is needed.

**PD7 812 INFORMING POLICY AND SERVICE PROVISION IN THE CONTINUUM OF CARE: A CANADIAN INTERRAI STUDY**

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**Introduction:** As the Canadian population ages, the effectiveness of the continuum of care, the sustainability of the health care system, and the well-being of seniors, demands that services be carefully allocated and care provided in the least intensive care setting that can adequately meet a senior's needs. **Methods:** interRAI data was collected, including 367 supportive housing clients, 2267 home care clients, 832 long-term care clients and 425 complex continuing care clients. Clinical characteristics of clients in each setting were described. Clinicians were asked about the most appropriate care setting for each client. Using interRAI data and focus groups, a decision support algorithm was developed to assist clinicians in resource allocation. **Results:** Characteristics of clients varied between care settings with some substantial overlap, including depression, medical diagnoses, number of falls and daily pain. Staff ratings indicated that most clients were appropriately placed; however, in each setting there were clients who required a less intensive care setting, and a few who required a more intensive care setting. Moreover, seniors with common care needs were found to reside across the care continuum. The decision support algorithm combined a cognition score and a prioritizing system developed through interRAI, to assist clinicians in addressing the challenges of providing the right care to seniors in the right place at the right time. **Conclusions:** This research provides evidence to ensure sustainability of the health care system by exploring the most appropriate care setting in which to provide care to seniors. While most seniors are appropriately placed, some could have their needs met in a less intensive setting. Transitioning current residents, or adapting future eligibility/discharge criteria, may result in a cost savings to the Canadian health care system and an improvement in the quality of life of seniors.

**PD7 813 THE FEASIBILITY AND EFFECTIVENESS OF PREVENTIVE HEALTH SCREENING FOR COMMUNITY-DWELLING ELDERLY**

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**Introduction** To address both the quality of life and cost concerns in an ageing society, preventing illness in and promoting the health of older people have become priority. Therefore, specific health screening centres in the Netherlands have been developed to detect unrecognized (health) problems and needs in community-dwelling elderly. The aim of this study was to investigate the feasibility and effectiveness of these centres and of similar preventive activities for community-dwelling elderly. **Methods** A study of relevant literature was performed after a search in PubMed, PsycINFO, Medline and Dutch databases, using the keywords: health screening, community-based, health promotion, intervention, elderly. The strategy also comprised reference tracking and consulting experts. Preventive health initiatives were included, if they offered in accordance with the activities of the Dutch centres: multidimensional health screening on a site (e.g. community-, health- or senior centre), tailor-made advice after screening including referral to relevant professionals and follow-up. **Results** Fourteen studies (7 national and 7 foreign) were included, covering several (types of) health programs in senior or community centres. These studies mainly using process evaluations, indicate that this type of preventive health screening is feasible. Elderly participants as well as health professionals involved were enthusiastic and convinced about the supplementary value of this type of preventive care. Furthermore, important risk factors like high blood pressure, overweight, mental health problems and social isolation were detected, managed and monitored in this target group. Effect evaluations on this type of preventive activities are clearly lacking. However, some studies have shown a reduction in disability risks, improvement in health status and maintenance of functional status. **Conclusion** Early detection of health risks and problems in combination with surveillance by health professionals might be beneficial for community-dwelling elderly. However, effect evaluations are needed.

**PD7 814 THE GERI-ED TEAM: A MODEL OF INTERDISCIPLINARY AND INTEGRATED CARE FOR FRAIL ELDERLY IN THE EMERGENCY DEPARTMENT OF A LARGE HOSPITAL IN NORTH AMERICA**

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**Introduction:** Interdisciplinary care for the geriatric population is widely used in the health system, but rarely seen in the Emergency Department (ED). There are numerous challenges in providing such care in the ED, limiting its implementation. **Methods:** To describe the operational model and implementation of the GERI-ED team, an Interdisciplinary Care for elderly presenting in the ED of a large university affiliated hospital in North America, and its impact on continuity of care. **Results:** The GERI-ED team was initially implemented as a pilot project, and has been operational since. The core

team members are: geriatric liaison nurse, occupational therapist, physiotherapist, social worker and geriatrician. The team focuses on the high-risk geriatric population being seen in ED. The team uses different sources to identify these high-risk patients in this fast pace environment, including screening (all presenting with complaint of 'confusion', 'fall' and 'frailty'), referral from ED staff and/or contact from home care. The interdisciplinary work is achieved through a short daily round in ED ('huddle'), semi-standardised assessments adapted to the ED and ongoing interactions. Verbal communication and assessment in a timely fashion play a key role in the model. Interventions vary greatly, are tailored to the patient needs and integrate discipline specific recommendations. Appropriate referral and prompt transfer of information to inpatient teams and outpatient services assure the continuity of care. This model of care optimizes management of elderly presenting with non-specific complaints such as 'frailty' in ED. **Conclusion:** Interdisciplinary care for the geriatric population can be incorporated into the ED practice, the GERI-ED team being an operational example. Utilisation of such approach in ED addresses the complex needs of this rapidly growing group, and provides an integrated model of care. Research of impact of such model in ED, needs to be developed.

**PD7 815 QUALITY OF LIFE (QL) AND PATIENTS' SATISFACTION (PS) IN GERIATRIC PATIENTS ARE INDEPENDENT OF WHETHER THEY ARE RANDOMISED TO HOME VISIT BY THE GERIATRIC TEAM OR TO CONSULTATION IN THE OUTPATIENT CLINIC.**

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**Intro:** To study if QL and PS were better in patients seen in their own home (PH) as compared to the outpatient clinic (OC). **Material and Methods:** 175 were randomised to first contact in PH and 176 in the OC. QL was measured by Euroqol-5d at first contact (EQ5d-1), and EQ5d-2 and PS were both measured 1 week after the end of the overall contact. EQ5d was converted to Danish norm-values. **Results:** Patients in PH and OC respectively: male/female 55/120 and 54/122, median age 81/ 83 years, Barthel-score 82/85 and MMSE 25/25. QL: Median EQ5d-1 (5%, 95%, N) in PH and OC 0,654 (0,040-1,000, 165) and 0,655 (0,027-1,000, 171) (ns) and EQ5d-2 0,708 (0,152-1,000, 129) and 0,708 (0,009-1,000, 136) (ns). QL increased in both groups ( $p < 0,001$ ). PS in PH and OC: 1: "Did you feel safe with the examinations and treatments offered to you?" (safe/very) 88,1%/91,1%. % answering "good/very good" to 2-6, 2: "Were informations given about your problems, examinations and treatments sufficient?" 74,1%/73,5%, 3: "How was your relationship to the physicians?" 86,0%/91,2%, 4: "How was the relationship to nurses, physio- and occupational therapists?" 90,9%/94,1%, 5: "Do you feel well informed about what to happen in the future?" 55,3%/59,6% and 6: "On the whole, was you satisfied with the treatment and nursing offered to you?" 87,4%/83,8%, PS-1 to PS-6 ns. **Conclusion:** QL increased significantly, PS could be better, but neither PS nor QL were higher in patients randomised to home visit by the geriatric team.

**PD7 816 DEMENTIA FRIENDSHIP CLUB: A TRIAL FOR DEVELOPPING A COMMUNITY SYSTEM FOR PEOPLE WITH DEMENTIA IN JAPAN**

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The Dementia Friendship Club (DF-Club) is a non-profitable organization established in Japan. The purpose of this trial is to develop a community where social capital for people with dementia is well off. For here, social capital means belief, consideration, complementary interaction or active participation to the network for the people with dementia in community. In a community, people with dementia may be living in their house or in various types of facilities, and no matter how different it is, they all have their own life and life history. Not only that, they all have a right to enjoy their own life as well as others, as well as before they diagnosed, and as same as usual. Some used to enjoy watching ball game at a ballpark. Some used to go out for shopping. Some used to enjoy taking a walk in a park, however; some can no longer enjoy these activities like before; because of the disease they have. Their friend might have said, "I don't know how to take care of him when he behaves strangely in public". Or their family may say, "We don't have enough time to take her out with all the time". One of the major projects called DF-Supporter project is a support system for people with dementia who wants to go out and have leisure activities. The Club provides educational training program for community members who want to help people with dementia, and sends them as a friend volunteer. DF-Club is an independent club organization consisted by community members who care about people with dementia. At this moment, 3 major projects, such as DF-supporter, DF-Store, and DF-Work are running based on the original triangle system. The detail will be discussed at the poster site.

**PD7 817 TRANSACTIONS BETWEEN GENERATIONS. ELDERLY PERSONS GIVING AND RECEIVING OF ECONOMIC AND PRACTICAL HELP IN SWEDEN**

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Swedish family policies are integrated within general welfare policy where the state has acquired a significant responsibility for the welfare of individuals, independent of the family

he/she belongs to. Numerous social reforms, in particular retirement pensions, parental allowance and other social benefits for adults have led to less economic dependency between members of the family. Since economic support for the younger generation as well as the ageing has become a societal commitment, research has primarily been focused on public transfers whereas private economic transfers have not been given much attention, at least not in Sweden. In debates concerning the relations between the welfare state and the family one recurring statement is that in taking over the family responsibility, the state has contributed to the weakening of the sense of responsibility between generations in Swedish families. The paper draws on results from a survey covering 2666 individuals from 18 years in Sweden (44% men, 56% women, 579 of the respondents, or 22%, were 65 years old or more). The aim of the study was to explore economic support and help transferred between family members belonging to different generational categories, gender and family forms. Results show a considerable flow of resources between generations in Sweden. Through gifts, financial support and help with daily matters the elder generation continue to be important actors for the younger generation. The elderly generations help to children and grand children decrease by increasing age. Men give to a higher degree than women, help to children and grand children. Women receive to a higher degree than men help from children and grand children. I will present general results from the study regarding prevalence of support, attitudes to giving and receiving support, which motives are seen as legitimate and also motives for giving or receiving support.

**PD7 818 TRANSITIONS IN LIVING ARRANGEMENTS AMONG ELDERS IN TAIWAN: DOES HEALTH MAKE A DIFFERENCE?**

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The purpose of the research examined (a) how physical and mental health influence living arrangements among older Taiwanese, (b) whether these effects differ for married and unmarried people, and (c) to study more carefully the dynamic evaluation, we examined changes in various health status measures, as predictors of living arrangements. Data came from a national probability sample of more than 3,893 men and women 60 years or older in Taiwan. Four surveys of this sample were conducted over a period of 10 years, from 1989 to 1999. Multinomial logistic regression analyses were used to analyze the effects of demographic characteristics, socioeconomic status, health and marriage status on changes in living arrangements. Results indicate that living with married children among the Taiwanese elderly was the most stable arrangement during the 10-year period. Physical and mental health conditions were found to exert both direct and indirect effects on transitions in living arrangements. Furthermore, when the change in health between 1989 and 1999 was added to the prediction equation, there were strong relationships between changes in health and living arrangements, suggesting that people respond to significant changes in health status. The analysis also demonstrates the importance of using a dynamic model for studying the link between health and living arrangement if data from multiple observation points are available.

**PD7 819 LEARN, PLAY AND GROW: KNOWLEDGE IN INTERGENERATION RELATION**

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Introduction: Nowadays the neglect, disrespect and lack of patience from younger people in relation to the elderly is growing and creating conflicts between generations and elderly exclusion. Such situation points to a reorientation to understand aging with the younger still in school, with elderly participation reinforcing positive values and attitudes related to the old age encouraging citizenship and solidarity. Objectives: Stimulate the learning of the 7 and 10 years old students to respect and value the elderly, live with a playful knowledge the culture and history of our people; rising the elderly self-esteem using their knowledge in intergenerational relation; create a learning book with games experienced during project implementation. Methodology: groups dynamic, awareness and training workshops for participants (counselor, professors for State Public School, students of the State Public School), workshops for small groups and circular discussion, workshops with students grandparents, intergenerational activities (grandparents, students, professors and counselors). Results: One hundred and eighty students from 1st to 4th grade, 10 professors of public schools, 141 grandparents participated in this study. As result the public school teachers training about intergeneration interaction; students learning about respecting and appreciation of the elderly person; living in a playful way about culture and history of our people, experienced by this elderly generation, rising their self-esteem, using their knowledge in the intergeneration relation, ending with preparing a learning book with children games, with grandparents help. Conclusions: This project awakened in the children "learn, play and grow" respect and solidarity to the elderly, as well as was helpful to self-esteem and improving older people life quality in an intergeneration interaction.

**PD7 820 GETTING RUDE - AN INTERGENERATIONAL PROJECT EXPLORING SEXUAL ISSUES OF OLDER PEOPLE IN HEALTH AND SOCIAL CARE.**

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RUDE was developed in partnership between an older people's theatre company and a University providing professional qualifications in health and social care. Issues associated with sexuality, sexual health and older people's ongoing needs for intimacy when accessing services are often neglected within professional education. This can perpetuate the myth of the 'asexual' older person and their marginalisation in sexual health policy and practice. Practitioners need to develop the right knowledge, skills and attitudes to work with older people so that they can be in a position to promote their independence and dignity in a way that acknowledges human rights and needs for intimacy and sexual expression. Using theatre and drama, six students worked intensively with six older actors and directors and filmmakers over a period of two days to devise and produce short pieces of film as learning objects for professional education. The process was experiential and improvisatory utilising dramatic and creative participative methods. The younger student participants had no prior experience of acting or filmmaking and had minimal contact with older people as patients or service users beforehand. This paper presents a qualitative evaluation of the project. Argyris (1980) emphasises the importance of using real problems and the greatest possible involvement of participants in the learning process and the need to refrain from correct or incorrect responses. Emphasis on this type of learning is on the insight provided by personal experience and the immediacy of problem solving rather than relying on texts or knowledge. It seeks to involve personal and emotional participation from both parties during learning provided a means of confronting complex ethical issues arising in practice. There were a number of spin offs from the project which enhanced intergenerational understanding and exchange of knowledge and skills. Short clips of the material will also be shared.

**PD7 821 A MODEL OF INTERGENERATIONAL KNOWLEDGE: THE TECHNOLOGICAL ENCOUNTER BETWEEN CHILDREN AND OLD ADULTS AT SCHOOL**

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Introduction The research concerns the technological intergenerational encounter between children (aged 11–12) and the elderly (aged 65–74). The latter are placed in schools as part of a "Multigenerational Connection program" run jointly by the Adult Education Division, the Ministry of Education Science and Technology Administration, and the Israel Internet Association, in which children instruct seniors in computer and Internet use and seniors impart their knowledge in their areas of formal schooling and life experience. The study is unique in that, for the first time, children, as possessors of proven ability to navigate knowledge, serve adults as the agents of socialization for a new cultural world. We claim that the Internet, the epitome of the generation gap but also an arena in which age and time do not exist, facilitates a unique investigation of intergenerational communications that has important educational and socio-psychological implications for both generations. Method and materials Data collection in a public primary school in Israel concluded observations of and participation in interactions in school, unstructured interviews, focus groups, feedback questionnaires, and contents of the program Web site. The data was subjected to a thematic analysis following the concept-indicator model Results According to Grounded Theory, a "Model of Knowledge" was developed. Based on diverse data the model sets forth four different types of encounters between children and old adults, and points to distinctive contributions of knowledge between them that reflect each side's relative control of knowledge. Conclusion The model offers a balanced approach towards the generations' typical needs, while teachers are primary agents of professional mediation between the generations. The intergenerational program has unique psychosocial and educational implications at individual and institutional levels. It also charges the concepts "authority", "productive aging", and "life span", with constructive meanings for the social images.

**PD7 822 GRANDPARENTS LATENT PROBLEMS IN TEHRAN: A SOCIO-DEMOGRAPHIC APPRAISAL OF AGEING IN IRAN**

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The paper explores the quality of life and problems faced by the ageing and increasing grandparents in Iran. These people, under the rapidly changing circumstances, are having increasing problems with their health, income, medical treatments, old age care, housing etc. in which many issues remain hidden. Grandparents need to be more touched and heeded under the conditions that the family system is rapidly breaking down and as a result, a generation gap is appearing. The paper examines how increase in longevity and number of grandparents are paralleled. To do the present research, the author approached a number of sample families with grandparents. Likewise, relevant perspectives and literature have been consulted as evidence to conduct the research. Findings, show that the ageing grandparents highly need to be dealt with from different dimensions. The paper evaluates how social and economic conditions among grandparents are different from each other. However, the ageing grandparents have become very much vulnerable in recent decades. Keywords: Life expectancy. Grandparents. Vulnerability. Dementia. Quality of life.

**PD7 823 COMMITMENT TO CONNECTIONS: EXPLORING THE MEANING OF LEISURE IN GRANDPARENT-GRANDCHILD RELATIONSHIPS**

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Introduction: Leisure plays an important role in the lives of families and specifically in grandparent-grandchild relations. While leisure has been shown to have a positive

influence on family relationships by enhancing communication and cohesion among family members, other studies have shown that family leisure may not be mutually satisfying for all family members. Given the trend of population aging, the relationship between grandparents and adult grandchildren emerges as an important yet understudied one, especially in relation to family leisure. The purpose of this interpretive study, therefore, was to explore the experience of intergenerational family leisure for grandparents and adult grandchildren. More specifically, this study examined the meaning of family leisure for grandparents and adult grandchildren. Methods: Fourteen dyads of grandparents and adult grandchildren were interviewed individually using semi-structured interviews and described their experience of intergenerational family leisure. Using grounded theory methods to analyze the interview data, the stories of the participants provided valuable insight into the meaning of leisure in the intergenerational relationship. Results: Grandparents and grandchildren participated together in a wide variety of leisure activities. These activities changed over time from more active leisure with a focus on play, to a more passive, relational leisure, emphasizing the emergence of a relationship among adults. Secondly, varied meanings were attached to the time spent together. Family leisure was more obligatory and was characterized as by sense of commitment. Individual leisure emphasized freedom of choice and intrinsic motivation. Conclusions: Grandparents and grandchildren developed strong bonds because of the knowledge they gained about each other through their leisure. Negative feelings associated with obligation were tempered by the value that both generations placed on the learning and bonding that occurred as a result of these experiences. Leisure, therefore, plays an important role in the increasingly important relationship between grandparents and adult grandchildren.

**PD7 824 LONG-TERM CARE: A NEW RISK FOR THE BRAZILIAN SOCIAL SECURITY SYSTEM**  
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Introduction: The main questions to be analyzed in the paper refer to the way the current social security systems have dealt with the complexity of the new demands imposed by the process of population aging; and how to articulate long-term care policies with the current framework of the Brazilian social security system. Methods & Materials: First we analyze the process of population aging and the surge of demand for long-term care within the social security systems; for this, experiences in three developed countries with very advanced aging processes were pinpointed so that different theoretical models were covered: Germany, Denmark and the United States. After doing so, we present the Brazilian legislation on elder protection and the situation of the Brazilian elders both in socioeconomic and familial terms. Finally we seek to summarize the advances, the possibilities and the challenges foreseen for the growing numbers of Brazilian elders, especially those with some kind of restriction in their functional or instrumental capacity to perform ADL. Results & Conclusions: The international experience indicates that costs involved in long-term elder care tend to become of great magnitude. Very high, these costs end up demanding a new distribution of responsibilities between the market, the State and the families in regard to financing the care relative to the new demographic pattern. In Brazil, the costs, whether tangible or not, involved in the activity of caring for/assisting the elderly tend to increase with the massive entrance of women in the labor market and with the changes in the gender contracts, suggesting growing obstacles for the families to meet the responsibility of taking care of their elderly. The challenge of financing this new social risk – long-term elder care – is aggravated by the unfavorable socioeconomic situation of poverty, exclusion and inequality in Brazilian society.

**PD7 825 INTRODUCTION OF SOCIAL INSURANCE FOR LONG-TERM CARE IN SOUTH KOREA: PROCESS AND CHALLENGES**  
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**Y. PARK, S. KIM**

Introduction: Facing rapid aging of population, Korea introduces long-term care (LTC) insurance on July 1 2008. LTC insurance aims to ease the financial burden of the elderly related to long-term care and hopes to reduce the financial pressure that social admissions of the elderly put on health insurance system. This paper discusses policy process and key issues associated with the new LTC insurance in Korea. Methods and Materials: This study is based on the review of literature, government documents, and secondary data. One of the authors has participated in the policy process as a member of government committees. Results: Introduction of LTC insurance is driven by experts (academics) and government bureaucrats, like other social policy programs, which was made possible in an era of a rather progressive (former) government. Korean LTC insurance is a contribution-based (social insurance) financing mechanism supplemented by government subsidy, similar to health insurance scheme. Korean LTC insurance provides benefits-in-kind rather than cash benefits to cover long-term care of the elderly and age-related long-term care of the non-elderly. Private providers are a dominant form of long-term care delivery in Korea, and payment to those entrepreneurial providers and monitoring their behavior will affect the performance of the LTC insurance. Considering the interactions between health care, long-term care and welfare services, coordination among health insurance, LTC insurance and local governments is a key challenge. Conclusion: Introduction of long-term care insurance, as the fifth social insurance system, is a major change in the Korean welfare state. The performance of LTC insurance in Korea (i.e., quality of care, financial protection

for the aged, and fiscal sustainability) will depend on the key factors described in the paper.

**PD7 826 DOES THE PROVISION OF IADL SUPPORT SERVICES PREVENT OR PROMOTE DECLINE?**  
**T. ISHIBASHI\*** (School of Medicine, Keio University, Tokyo, Japan)  
**N. IKEGAMI**

Introduction: There has been controversy as to whether IADL support services provided by home-helpers should continue to be included as a public long-term care insurance (LTCI) benefit in Japan. On one hand, the government has claimed that providing these services accelerates the functional decline of elders and leads to unsustainable increases in expenditures from moral hazard. While on the other hand, some have claimed that home help services may prevent decline and are the services most sought by the elders. The aim of this study is to clarify whether IADL support services contribute to the functional decline of elders. Methods: The study used the cox proportional hazard model with the decline in the eligibility level as the outcome. Subjects were 3,096 elders who had been certified as being in the light disability levels (Support Level 1 or 2 in LTCI) in a suburban city of Tokyo. The mean follow-up period was 15.4 +/- 4.8 months. Results: Of the 3,096 certified, 44.0% actually used LTCI services, and 23.3% used IADL support services provided by home-helpers. Among the elders who used IADL support services, 9.8% declined in their level, which was significantly lower than the 16.0% for the rest (HR=0.54, 95%CI 0.43-0.69). However, when their decline rate was compared with the actual users of LTCI services, it was not statistically significant. The same trends could be observed when analyzed separately by gender. Conclusion: The results show that the provision of IADL services prevented, rather than accelerated, decline in function. Based on these results, the recent LTCI reform restricting the use of IADL support services should be reconsidered. Further analysis should be made by including factors such as the levels of family support and IADL function.

**PD7 827 10 YEARS OF LONG TERM CARE INSURANCE MODEL IN LUXEMBOURG: BENEFITS AND NEGATIVE ASPECTS FOR PATIENTS AND DOCTORS**  
**J. LENERS\*** (Long term care, Ettelbruck, Luxembourg)

In 1999 a compulsory long term care insurance was introduced in Luxembourg in order to generalize a new social model of care mainly to senior persons. Some general data on the elderly dependent population in Luxembourg will be shown, comparing them to the existing models in Germany and Austria. The systematic review over the years of the minutes of care allocated in the 3 three main domains (hygiene, dressing and walking, nutrition) shows a slight increase (now some 750 minutes per week) and the number of evaluations per year is about 4200. At least 14 percent are refused. The detailed differences between the home care allocated minutes and the one in the institutions will be presented, including the primary medical reason for the dependency (ICD 10). The legal framework was changed in 2006 and I will show some negative implications of this for all institutionalized residents. A detailed analysis of a mixed nursing home (140 beds) including patients with purely somatic diseases, compared to a group of elderly people with dementia and another one with psychiatric disorders shows a major difference in allocated minutes (from 82% up to 120% in comparison to the mean values in institutions). Another aspect of the care insurance for dependent people will be presented: individualized versus group activities and the negative evolution over the last years. A last but not the least aspect of the recently (December 2008) introduced legal framework for palliative care and euthanasia and their issue on dependent elderly patients will be discussed in conclusion!

**PD7 828 A COMPARATIVE STUDY OF LONG-TERM CARE INSURANCE IN JAPAN AND SOUTH KOREA - THE CHARACTERISTICS AND PROBLEMS-**  
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Japan has provided long-term care insurance for older persons since 2000, but South Korea just started it last year. Examining the literature, we analyzed both systems to clarify the characteristics and differences between the two countries. In general, Korea has many problems compared with Japan, resulting from insufficient preparation of infrastructure, such as funding schemes, service structures, and training facilities. Compared to Japan, the individual financial burden of care is significantly higher in Korea, which places a greater disadvantage on the poor. The central operating bodies in Japan are the municipalities, which are most closely linked with citizens but in Korea the National Health Insurance Corporation, which is an independent organization, manages the system and there is often insufficient cooperation between the NHIC and municipalities. Furthermore, only a limited number of serious cases in Korea can use the long-term care insurance system, because only three classes of benefits are used. By comparison, Japan has seven classes. In the Korean system people who receive class1 to class3 benefits are able to use services provided by the NHIC but people who are judged to be outside these classifications have to

use the services provided by their municipalities. Korea gives cash benefits to family caregivers but Japan has no such system even though many family caregivers have called for it. There are too many educational and training facilities in Korea due to a system that emphasizes job creation over professional development. Moreover, there is no national licensing system for care workers, as opposed to Japan where there is a move away from the home helper system towards a more stringent care worker system that requires both care-workers and care managers to be nationally certified. Results show that Korea has many issues to resolve in both respects of manpower and materials.

**PD7 829 WITH WRINKLED SKIN AND WORN-OUT SHOES. ELDERLY WORKERS' LABOR AND SUBSISTENCE IN MEXICO'S SHOE AND TANNING INDUSTRIES**

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**Introduction:** Today, social conditions for the elderly are largely defined by their relationship to work. The phrase "Old Age" has social connotations linking it to an identity characterized by deteriorated abilities, redundancy and obsolescence in productive sectors, resulting in lowered expectations and a lower quality of life. **Objective:** To explore the meanings that work holds for the elderly and the subsistence strategies they develop. **Methods:** The study included 25 men and 10 women, ranging in age from 50 to 89, all living in León, Guanajuato, Mexico and employed –or once employed– in the shoe and tanning industries. Data was obtained through deep interviews lasting 2 or 3 sessions, including clinical histories. **Results and conclusion:** Of these subjects, 23 men and 9 women were still employed, despite chronic illness(es) that affect 17 of them (8 muscular-skeletal, 6 cardiovascular, 5 diabetes, including 2 blind individuals). Only 31% had welfare or medical benefits: on average a monthly pension of \$1,500 pesos (\$109 USD). All expressed that working was the best way to earn a living, as it brings self-esteem and social recognition. Half of the people worked in leather shoe manufacturing, mainly in jobs reserved for the more defenseless, or "old folks": as shoe polishers, janitors, night watchmen, garbage collectors and cleaning women; those who had disabling illnesses but no social benefits survived by begging. The system of labor relations as a means of gaining social recognition and power, the remuneration system, wage levels, functional abilities, gender and health are some of the factors that help explain the variety of configurations that characterize these elderly workers' survival strategies.

**PD7 830 A STUDY ON THE DETERMINANTS OF LABOR PARTICIPATION OF THE ELDERLY IN RURAL AND URBAN CHINA**

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Employing the data from 1 % population sample survey of China in 2005, this paper conducted an empirical analysis on the probability of labor participation and income of the elderly people in rural and urban China. Age, marital and health status, educational attainment, benefits from social insurance were introduced into the Logistic regression models to analyze the probability of the labor participation of male and female elderly in rural and urban China respectively, and the OLS regression models were employed to analyze the payment for labor participation of the elderly. The regression results indicated that releasing economic pressure is predominant reason for the Chinese elderly to participate the labor forces, and active social participation attitude motivates urban elderly with high educational attainments continue to work. It is also be convinced that good health status has positive effects on the labor participation especially for male and rural elderly in China. The elderly with poor economic status are more likely to participant the labor forces, but only low payments can be paid for them. Rural and male elderly bear higher labor burden and economic pressure than other elderly in China.

**PD7 831 EXAMINING THE EFFECTS OF A HIGH-COMMITMENT SENIOR VOLUNTEER PROGRAM:A QUASI-RANDOMIZED EXPERIMENTAL DESIGN**

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**Introduction.** From the expansion of services for older adults' well-being, we evaluate the program effects of Experience Corps (EC) on older adults' health status through a 'quasi-randomized' experimental design to supplement a weak causality examination. Our investigation tests (1) whether volunteers' health status improve after participation in the EC program compared with non-volunteers' health status; (2) what characteristics of volunteers are associated with the longitudinal changes in health status. **Methods.** Using a nearest available Mahalanobis metric matching within calipers defined by the propensity score (Rosenbaum & Rubin, 1985) to reduce sampling selection bias, we selected a comparison group having homogeneous characteristics of the EC participants. For two years, 167 EC participants completed pre and post tests. Based on more homogenous sociodemographics and health status at baseline, the matched control subjects were selected from those who completed the 2004 and 2006 Health and Retirement Study and were never involved in volunteering activities for this period. To test the program effects of the EC, we used generalized estimating equations on difference scores in health outcomes.

**Results.** Compared with the HRS control group, the EC treatment group showed lower depression, better self-rated health, better perception of current health status compared to health status in the past year, and lower functional dependency. There was no significant difference in cognition status between two groups. In addition, those who were married and had higher income and education reported better self-rated health and lower depression. **Conclusion.** From this rigorous investigation to explain social causation between participation in volunteering and changes in health outcomes, we confirmed that the positive effects of the EC program on the health status of older adults reinforce the justification to support active aging policy and programs.

**PD7 832 THE DEVELOPMENT AND VALIDATION OF A COMPREHENSIVE AND THEORY DRIVEN MEASURE OF RETIREMENT PLANNING.**

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**Introduction:** International research suggests that retirement planning is associated with greater well-being in later life. However, to date no research has tested theories about how people plan for retirement or effectively assessed the different ways that people can prepare. This study utilises a process model to examine the psychological, health, lifestyle, and financial planning activities of New Zealand pre-retirees aged 50 to 60. **Methods and Materials:** According to a process model of planning, people must firstly develop an understanding of retirement issues, they then set specific goals, make a decision to start preparing, and finally undertake the behaviours necessary to meet those goals. Individual items for each of the four elements of retirement planning were developed to assess this model. Cross-sectional data was collected by questionnaire survey from a representative sample (N = 1,500) of the New Zealand population. **Results:** Structural equation modelling revealed four distinct elements of retirement planning and provided support for model. Correlations with key variables provided further support for the validity of this measure and helped to explain why some people plan while others do not. **Conclusions:** Findings suggest that retirement planning is a process that begins with an understanding of retirement issues and ends with the undertaking of specific preparatory behaviours. This information will help to direct social policy and promotional initiatives by indicating where people are at in terms of their retirement planning. These results will also suggest which groups of people would benefit most from such initiatives.

**PD7 833 THE INFLUENCE OF GENDER, HEALTH, EDUCATION, AND INCOME ON RETIREMENT SATISFACTION**

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Issues of the impact of culture and gender have become increasingly important as the world is faced with an aging population. A recent study in Denmark (von Solinge & Henkens, 2008) found that retirement satisfaction primarily related to access to key resources such as finances, health, and education. In the United States, the majority of research has been on examining the impact of similar parameters on male retirees. Very few studies have conducted research on women retirees. The purpose of this study was to explore the effects of gender, health, education, and income on life satisfaction for retired and nonretired individuals 60-years-old or older. Community residing adults (N = 496, 72% female, M age = 72.26, SD = 8.01) were assessed on variety of dimensions. In this paper, we will focus on selected set of factors that influenced well-being and retirement satisfaction. We performed an ANOVA on gender, retirement, and life-satisfaction controlling for income, education and health. The life-course ecological theory (Kim & Moen, 2001) predicts that there would be gender differences. Results revealed a significant finding for income, health, gender, and retirement on well-being, while education and age were not associated with life satisfaction. The means reveal that males and females have higher life satisfaction after retirement although overall females have less life satisfaction than males do either while employed or retired. The results support the life-course developmental model and underscore the influence of social role, culture and having resources on life satisfaction. The findings also suggest that women in this age cohort have a more difficult time adapting to retirement as compared to men, but both males and females seem to enjoy greater life satisfaction in retirement as compared to their employed counterparts. The implications of these findings for public policy are discussed.

**PD7 834 REVERSE MORTGAGES : AN OBJECT FOR SOCIAL SCIENCES**

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Reverse mortgages are being promoted in most advanced countries as a way to finance old age. If their advantages for public expenses seem obvious, at first, their implications for elderly people, family and intergenerational links are more questionable. Moreover, the

financial and juridical logic at stake in reverse mortgages puzzles the very link between kinship and society.

**PD7 835 SOCIAL WELLBEING, DIVERSITY AND COMMUNITY IN RETIREMENT HOUSING ENVIRONMENTS.**

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**Introduction:** Assisted living facilities are increasingly popular in the United Kingdom and form a central plank of government housing policy for older people. They are particularly valued for their perceived ability to promote social interaction and a sense of community among residents from different socio-economic backgrounds and with a wide range of dependency needs. The recently published Housing Strategy for an Ageing Society sees such developments as a way of developing sustainable communities based on lifetime neighbourhoods. **Methods:** This paper reports on a study that explored residents' experiences of community and social interaction in a mixed tenure retirement village in the UK. Data were collected through semi structured interviews, needs assessment forms and a housing satisfaction questionnaire. **Results:** The findings suggest that a range of factors can impact on the opportunities for social interaction and the development of networks including the village layout, the provision of services and facilities, design of the built environment and connections with wider communities. Residents perceived themselves to be part of a community to varying degrees, but there was little evidence of cross-tenure interaction. Instead, social networks focussed on communities of interest within tenure. The findings are also viewed in the context of contemporary theories of community and place attachment. **Conclusion:** The paper concludes that the success of purpose built mixed communities for older people depends on understanding the complexities and subtleties of diversity and lifestyle aspirations.

**PD7 836 REPRESENTATIONS AND GOOD PRACTICES OF HEALTH PROFESSIONALS IN AGE MANAGEMENT**

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It is currently notorious, in Portugal, an interest on the individuals' permanency in the labour market on the part of the State and other political agents. Our communication focuses on the results of a research project on the representations and practices of health professionals (medical doctors and nurses), aged between 55 and 65, regarding active ageing and transitions from employment to retirement. Based on two case-studies (hospitals in the city of Porto), we will also discuss the relations between those professionals' stances and the organizational contexts within which they work.

**PD7 837 "PLANNING TO RETIRE AND GROW OLD TOGETHER"**  
S. KEELING\* (University of Otago, Christchurch, Christchurch, New Zealand)

**Introduction:** Coupledom in retirement, mid and later life has received limited attention in New Zealand social research, despite the fact that the majority of people in the age cohort 55-70 years describe themselves as married or partnered. An increasing number of people establish new partnerships in middle or later life, negotiating living arrangements, social and family relationships, financial exchanges and transactions along the way. Partnership status, and changes in the ways individuals and couples experience linked, joint, parallel, convergent or divergent pathways through mid and later life merit careful research explication. **Methods:** Qualitative interviews were held with sixty participants in the national Health, Work and Retirement Study, at two phases of the study, with an interval of 18-24 months. In the second phase, spouses of participants were invited to take part in a separate interview exploring couples' perspectives on topics such as joint and/or individual planning surrounding the transitions between work and retirement. **Results:** The resultant interviews conducted with fifteen participants and their partners have been analysed in their pairs, based on full transcripts. This analysis found both congruence and divergence in the attitudes and reported behaviour within these couples. Factors described as having a significant influence in their joint and individual decision-making include health, employment and financial circumstances, and family relationships. **Conclusion:** Our findings suggest dynamic and fluid patterns in couples' handling of shared and individual threats to financial and health-related autonomy, in the context of transitions to retirement. It is increasingly important to make conceptual distinctions within studies of individuals and couples between aspects of gender, living arrangements, and age-related cultural expectations. Despite the methodological issues and potential ethical questions, exploring coupledom within social gerontology poses challenges for future research.

**PD7 838 A CROSS-NATIONAL ANALYSIS OF LABOR FORCE PARTICIPATION AND LIFE EXPECTANCY AMONG OLDER ADULTS**  
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**Introduction** Productive aging is a new and evolving conceptual model that emphasizes the antecedents and consequences of productivity in later life. Proponents of productive aging claim that productive activity in later life is associated with a number of benefits for individuals, communities, and societies, but this assumption has not been widely tested at the country-level. In the context of an adapted model of productive aging, the study seeks

to identify the cross-national predictors of and relationship between one form of productivity (viz., labor force participation) and one aspect of well-being (viz., longevity) among older adults. Methods and Materials Random effects models with pooled cross-sections and path analysis was used to analyze potential relationships with data from several international data sources. The complete cross-national longitudinal dataset consists of variables measured at five time points (i.e., 1980, 1985, 1990, 1995, and 2000) for each of the thirty countries that belong to the Organisation for Economic Co-operation and Development. **Results and Conclusions** The results suggest some important sex differences. While financial and social factors are important predictors of older male labor force participation rates, education, health, and opportunities for self-employment and employment in the service sector are important predictors of older female labor force participation rates. Furthermore, while the predictors of older male and female longevity are similar, labor force participation is an important predictor of male life expectancy only. In light of the global trend toward longevity and the related potential pressure on countries to consider efforts to promote longer work lives, the results of the study can have major policy implications. In addition, the results are relevant to individuals interested in advocating for policy and programmatic changes that could enhance the well-being of older adults.

**PD7 839 CHILEAN PUBLIC HEALTH MODEL FOR ELDERLY CARE**

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Until 1995 the care for elderly in the Chilean public health system, only had geriatric specialty care at a secondary level in the National Geriatric Institute.(NGI) Taking into account the county's aging population process (13.4% 60 an over) and the fact that 80% of the elderly are registered in the Public Health System it becomes an urgent need to have a Model of care for the elderly at every level. **Method:** For to make the Model were studied for four years, the profile and need of outpatients attended in the first medical specialist consult and inpatients high medical, the sample was 8.571 and 4181 respective, all of them attended in NGI. Proposal Investigation to evaluate Chile's model for elderly health care based on maintenance of functionality (complementing curative paradigm). To achieve this first it was carried out an investigation to create a screening instrument to predict functional loss to be used at primary level (EFAM-Chile) and secondly a geriatric health check up was carried out in Primary Health Centres. Investigation to evaluate the appropriate specialised care model at the hospital level. To achieve this, first it was set up an out-patient geriatric clinic in the NGI. Results 1.-EFAM Chile was created and used nowadays at the national level: 450.000 sixty and over persons evaluated each year 2.-A geriatric evaluation was created and used nowadays at the national level: 450.000 persons sixty and over evaluated each year. Outpatient Geriatric Clinic Centre was created: 2.100 medical consults each year. Conclusion The Chilean Model of Elderly Care in the Health Public System has been set up. It has been based upon its own creations and adaptations, resulting in a HPC firmly set up throughout the country.

**PD7 840 THE AGE OF MIGRATION AND THE DIVERSITY OF OLDER MIGRANTS: CHALLENGES AND OPPORTUNITIES FOR SOCIAL GERONTOLOGY**  
S. TORRES\* (Linköping University, Norrköping, Sweden)

This presentation will shed light on what migration and ethnic relations researchers call 'the age of migration'. The aim is to delineate some of the theoretical and empirical opportunities that this new state of affairs poses to the field of social gerontology. Because this is an area with which not many social gerontologists are familiar, the paper will begin with brief presentations of what 'the age of migration' means and how the diversity of older migrants across Europe is challenging to think in a globalization- informed manner and with an inventory of research areas (such as the study of successful aging; life satisfaction, quality of life and the study of intergenerational relationships) that could benefit from expanding their gerontological imagination to include the specific challenges and opportunities that the migrant life course poses. The main argument will be that the social gerontological study of migration, ethnicity and culture is a profuse area of research and that there is an untapped potential for theoretical development and for the expansion of the gerontological imagination in launching empirically-interesting research about older migrants.

**PD7 841 ACTIVE AND HEALTHY AGING: SOCIALMEDICAL ASPECTS IN GERMANY**  
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**Introduction/background:** „Aging is primarily a social and only secondarily a biological fate“ (Mr. Thomae, Gerontology 1963). Specific treatment schedules are necessary for the elderly patients - especially for the oldest old patients- as well as prevention and rehabilitation. New basic conditions were introduced in Germany by the Health Care Reform in 2007 and the Long-Term Care Reform in 2008. In both reforms prevention and rehabilitation will become more important in the future. Life expectancy in Germany is continuously rising (actually: men 76 years, women 82 years), whereas in the same time the fertility rate is low. Demography is a cost factor in health care. Health risks are

increasing on elderly and oldest old people (falls, dementia, dentures system, incontinence). First of all secondary and tertiary prevention is important for these patients. Geriatric structures have to be adapted to these facts and have to include ambulatory and long-term care providers. Methods: - 60 Bavarian Geriatric Rehabilitation Hospitals were visited by a team of MDK geriatric medical doctors to evaluate the effectiveness and quality of geriatric rehabilitation in the years 2005 until 2008 - the evaluation included as well the geriatric complex treatment rehabilitation in geriatric hospitals and ambulatory treatment (intermediate results 2005 – 2008) - in another part of the study rehabilitation efforts in long-term care patients were evaluated Results/Conclusions/Discussion: Prevention and health care promotion are effective even in elderly and oldest old patients. It requires a qualified and adequate treatment provided by a geriatric team including socialmedical knowledge.

**PD7 842 NON-CONTRIBUTORY SOCIAL PENSION: A NECESSARY SCHEME TO BE DEVELOPED IN CHINA**  
X. JIANG\* (Renmin University of China, Beijing, China)

Although the elderly social security has played an important role for retirees in urban China and has improved their economic situation to be better guarantee, there are some problems in the system at present. Non-contributory pension is implemented through minimum living security, social relief, family planning bounty and a part collective (or village) pension in some more developed rural China. But in rural Chinese elderly, only very low percent can enjoy minimum living social security and social relief security. Although most urban poor elderly can get minimum living social security, their living standard is relatively lower than most other citizens. Furthermore most Chinese elderly have no enough individual wealth to support their later lives. As rapidly increasing of the elderly in China, total ratio of poverty will go up, if government can not implement effective policy to reduce poverty in the old aged. Considering above situation, the changes of demography and socio-economy, government should take more effective policy to promote the system of non-contributory pension for securing the elderly later living and for realizing real social equity. This paper selected data from the Sampling of Survey of the Aged Population in China conducted by China Research Center on Aging and the Yearbook of China Statistics by China National Bureau of Statistics, studied and analyzed the situation, problems and the reasons of non-contributory pension, the elderly economic status and the necessity of promoting non-contribution pension system in China. This study conclusion mainly shows that with the changes of demography and socio-economy, especially the transition of market economy, government should take more effective policy to promote the system of non-contributory pension for securing the elderly later living and for realizing real social equity.

**PD7 843 A LIFE COURSE PERSPECTIVE OF HOUSING AND HOMELESSNESS**  
L. MCDONALD\* (University of Toronto, Toronto, Canada)

Evictions, as markers of housing instability, call attention to the “housing affordability crisis.” Little is known about the extent or impact of evictions in Canada or internationally, but there is emerging evidence that they are sharply on the rise. The purpose of this exploratory research was to examine the individual and structural circumstances that contributed to eviction transitions in housing careers across the life course; to examine housing trajectories and if they spiralled into homelessness, and to examine the confluence of social policies operative during these transitions. Qualitative interviews (N=42) and secondary data analysis of evictions in Toronto Canada (N=1583) were carried out. A model predicting eviction status was estimated. Results indicated that the transitions from stable housing to unstable housing and back again, from threats of eviction to eviction orders, and from poorer housing to homelessness were entangled across the life course and stretched across generations. The study shows how housing policies can interact with life course events and other policies to produce negative and costly effects for the precariously housed, tenants and the state.

**PD7 844 IMMIGRANT CARE WORKERS IN HAWAII: DEVELOPING SOCIALLY-JUST WORKFORCE POLICIES AND COMMUNITY OPTIONS IN CARING FOR FRAIL OLDER ADULTS**  
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Introduction With the aging of the world's population comes the rising need for qualified direct long-term care workers; i.e., those who provide personal care to frail elders. In this presentation, we use Hawaii, the 50th state of the USA, as a case example to examine issues faced by nations that are growing increasingly dependent on immigrant women to provide this labor. We focus on the gendered processes inherent in population aging, globalization, and immigration, and their collective impact on the long-term care workforce for nations. Hawaii is unique in its population—it has attracted new residents from many areas of Asia and the Pacific. Individuals from the Philippines compose 15% of the State's population, and Filipinas are over-represented in health and long-term care jobs. In Hawaii, they have led the way for the development and management of two community-based long term care options. Adult Residential Carehomes (ARCH) are family homes that provide 24 hour residential care to 4-5 dependent adults with personal care needs. Geriatric Foster Homes

(GFH) also are family homes, but the greater disability of elders results in GFH caring for only 1-2 patients at a time. Shown to be cost effective for the state, these community-based options require long-term care workers to survive. Methods/Materials: We share results of two studies that examine Filipino care workers in Hawaii, and the role that culture, immigration, and poverty play in the choice of this work. Results/Conclusions: We raise policy and research implications and questions. Although we found that 95% of ARCH and GFH providers were Filipinas, results suggest that second generation women are not entering this work. Policy suggestions that address the contradictory effects of these trends to both developed and developing nations are presented.

**PD7 845 QUALITY OF LIFE & OLDER PEOPLE: THE CASE OF CYPRUS**  
C. PHELLAS\* (UNIVERSITY OF NICOSIA, NICOSIA, Cyprus)

Background This paper provides a critical approach to the conceptualisation and measurement of quality of life in social gerontology, and health and social care research. By drawing data from a two year research study among elderly people in Cyprus (funded by the Cyprus Research Council during the period 2007-2009) it describes the experiences of older people through their own personal accounts and representations in everyday life, popular culture and scientific research. Methods The data are collected by employing the Biographical/Life History approach (through a series of in-depth interviews) and subsequently are analyzed by applying (i) Multi-Dimensional Scaling –MDS) & (ii) Content analysis The participants are selected by non-probability means of sampling (Quota/Purposive) and would cover both urban and rural areas in Cyprus. Around 100 people (aged 55 and above-living at home and at elderly peoples' institutions) would be interviewed on the following domains relevant to the quality of life of older people: (a) Subjective satisfaction, (b) Physical environment factors, (c) Social environmental factors, (d) Socio-economic factors, (e) Cultural factors, (f) Health status factors, (g) Personality factors, (h) Personal autonomy factors Results & Conclusions The quality of life for elderly people in the 21st century will depend on a number of fundamental changes in the way that societies perceive and respond to human ageing. However, it would be difficult to change attitudes without making some inroad into the government's policies. The findings from this research project would hopefully (i) help to improve interventions by advising the policy makers on a national level, and (ii) provide a platform where knowledge from cross-cultural research on elderly could be exchanged and shared.

**PD7 846 EXPLORING OLDER WOMEN'S EXPERIENCES OF DOMESTIC ABUSE: IMPLICATIONS FOR POLICY AND PRACTICE DEVELOPMENT**  
J. MCGARRY \* (University of Nottingham , Derby, United Kingdom)

Introduction: There has been little exploration of the health needs of older women (60+ years) who have experienced domestic abuse. A number of reasons for this deficit have been reported, for example, barriers to disclosure (Acienro et al, 2001), failure of professionals to recognise domestic abuse as occurring in this age group and the way it has been subsumed under the generic term of elder abuse which homogenises older people rather than recognising individual differences, including gender (Hightower, 2002). The impact of domestic abuse for older women has been identified as encompassing a number of facets, for example, the long term effects of physical injury and the psychological impact of prolonged trauma (Women's Aid, 2007). The services that are currently available may not be appropriate for older women and it has also been suggested that older women may remain in abusive relationships through lack of practical knowledge of how and where to seek help (Pritchard, 2001). Health care professionals are currently ill equipped to meet the needs of older women who have experienced domestic abuse. This represents a significant gap in current care provision. Methods: A qualitative study involving semi-structured interviews (interview guide) with older women (60+ years) who have experienced domestic abuse (n=30). Analysis: Currently in progress and will be undertaken using an iterative approach incorporating ongoing preliminary analysis of data. Findings: Discussion and implications for service organisation and care delivery will be presented in light of findings. Conclusions: The UK and the wider international health community has an ageing population and it is therefore pivotal that health care professionals are able to understand the particular experiences and needs of older women affected by domestic abuse and that service provision which is responsive to these needs is developed effectively at both organisational and care delivery levels.

**PD7 847 TOWARD LONG-TERM CARE REFORM IN THE UNITED STATES: FINDINGS FROM A NATIONAL SURVEY OF SPECIALISTS**  
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V. MOR(1), M. CLARK(1) - (1) Brown University (Providence, United States of America)

Introduction The deficit of preparedness in meeting the needs of an aging population means that policymakers cannot afford to wait longer to improve long-term care (LTC) delivery, regulation, and financing. To facilitate reform, we conducted a survey of LTC specialists in the U.S. Methods The questionnaire addressed provider quality and challenges, financing and insurance, linking individuals and families to services, organizational change and innovation, workforce recruitment and retention, and quality improvement and regulation. It also collected basic demographic information. The survey

was distributed by Web-based format to 2,577 eligible individuals during September 2007–March 2008. Results There were 1,147 respondents completing the survey. These included consumer advocates (10.6%), provider representatives (25.9%), public officials (31.8%), policy experts (24.3%), and others (7.3%). Most worked in LTC for >15 years (59.3%); had family/friends served by the LTC system (88.6%); and were Masters- or doctoral-level educated (81.0%). Results reveal varying degrees of consensus regarding the desirability and effectiveness of strategies for improving access, quality, and oversight in LTC. Most, for example, believed LTC financing should be a shared responsibility; few felt that individuals or families should pay most (or even share) in the cost. But whereas consumer advocates were much more likely to favor more aggressive regulatory enforcement and higher staffing requirements as methods for improving quality; provider representatives were much more likely to favor increased payment rates. Conclusion Tapping into the perspectives of LTC experts is significant because those specializing in this area must be able to communicate the importance of the issue to policymakers and the general public. It is also important because identifying areas of agreement and disagreement among key stakeholders is an important first step toward promoting action where it might otherwise remain politically intransigent.

**PD7 848 SOCIAL POLICY AND SOCIAL WELFARE FOR THE ELDERLY**  
T. HARTONO\* (National Commission for Older Persons, Jakarta, Indonesia)

In 2000 the population of Indonesia was around 205 million. The structured proportion of older persons (OP) was 7.18% (14.4 million). In 2020, this will be doubled and estimated to reach 11.34% (28.8 million). The social economic condition of OP were low. The majority of OP still work to fulfill their livelihood, mostly in the agricultural and informal sectors due to their low education. The environmental health condition was poor, efforts to improve health and welfare was not optimal. To ensure the success of OP social initiatives, a coordinating body named The National Commission for Older Persons (NCOP) was established. It continuously analysis instruments of law, and evaluates state policy implementation as well as submit recommendation for presidential policy on the aged. The Social policy for the elderly base on the Law No. 13/98 on OP welfare among others: - Older persons have the same rights in the community, nation and state - Older persons have the right to improve their social welfare including: religious service, health, access to public facilities, legal, social protection and assistance - Older persons has the obligation to provide wise advice based on knowledge and experience - The government task is to direct, guide, and create situation to support the implementation of older persons welfare - Government, community and family are responsible for effort to improve older person social welfare. The result of NCOP studies on older person welfare: -The law, regulation and related ministerial decree on the welfare of OP has been existed but the implementation was limited. -To increase older person welfare, and decrease the number of neglected older persons several initiatives should be done.

**PD7 849 WHICH MEASURE OF QUALITY OF LIFE IS MOST VALID FOR USE WITH OLDER PEOPLE?**

A. BOWLING\* (University College London, London, United Kingdom)

Background There is policy interest in improving older people's health, activity and participation in society ('active ageing') and, in effect, adding quality to life (QoL). Assessment of the effectiveness of such policy requires the use of relevant and valid measures, based on a conceptually sound model. Aims The main aims of the study presented, funded by ESRC (via the New Dynamics of Ageing Programme), were to i) test a new measure of older people's quality of life (OPQOL), and ii) the robustness of the causal model underpinning it, dynamically as people age. The model and measure of QoL to be tested were developed from our earlier QoL Survey, funded by the ESRC Growing Older (GO) programme. Methods ONS Omnibus national face to face interview Survey; Ethnibus national face to face interview survey; follow-up of national QoL survey sample. Measures OPQOL, CASPE-19, WHOQOL-OLD, and items measuring personal psychosocial and socio-economic circumstances. Results The OPQOL, which was derived from lay views, achieved superior reliability and validity to CASPE-19 and WHOQOL-OLD when administered to three national samples of older people, including the ethnically diverse Ethnibus sample. Discussion The study has resulted in a superior, psychometrically sound, measure of quality of life in older people, for use in descriptive and evaluative research.

**PD7 850 HAS MODEL OF ATTENTION OF DIF TAMAULIPAS FOR THE ELDERLY**

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Between 2005 and 2023 the elderly population in Tamaulipas will increase from 233 thousand to 473 thousand. In Tamaulipas the System for Family Development (hereafter DIF) gathered the State institutions, civil associations and the elderly population to build a model of attention in order to help the elderly. After three years of working with this model, it has been shown that there is potential for a new possible social policy for the elderly. The model of attention for the elderly of DIF Tamaulipas highlights the following

actions: 1.To invite public and private sectors to join the new proposals for the construction of social assets. 2.To establish a coordination to develop the government and the civilian society's activities. 3.To create new social programs, facilities and institutional capacity. 4.To attend the stratified target population by indentifying their priorities on the degree of exclusion and vulnerability. A number of results have been achieved as part of this model. For example, in "Adopt a Grandparent" Program there are 12,500 people assisted by the government and civil society. The elderly registered in this program are currently benefited with a social security program and food support. The Goal is to assist 16,000 people by the year 2010. In the State's network of Club Houses, culture and entertainment are offered to more than 20 thousand people. Also, there are 11 Elderly Day Care Centers throughout the state of Tamaulipas. The project "Villas Vida Plena" residencies provides 300 elderly with a new way of housing, companionship and attention. Also, this model of attention includes an elderly card issuing program, which in a period of three years has enrolled 97,324 elderly who have access to discounts for products and services within 2500 businesses, will assure a better future for them.

**PD7 851 PARTICIPATION IN LOCAL GOVERNANCE: A MODEL FOR ENGAGING WITH DIVERSE SENIORS**

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Introduction Population ageing brings with it a range of new challenges and opportunities for local communities in Australia and across the developed world. It also brings an increasing, and increasingly diverse, population of older people whose needs and interests should be represented in local governance processes. Genuine and inclusive opportunities for participation are vital for what has become known as 'good governance'. There is therefore a need for a useable and evidence-based model for engagement with seniors in local governance. Methods and materials This paper discusses the development of a model for the effective engagement of a diverse range of seniors in local governance processes in Australia. A two-phase multi-method study conducted in a Queensland City that is poised to experience a dramatic population shift provides a case study to highlight a broad range of commonly experienced challenges in engaging older people in governance of ageing communities in Australia and internationally. Results Key points include that the factors impacting on older people's participation can be very broad and extend beyond a focus on practical or physical arrangements to include more abstract motivations and barriers. Second, many aspects of difference can impact on the ways people approach their role in governance. Diversity among older people is more than simply cultural and linguistic difference, incorporating a range of demographic and lifestyle factors. These findings contribute to a model for engagement that is based on responding to the motivations and barriers experienced by diverse seniors. Conclusion Providing opportunities for genuine and inclusive participation by a range of older people in local governance requires innovative approaches that incorporate broad aspects of diversity. The model presented here highlights key considerations that may be shared by local governments and their policy partners throughout the developed world.

**PD7 852 STEALTH PRIVATIZATION OF CARE FOR THE ELDERLY IN BRITISH COLUMBIA, CANADA**

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Introduction: The paper is a policy study of privatization examining health-related services for the frail elderly in the province of British Columbia, Canada. It comprises three case studies: (a) increasing government support for profit-oriented, user-pay medical services, (b) changes in eligibility criteria for public pharmaceutical insurance and (c) implicit and explicit privatization of home and residential care for elderly adults. The focus of the study is policy development under the current provincial government, elected in 2000. Methods: The paper employs institutionalist public policy theory through case study methods. Statistical data on funded beds, home nursing, home support services and pharmaceutical insurance are analysed. Specific policy directions are identified through analysis of budget documents, government reports and legislative and regulatory changes. Results: The paper demonstrates substantial shifts in policy orientation from universal, solidaristic toward selective, taxation minimizing approaches. It also attempts to quantify the significance of the boundary shifting from public-pay to user-pay within the sub-sector of services for elderly adults. Conclusion: The paper concludes that the initial conditions have now been established for substantial policy change and massive boundary shifting in the area of health and social care for elderly British Columbians.

**PD7 853 THE ESTABLISHMENT AND OPERATION OF THE PATIENT RESOURCE AND SUPPORT CENTER AT HADASSAH HOSPITAL**

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The encounter with the hospital confronts patients and their families with a new reality. Hospitalization and medical treatments are destabilizing factors which require reorganization when the patient returns to the community. Many patients, especially the elderly and their families, are not aware of the opportunities for continuing care in the

community or what their eligibility for medical services. At the same time, patients and their families are often inundated with information distributed by representatives of private caretaking agencies, manpower companies and nursing homes who freely roam hospital wards, accessing patients, violating their privacy and disrupting departmental work. The information they disseminate serves to both confuse and exacerbate the difficulties which accompany hospitalization, overwhelming patients and complicating their decision-making. The Social Work Department Of Hadassah has thus identified a critical need for an easily accessible and comprehensive service that would provide assistance and assessment by trained personnel through relevant, updated information on rights, benefits and services for patients being discharged from hospital and their families. In response to these unmet needs, in February 2008, we began a pilot project that we called the Patient Resource and Support Center at Hadassah Ein Kerem. The Patient Resource and Support Center provides information to patients and their families on a broad range of issues pertaining to their hospitalization and rights available upon discharge. This information ranges from benefits and rights provided by diverse government and other health-related agencies, to sources of voluntary and professional assistance, and placement in diverse frameworks. The service is provided free of charge. The Center currently serves approximately 100 people per month, with potential to 250 - 500 a month. We feel that the project has great potential to prove worthy of replication in other hospitals not only in Israel but throughout the world.

**PD7 854 WITHOUT INTENTION: UNCOVERING THE HIDDEN ASPECTS OF RURAL RESPONSES TO HOMELESSNESS**

B. ELIAS \* (University of Toronto , Toronto, Canada)

Introduction Rural Homelessness exists as an important, but often invisible, social issue of our time (Clore, P., Milbourne, P., and Widdowfield, R., 2001) Canadian social housing policy has shifted dramatically in the 21st century and has been framed by the federal government's National Homelessness Initiative in an attempt to "involve community" in both policy development and service delivery decisions, particularly challenging when tackling thorny issues such as homelessness(Phillips, et. al., 2003, p.1). This paper will explore community responses to homelessness related to this federal initiative within a rural Canadian context from a social policy perspective. The research questions will focus on distinctive features of selected rural communities, community planning processes and how the hiddenness of homelessness, particularly that of older adults, is addressed. Methods A multi-method approach was adopted and includes a policy/literature review, focus groups with stakeholders and a case study conducted over a 7 year period which examines community action planning and factors such as deinstitutionalization and rural gentrification of housing stock occurring in the idyllic settings of "cottage country" in Canada. Findings will be compared to a similar ethnographic study carried out in a rural setting in the United Kingdom (Clore, P., 2002). Results Three selected community action plans revealed distinctive features of each rural setting and yielded some interesting outcomes that had a direct impact on the implementation of new social policy locally. However, the study concludes that exhaustive volunteer efforts over almost a decade have had disappointing results and that political action in the form of advocating for the creation of new national legislation to provide permanent housing for the homeless is now warranted. Keywords: rural homelessness and community action planning

**PD7 855 THE BLOSSOMING OF THE PATH TO MAINTAIN GOOD HEALTH**

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Introduction Maori are the indigenous population of New Zealand. Only 3% of Maori is aged over 65 years of age. Those over 75years of age are seen and regarded by their whanau, hapu and iwi, as "taonga", or living treasures. They the spiritual being of their ancestors and the means by which traditional Maori knowledge, values and beliefs are transferred from one generation to the next. They are also recognised as the guardians of their people, and they connect to the future by the way of their grandchildren. Methodology A feasibility study has been undertaken in New Zealand, recruiting from 1% of the Maori and non Maori populations, to determine whether it is possible to design a quantitative study and recruit a group of Maori aged 75-79 years and for non Maori, 85 years of age to hear and record from their experience of living to this advanced age. The study has involved designing with elders, other researchers nationally and internationally, a lengthy qualitative questionnaire as well as undertaking bio medical measurements and assessment of participants' physical and general mobility. Results Data from the study will be shared Conclusion This paper will describe the journey, we have navigated with our elders and lessons learnt to implement this feasibility study and where we are now going. E kore e hekeheke he kakano rangatira. Our ancestors will never die, for they live on each of us.

**PD7 856 THE PUBLIC LIFE OF OLDER PEOPLE: NEIGHBOURHOODS AND NETWORKS**

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Population aging and urbanization are major forces in the 21st century. The health of the urban elderly will be determined in part by their social and physical environments and policy makers, planners, community groups and healthcare organizations are asking "what

makes an age-friendly community"? The purpose of this research was to explore how neighbourhoods affect older people aging in place. The study objectives were to: a) understand neighbourhoods as the material places where public life occurs, b) understand networks as the social places of public life, and c) examine how these neighbourhoods and networks shape the experience of healthy aging. The study employed a critical geographical gerontology research framework and a methodology called 'friendly visiting' which combines ethnography, narrative and case study research and utilized participant observation, visual methods and innovative interview techniques. The qualitative data were analyzed using grounded theory and an adapted coding strategy that integrated the textual, visual, and auditory data to highlight theoretically-informed themes that characterized participant's perceptions and experiences of their neighbourhoods. Results provide insight into the micro-territorial functioning of neighbourhoods for older residents where key sites for informal public life – "third places" – are revealed. Third places (e.g., parks, streets, coffee shops) are important material and social places for older populations: preparing for, journeying to, and engaging in these public sites promotes healthy aging by providing opportunities for engagement in life and facilitating social networks. Findings reveal that neighbourhoods – and in particular informal public spaces within these local environments – are significant places of aging that impact the well-being of older people aging in place. Results advance healthy aging and aging and place research, contribute to gerontological methodologies, and have implications for healthy public policy and practice in areas such as health promotion and age-friendly community initiatives.

**PD7 857 TRACKING PROFILE AND PREDICTORS OF ADMISSIONS TO NURSING HOMES IN SINGAPORE**

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Introduction: Like other developed countries, Singapore is confronted with a rapidly ageing population, lower "old age dependency" ratio and smaller families. With a graying population, aged-related chronic diseases and functional disabilities will be expected to grow. Inevitably, more elderly will either have to cope on their own, or institutionalization may be the obvious alternative. These will lead to an increase in demand for residential-based facilities. This poster presents data from Agency of Integrated Care (AIC) aiming to understand the profile of patients requiring nursing home and have a better understanding on the predictors of nursing home admission. Method: One of the roles of AIC is to coordinate referrals and admissions to nursing homes. For this poster, we mined data of all patients admitted to a government-funded nursing home from 2001 to 2007, which includes: demographics, functional status, diagnosis, cognitive status, social information, caregiver support and nursing care. From these, we performed descriptive and trend analysis to understand how patients requiring admissions to nursing homes have changed; and regressions to understand if and how the predictors of nursing homes have changed. Result: Since AIC started coordination of referrals to government-funded nursing homes in 2001, we have more than 10000 applications. Preliminary data from the west has shown patients admitted to nursing homes tend to be older, sicker and more dependent. Also observed are the changes in acuity and social circumstances of the elderly. Contrary to government's philosophy of self help, we observe a greater number of families who are unable to cope with the functional decline of their elderly are requesting for nursing home admissions. Conclusion: With the growing acuity of the patients and changing family structure, Singapore Government may have to rethink on its most basic philosophy and support her citizens.

**PD7 858 THE EFFECT OF HOME CARE ON THE ABILITY TO PERFORM THE ACTIVITIES OF DAILY LIVING AND THE WELL-BEING OF OLDER PEOPLE**

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Introduction. With the considerable changes in population age-profiles, the preventive care of older people is becoming more and more important. We analyse the long-term effect of the provision of home care in Denmark on the recipient's ability to perform the activities of daily living (ADL) and upon aspects of their well-being. Methods and materials. Using regression analysis on a set of Danish longitudinal data featuring people aged 67-77 we estimate the effect of home care while controlling for initial health, including initial ADL ability and well-being, along with demographic and socioeconomic conditions. The study included 1,317 people aged 67-77 in 1997 who participated in interviews in 1997 and follow-up in 2002. Results. We find no effect of home care on ADL ability in women; results for men, however, indicate a negative association. The provision of home care has an insignificant effect on women's well-being, but a positive effect for men incapacitated beyond a certain degree. We find that help from relatives and friends is correlated with a subsequent lower ADL ability in men but not in women. We find no correlation between help from relatives or friends and subsequent well-being. There appears to be a positive effect on subsequent ADL ability for women who consider that they need (more) home care. Conclusion. The results indicate a need for supplementary efforts to protect against

the disablement process, and that help should be granted on the basis of a careful assessment of older people's actual ability to perform daily chores.

**PD7 859 DIGNITY AND RESPECT IN OLDER AGE: LESSONS FROM RESEARCH ON BLACK AND MINORITY ETHNIC COMMUNITIES**

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Introduction Drawing on research on the views and experiences of older people from black and minority ethnic (BME) groups, this paper identifies and discusses the key issues for minority older people's dignity and respect in older age. We discuss people's understandings and expectations for their care and support, and consider how well these are addressed in relation to the avoidance of abuse and neglect. Methods The research included an audit of good practice in addressing mistreatment of older people from black and minority ethnic groups; interviews with older people and family care givers from four minority ethnic categories (South Asian, Chinese, African Caribbean and White European) in the UK; focus groups which explored the 'fit' between service user needs and service provider approaches. Results Facilitators for dignity and respect for older BME people included the strength of family support and the commitment to family care; the strong BME voluntary sector; aspects of current policy; and some examples of good practice by services. Barriers to dignity and respect were however strong and included a limited response from statutory services; failure to engage with BME communities, exclusionary processes preventing access to services; low expectations; the marginalisation of BME voluntary sector services. Conclusions There are many obstacles in the way of BME older people being assured of dignity and respect in older age, especially where support and care from services is needed. However, the research identified some areas of good practice including good outreach work with local BME communities; some specialist services grounded in community action; open discussion of issues of mistreatment.

**PD7 860 INTERNATIONALISATION OF ELDERLY CARE AND WELFARE AND CARE FOR OLDER MIGRANTS**

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For my final thesis (European Masters of Gerontology) I am doing a research about the internationalisation of elderly care. Are housing corporations and care organisations planning to operate abroad? What kind of services will they provide? In which countries (for example countries like Surinam, Turkey and Morocco, the Dutch Antilles als a lot of people from that countries migrate to the Netherlands)? What obstacles do they face? And do older people in that countries do benefit of this as well? On the other hand, I will investigate if older migrants will return to their country they came from. And if they do so, I would like to know what reasons they have to migrate back. What services do they need? Why are they what to go back to their roots? I use the oral histories as the main source of the data. So I have already been talking to housing and care organisations and I spoke several older migrants. I went to the Dutch Antilles to speak to older persons, to housing and care and welfare organisations. As a professional I work for the national Knowledge centre of Housing and Care, initiated by two branche-organisations ActiZA (care organisations) and Aedes (housing corporations). The results of this research can be used by those two sectors but it is also interesting for older migrants and their self-organisations. I like to compare the Netherlands to 2 other European countries.

**PD7 861 AGEING WELL IN AUSTRALIA: THE ROLE OF COMMUNITY ENGAGEMENT AND COLLABORATION**

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Introduction The ageing of the population highlights an increasing need to include the preferences and resources of older people in community-building strategies. In some contexts, such as Australia, local governments are developing ageing strategies to help address the diverse needs of a rapidly ageing population. However, many local responses do not recognise the role that older people themselves can play in ensuring that their communities enable people to age well. Methods This paper reports on a project that engaged older people in two contrasting communities in identifying ways they could work together to make their communities more age-friendly. As well as including the 'voice' of older people, the action involved collaboration between older people, local government and relevant organisations. The research was conducted in three sequential phases 1) identifying the local context and ageing issues (mainly through interviews); 2) brainstorming and goal-setting (in community workshops), and 3) interactive action planning by working action groups over 12 month period. Results The research identifies key factors influencing the effectiveness of collaborative, community-based approaches to building an age-friendly environment. Results also highlight some of the challenges faced when older people work with others in local networks on these issues. Further, they contrast the forms of engagement and degrees of collaboration developed in communities characterized by ageing-in-place, and "seachange" mobility. Conclusion To optimize

people's opportunities for health, participation and security as they age, it is essential that approaches to governance are inclusive and supportive of older people. They need to be adapted depending on the context in which collaboration occurs, including the nature of the community and existing levels of cohesion. This paper presents some Australian evidence supporting the development of flexible, collaborative approaches, based on engagement of older people themselves and strengthening networks.

**PD7 862 CHALLENGES FACED BY SERVICE PROVIDERS WORKING WITH IMMIGRANT SENIORS IN WESTERN CANADA**

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Introduction: Despite growing interest in aging and ethnicity, most research has overlooked challenges experienced by senior immigrants and their support needs. Little is known about how migrant elders from different countries of origin adapt following immigration late in life or about challenges faced by service providers in meeting the support needs, and preferences of immigrant seniors. Consequently, this study examined the challenges faced by service providers from various organisations in reorienting available resources and programs to provide support for the new elderly immigrants in Western Canada. Methods: Group interviews were conducted with service providers and policy makers (n=25) in Alberta to ascertain their views on the availability and appropriateness of services for immigrant seniors. Service providers were selected from agencies/ organisations in health and health-related sectors that provide services to immigrant seniors, and recruitment was facilitated by a Community Advisory Committee. The service providers were purposively sampled to represent different health-related disciplines (e.g. nurses, physicians, social workers, psychologists). Group interviews were tape recorded and transcribed verbatim. Data were subjected to thematic content analysis, while inductive analysis was used to create a coding framework and recurrent themes were systematically compared to identify substantive categories and potential theoretical codes. Results & Conclusion: Service providers faced high costs of programmes and equipment for activities, lack of culturally appropriate services to offer immigrant seniors, and lack of financial and human resources. Other challenges include failure to determine the exact support and service needs of immigrant seniors, unclear mandate or geographical coverage of their activities, and lack of intersectoral collaboration among service providers. Integrative strategies in policies and multicultural programmes are desired for overcoming the barriers encountered in assisting immigrant seniors. Advocacy should be conducted for government policies that can alleviate poverty among immigrant seniors.

**PD7 863 NEXUS OF AGING, IMMIGRATION, AND MULTICULTURALISM IN SOUTH KOREA: LESSONS FROM THE 1992 LOS ANGELES RIOTS**

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Purposes: As population rapidly ages, the economically productive population has greatly decreased in South Korea. With this demographic transition, the country is witnessing a steady inflow of immigrant workers from neighboring nations. It is therefore essential for South Korea to receive these workers in order to maintain an adequate workforce. However, Koreans' inexperience in coexisting with foreigners has caused social and cultural discrimination against the immigrant workers. This study explores socio-cultural features that trigger tensions and conflicts between Koreans and immigrants. The study also reviews an instructive example of social integration, which assimilated Korean immigrants with mainstream Americans following the 1992 riots in Los Angeles. Method and Results: Using a qualitative research methodology, the study explores four factors that tend to trigger racial tensions between native Koreans and immigrant workers: 1) social exclusion of foreigners; 2) cultural values stressing the nation's homogeneity; 3) discrimination of immigrants; 4) lack of experience in multiculturalism. The study also examines the 1992 Los Angeles riots and its immediate aftermath as an example of racial conflict and integration using three categories: 1) the historical background of immigration in Los Angeles; 2) causes and effects of the riots; 3) efforts to overcome and minimize racial segregation. Finally, this study argues that following the example in Los Angeles, racial tensions in South Korea can be minimized through multi-ethnic coalition building as well as education on multiculturalism. Implications: This study presents three policy implications. First, the study suggests implementing a program of multicultural education in South Korea. Second, South Korean society needs to support national policies that address challenges caused by the growing immigration of foreign workers. Finally, major government assistance including job training, housing support, health care and welfare can improve living conditions of immigrant workers.

**PD7 864 SOCIAL RESULTS AND LESSONS LEARNED FROM A HEALTH PROMOTION PROGRAMME FOR THE ELDERLY IN RURAL THAILAND**

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Good health does not occur automatically. It requires good preparation and the right form of promotion. The objectives of the study are 1) to promote the elderly in rural Thailand with good physical and mental health, 2) to research and develop a health promotion programme for the elderly through collaboration with health-center staffs at sub-district level, and 3) to promote health centers at the sub-district level to become main supporters in health promotion. The participatory action research was used to assess the effectiveness of community-based interventions in implementing a health promotion programme for the elderly. Two health centers at sub-district level were selected and qualitative techniques were employed. Through the use of a systematic approach and attentive evaluation, the results from the evaluation at the end of the project covered 300 elderly samples indicated that more than 90 percent of the elderly were satisfied with the health promotion activities. They wanted to prolong the programme and needed not to change any activities. Changing in their health behaviors were also found, the elderly came out to jog along the village's roads in the morning and were no longer shy to exercise at home. These had never happened before. Moreover, the main outcomes of the programme were the setting up elderly clubs at the two sites. This indicated the empowerment of the community and the local administration offices agree to provide financial support for the programme in the consecutive years. The lessons learned from the study are good health would reduce the expenses to be paid for the medical treatment and stimulation for self health care should be promoted in rural area because good health would bring happy life which in turn resulted in the happiness of the family and the community as well.

**PD7 865 BEREAVEMENT NEEDS AMONGST OLDER PEOPLE – A NEGLECTED POLICY AREA?**

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**Introduction** This paper draws on a PhD study which examines whether older people's needs for support are being met during times of bereavement. Using a qualitative approach, the study explores their experiences of bereavement, and their perceptions of the adequacy of public, private (including family and friends) and voluntary sector agents in responding to their needs. Although research has long shown the pivotal role that social support plays in promoting well-being during periods of bereavement, the study argues that older people's needs for support during these times represent a neglected area in contemporary social policy agendas. Current UK policy discussion (e.g. Transformational Government Strategy, 2005; Varney Review, 2006; Local Government White Paper, 2006; Age Concern, 2008) also suggests that this has been the case. **Methods** This paper presents the findings of a literature review which examines existing knowledge of older people's needs in times of bereavement; developments or changes to service provision for this particular group over the past century; and the relevance of concepts of 'social need'; 'social support' and 'social networks' to this field. **Results** Preliminary analysis of qualitative interviews with bereaved older people and service providers suggests that social isolation and loneliness are dominant concerns which remain unaddressed. **Conclusion** The study thus far points to the need for formalized support for older people during bereavement, particularly because of broader social changes which affect the potential availability of traditional informal sources of support, notably the family.

**PD7 866 "WHAT CONTRIBUTE TO QUALITY OF LIFE IN OLD AGE?" PERSPECTIVES OF OLDER TAIWANESE**

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**Introduction.** With population aging, extensive research has been devoted to understanding Quality of Life (QOL) in old age. QOL is recognized as a multi-dimensional concept. There is yet limited understanding of the interaction among its dimensions. Such a dynamic perspective is important to our understanding of how seniors perceive QOL as they face continuous personal, societal, and cultural changes. This study is to investigate how seniors considered QOL in old age, the meanings they attributed to the various dimensions of QOL, and how these meanings were situated in their special personal and cultural contexts. **Methods.** The study adopted a qualitative design. 20 seniors who were 65 and older in central Taiwan participated in taped in-depth interviews and participatory observations. The interviews were transcribed in verbatim. The transcripts were analyzed, following the principles of thematic analysis, with the assistance of Atlas.ti software. **Results.** The narratives of the seniors' about lives, aging experiences and expectations for future reveal their desire for an ideal state of "free from worry," what they considered central to "having a good life in old age." The theme brings together the multiple QOL dimensions, including "physically healthy," "independent in daily living," "supported by family," and "economically independent." The meanings associated with each dimensions were intricately inter-related. The meanings and the core themes of the narratives also reflect the seniors' attempts to make sense of their experiences and to reach a sense of "having no worry" amid the rapid personal, societal, economic, and cultural changes, for example, the changes in concepts of traditional filial piety. **Conclusions.** The holistic and dynamic construction and evaluation process of QOL revealed in the narratives reflected

the close linkage among dimensions of QOL. A culturally-relevant perspective that values individual perspective contributes to the understanding of QOL in old age.

**PD7 867 HEALTH STATUS AND HEALTHCARE EFFECT OF GRANDPARENTS IN GRANDPARENTS AND GRANDCHILDREN FAMILY**

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Grandparents-grandchildren(GP-GC) family have been increased by from 1995(35,194 households) to 2005(58,101 households) in Korea. These pattern is markedly increased in the rural area of Korea. GP-GC family have many severe problems such as poverty, health problem from aging of grandparents, lack and stress of childcare, retardation of growth and development of children, exposure in crime, and remedial classes etc.. Therefore this family should required several services. Intervention programmes for GP-GC family was demonstrated by nurse/social worker using electronic voucher per week a day(3hrs.). Contents of service were consultation, information, health prevention and maintenance(exercise, play, examination), giving a learning for children and chores. Purpose of this study was to get health status and childcare effect of grandparents through intervention service of the GP-GC family. The interview survey was performed in January 2008 with a structured questionnaire to 110 grandparents of GP-GC families who served intervention programs and lived in Muan-Gun of Chunnam Province. The questionnaire composed of grandparents childcare stress, ADL, IADL, health status and depression status. research method used Chi-squire method and t-test. The average age of grandparents was 68.9( $sd=8.2$ )years old. 70.6% of grandparents have chronic disease(arthritis, hypertension, DM, incontinence, cancer etc.) and 54.7% of grandparents about subjective Health status was not good. ADL, IADL and depression of grandparents were good status and slightly promoted. Childcare stress of grandparents was very high, but grandchildren perceived childcare attitude of grandparents were significantly lower in served GP-GC family than not served GP-GC family. Intervention program for GP-GC family changed the childcare attitude and health status of grandparents. These results suggest the need for intervention programs with childcare service and health management about grandparents.

**PD7 868 MIGRANT CARE WORKERS, OR MIGRANTS WORKING IN LONG TERM CARE: A REVIEW OF THE AUSTRALIAN EXPERIENCE**

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The role of migrant workers in aged care is of particular relevance to Australia where 25% of the total population are overseas born, two thirds of them in countries where English is not the main language. Issues of interest arise with regard to meeting the demands of the aged care workforce in general, and responding to the particular cultural and linguistic needs of post war immigrants who are now reaching old age in increasing numbers. This paper begins with an account of the overseas-born components of the aged care workforce drawing on data from a comprehensive survey of the residential and community care sectors conducted in 2008. Comparisons with the total female workforce show that overseas-born workers are over-represented in aged care. Answers to the question as to whether these workers are migrant care workers or longstanding migrants are then sought with reference to migration policies, long term care financing arrangements, worker recruitment and training and credentialing, the four factors identified as shaping international flows of migrant care workers in the six nation study carried out by the American Association of Retired Persons Public Policy Institute in 2005. The way in which these factors play out in Australia means that while migrants are an important element of the aged care workforce, the great majority of overseas-born workers are longstanding migrants who have trained and gained qualifications in Australia. There is little evidence to show that aged care provides a pathway into the workforce for low skilled migrants or that others are working below their skill level. Migrants entering Australia specifically as care workers are not identifiable as either a problem in terms of disadvantage in employment conditions and lack of permanent residence, nor do they offer a solution to shortages in the aged care workforce.

**PD7 869 EMPLOYMENT STATUS AND EMPLOYMENT DEMANDS OF CERTIFIED SOCIAL WORKERS IN THE GERIATRIC SETTING UNDER THE LTCI IN JAPAN**

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**Purpose:** Although twenty years has passed since the national government in Japan started a system of certifying social workers, their working environment has not developed sufficiently. The purpose of this study is to describe and examine the employment status and the demands for employment of certified social workers who are working in the field of geriatric setting. **Methods:** There were two data sets in this study: one was the data for the care management centers and the other was for the day/day care centers. Subjects were selected randomly from the WAMNET list. The survey was conducted by mail from

February through May, 2007. There were 273 respondents for care management centers and 293 respondents for day/day care centers. Results: Employment rates of CSW in care management centers under LTCI in Japan were only 3.6% and 2.9% for day/day care centers. However, most of the respondents recognized that there were many needs and tasks which CSW can best deal with or solve. Moreover, more than 60% of the respondents showed that they greatly utilized their certification and knowledge when they hire new professional staff. Conclusion: Even though the result of this study suggested that CSW are not fully employed in the geriatric setting in Japan, the employment demands of CSW is quite high. It was clearly shown that there was a big gap between the actuality and demands. It is necessary for CSW themselves, administrators of service providers, and the national and local governments to work together to fill this gap.

**PD7 870 CADENZA, A JOCKEY CLUB INITIATIVE FOR SENIORS**  
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Introduction In 2006, The Hong Kong Jockey Club Charities Trust launched a five-year project: "CADENZA: A Jockey Club Initiative for Seniors". The initiative is meant to nurture and develop innovative approach in understanding ageing, promoting positive image of the elders and meeting the need of the future old. Faculty of Social Sciences, The University of Hong Kong and Faculty of Medicine, The Chinese University of Hong Kong are project collaborators. Objectives and Programmes Its objectives are to revolutionise the way society views its elders; promote innovative approaches in improving and quality of life and quality of care of the elderly; train different levels of professionals, formal and informal caregivers; and encourage academic leadership in gerontology. The above objectives are accomplished through research training workshop and research projects; training of professionals, front-line workers, care givers and the general public; innovative and sustainable community projects; and public awareness. Results Today, 30+ research projects are underway or have been completed. 1,000+ professionals, formal and informal caregivers have been trained. Two symposia were organized in 2007 and 2008 respectively with 1,000 overseas and local experts participated. Four innovative community projects have been funded with a total amount of more than HK\$1,000K, and a number of creative service ideas are being considered. A territory wide public awareness program through radio and TV has been launched covering 6 major themes: (i)health promotion and maintenance, (ii)health and social services, (iii)living environment, (iv)financial and legal issues, (v)quality of life and quality of dying, and (vi)age disparities. Conclusion CADENZA is an exemplary funding model for promoting interdisciplinary collaboration in gerontology, involving academia and service providers. Funding bodies world wide may consider its funding mode in supporting innovative and sustainable initiatives for the betterment of the older population.

**PD7 871 THE HAUSGEMEINSCHAFT (HOUSING COMMUNITY) AS INNOVATIVE APPROACH IN NURSING HOME CARE**  
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The Hausgemeinschaft (Housing Community - HG) was first described in Germany by Winter (1995). According to his terminology HGs represent the 4th generation of nursing home concepts (1st generation: shelter, 2nd generation: hospital like, 3rd generation: residence dominated by care) HGs are a special type of household consisting of a limited number of people needing care. About 100 out of 10,000 nursing homes in Germany have already switched to HG. The number is rising. The concept and different assessment reports are analyzed to what extend HGs have advantages to conventional nursing homes and which problems occur with the implementation. It is shown that HGs lead to a higher autonomy of the residents, a better satisfaction of staff and relatives, and an improved image of the nursing facility. Main problems are the training of the staff because of the different operational and organizational structure. Furthermore some problems with the legal framework of nursing homes occur e.g. hygiene regulations, fire protection requirements or guidelines of the long-term care insurance. It is concluded that HGs can be regarded as an innovative approach in nursing home care if operations and organization are intensely planned and controlled. HGs are not appropriate for all nursing home residents but a great number could benefit.

**PD7 872 OLDER PEOPLE AND DOMESTIC PHONES: DOES THE MARKET ANSWER THE NEEDS OF HONG KONG'S SILVER POPULATION?**  
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Introduction The Hong Kong population is ageing rapidly. It is estimated that by the year 2036, people aged 65 or above will soar to 26.4% from the current 12.4%. Domestic phone plays an important role in enhancing connectedness and reducing isolation in the older population. Since ageing is associated with some physical and cognitive functional losses, aged people demand domestic phone that can meet their special needs. This study examined the current domestic cordless phones available on the local market for their elder-friendly features. Method and materials The elder-friendly features used in this study were identified from the findings of an earlier study (Lo, Yap and Lai, under review)

wherein local elderly people's preferences of domestic phone features were solicited. The most wanted features were prioritized accordingly. In the present study, domestic cordless phones from local major retailers were examined. Their elder-friendly features and prices were cross-checked against that of elder people's plea. Results Out of a total of 35 searched domestic phone samples, 26 embraced 1 to 5 elder-friendly features, 6 samples had 1 identified elder-friendly features, 13 had 2, and only 1 phone searched carried the maximum of 5 elder-desired features but with a price of HK\$1600. The market niche identified in this study is therefore a phone that would include more practical non-fancy elder-friendly features, at a relatively affordable price. Conclusion Having known that a domestic phone can indeed facilitate seniors' social networking and thus enhance their quality of life, the findings of this study serve as a quick reference for those who care for the well-being of the seniors in developing a market-niche domestic phone which can answer the unique needs of the silver population.

**PD7 873 THE FLEMISH ELDERLY CARE STUDY. CARE PATHWAYS OF ELDERLY PERSONS WITH COGNITIVE PROBLEMS AND/OR DEPRESSION**  
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Introduction The Flemish elderly care study is a large-scale longitudinal study from the Flemish Policy Research Center Welfare, Health and Family. It focuses on pathways of care of elderly persons with cognitive problems and/or depression. Methods VoZs aims to yearly interview 3600 elderly persons who live in eight Flemish regions for a period of (at least) four years. Primary health and social care organizations select the respondents by means of a screening instrument for cognitive problems and depression. All clients aged 65 years or older, who speak Dutch and who live in one of the 8 regions, are screened. Those who score positive, are encouraged to participate in the study, as is their primary care-giver. Following the screening, those who wish to participate, are interviewed by means of a structured questionnaire. Results A purpose of the study is to map pathways of care and the factors which reinforce or weaken the demand for care. Other research goals are to determine (1) the time-interval between the first use of care and the admission in residential care (or death) and (2) the factors which influence the pathway of care and the length of the interval. As more and more research stresses and demonstrates the importance of the socio-demographical and the geographical context on the need for and demand of care, VoZs not only aims at examining the influence of individual characteristics of the elderly person and the caregiver (for which there is ample evidence in the literature, but also the influence of particular municipal and regional characteristics. Conclusions Because of its broad scope, the longitudinal character and the fact that individual as well as regional characteristics are part of the research, it is quite innovative. The results are relevant for local, regional and national policies.

**PD7 874 THE RETENTION OF OLDER PARTICPANTS IN LONGITUDINAL RESEARCH STUDIES**  
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Background Retaining participants in longitudinal research studies is crucial if the findings are to be valid. If people drop out then the sample no longer becomes representative. Response rates for studies; especially involving older people are dropping. This multidisciplinary research which took place in 2008 examines what factors encourage older people to remain as participants or discourages them from continuing to participate in health related longitudinal or panel studies. Methods and findings The first part was a literature survey which revealed that there were many reasons for drop out including too time consuming, questionnaire being intrusive and dislike of some of the medical exams. Questionnaires were then sent to the 38 studies identified in this literature and 20 replied. Various ways of encouraging participation were found. The second part of the study was secondary analysis of participants in the Whitehall 11 Study (a study of 10,308 civil servants which started in 1985). It was found that attrition was associated with being female, older, not being married, having a lower occupational grade, being in unfurnished property and having a lower educational level. This was followed by focus groups and telephone interviews. Positive things associated with being a participant included particularly having a free medical examination. Dislikes included some aspects of the tests (particularly the cognitive ones), a lack of understanding why some of the tests were carried, dislike of the questionnaire and the repetitiveness of some. Reasons for continued participation ranged from the value of the medical examinations, the prestige of the study and 'giving something back'. Conclusion A series of recommendations are made which are both practical, such as continuing with the offer of home visits, a comfortable environment and sensitive caring staff to wider issues about the desire for more knowledge about the whole study.

**PD7 875 PERSPECTIVES ON TRANSPORTATION: BUILDING ON THE AGE-FRIENDLY CITIES PROJECT - A "WHO" INITIATIVE**  
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Introduction- The transportation options of older adults are under scrutiny as the number of older adults will increase significantly in the coming years. As part of the World Health

Organization's (WHO) "age-friendly community initiative, our research investigated the role that transportation plays in an "age-friendly" community in Saanich, British Columbia (BC) Canada. Methods-Focus group data, collected as part of the Age-friendly Cities project in Saanich, BC were reanalyzed to specifically examine information on transportation and older adults. There were two focus groups of older adults 60-74 years (young-old), two focus groups of older adults over age 75 (old-old), and four groups of stakeholders (i.e., policy makers, business owners). One additional two-hour focus group of stakeholders was conducted that was devoted entirely to the topic of transportation. This qualitative data was analyzed within the Developmental Systems Perspective (DSP) theoretical framework. This perspective integrates both individual and contextual levels of analysis that promote positive development for the population, emphasizing the importance of scholarly and community partnerships in research. The practice of fostering bidirectional relationships between practice and research has the potential to contribute to positive policy changes and social interventions. Results-It was apparent that the transportation needs of young-old adults were different than old-old adults. It was also evident that there was a need for stakeholders to better understand what the physical environment was like for older adults. Conclusion-Although there is a great deal of information available on older adults and transportation, little is known about the perspective of the stakeholder. The DSP provides a framework for better understanding the developing needs of older adults and the characteristics that make a community age-friendly. This information might be to implement more age-friendly transportation policies and programs.

#### **PD7 876 EXTRA CARE BUILDING TYPOLOGY IN THE UK**

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Introduction A problem posed by the worldwide phenomenon of an ageing population is how to enable people to retain their independence in later life. One strategy adopted by the UK Government is to promote extra care housing. Comprised of self-contained living units, extra care schemes are popular as they offer independence to people with high care needs who might otherwise require communal residential care. Currently there is little empirical evidence to show what constitutes good practice in extra care design. The EVOLVE project, funded by the Engineering and Physical Sciences Research Council and run by Sheffield University in collaboration with PSSRU University of Kent, aims to develop an evidence-based evaluation tool that can be used throughout the life-cycle of a building, from the design stage through to the experience of the building in use. As part of the tool's development, a building study was conducted to determine what types of building have been created by the extra care initiative. This paper will describe the wide range of extra care building typologies currently in use in the UK. Methods and Materials Plan drawings for fifty-seven schemes were collected from a variety of sources including housing providers, architects and the existing literature. Eight of these schemes were visited and extensive photographs taken. Schemes were then studied to identify similarities and differences. Results A wide range of typologies exist, from bungalows to high rise apartment blocks. There are some key similarities between schemes, especially in the design of individual apartments. However there is much disparity in the provision of facilities and in the overall layout of schemes. Conclusion The wide range of typologies in use suggests there is currently no universal agreement about what constitutes good design in extra care, and consequently this area merits further investigation.

#### **PD7 877 CARING FOR OLDER PEOPLE: A COMPARISON OF ARRANGEMENTS IN ENGLAND AND NEW ZEALAND**

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Community care of older people is an increasingly significant issue for governments worldwide in the light of demographic changes and ageing populations. Comparing policy measures and developments in different countries helps identify policy innovations, convergences and divergences, and has the potential for shared learning by governments. This presentation draws on relevant policy and service documents, and research evidence, in focusing on different aspects of social care models for older people in England and New Zealand, including: funding streams and commissioning arrangements; charging policy; range and scope of service infrastructure; co-ordination of services; quality control; access routes, eligibility criteria and assessment procedures; and the recognition and role of carers. The analysis investigates the advantages and disadvantages of the English and New Zealand models of social care in terms of 'higher order' outcomes, such as choice and control, citizenship, equity and opportunities to participate in society. For example, cash allowances (including direct payments and individual budgets) are becoming increasingly common in England (replacing services in kind) and have the potential to improve choice and control for older people. At the same time however, this mode of social care can involve carers in additional administrative work. The presentation notes that carers' contributions are recognised in both countries, with a greater emphasis on supporting carers' economic independence in England. Both countries offer home care and personal care, but arguably New Zealand offers more home care than England. However, the move in both countries towards 're-ablement' or 'restorative' services blurs this distinction. Thus

this presentation will show how the comparison of models of social care in England and New Zealand helps identify where there are opportunities for policy makers to learn from each other to improve the delivery and outcomes of social care for older people and their carers.

#### **PD7 878 THE DESIGN OF EXTRA CARE HOUSING: MEETING THE UK NATIONAL STRATEGY FOR HOUSING IN AN AGEING SOCIETY?**

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Introduction Specialised housing models incorporating care services, such as extra care housing schemes, are seen as enabling older people to maintain a high quality of life (QoL) despite increments in frailty that accompany ageing. The success of extra care housing is likely to be dependent on excellent building design. EVOLVE: evaluation of older people's living accommodation is an EPSRC funded study of the relationship between building design and QoL in occupants of extra care housing schemes. This paper reports data drawn from focus groups of extra care housing occupants exploring their views on the architecture and design quality of their schemes. Methods and materials Five extra care schemes in England were purposively sampled. Focus groups were held in each scheme with residents and relatives in order to identify good and bad design features of extra care housing. In total 35 people participated in six focus groups. Focus group transcripts were analysed using content analysis. Results Residents were in agreement that provision of a wet room, a communal lounge and CCTV were good design features as they enabled personal realisation, social inclusion and a feeling of security. Furthermore, residents agreed that a lack of accessibility around the schemes was indicative of bad design. Residents complained about the location and number of lifts, weight of fire doors in corridors and wheelchair users found many thresholds too high. Many, but not all, residents complained about several aspects of the design of their living accommodation, including kitchen layout and accessibility. Other problems included overheating, poor ventilation and the inability to control room temperatures. Conclusions Poor design features impact on the ability of older people to lead active and independent lives. To provide an enabling environment, the design of extra care housing needs to be better aligned with the specific needs of occupants.

#### **PD7 879 ELDERY PROFILE AT HEALTH SERVICE: NECESSITY OF ATTENTION IN RIGHTS PERSPECTIVE. SOCIAL SERVICE AT CLINICAL HOSPITAL OF UNICAMP**

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Introduction:This work was achieved by the experience of Social Service Professionals, which works at Clinical Hospital Campinas University, using as reference the changing in demographic profile of population, principles of Public Health System (SUS) and the Eldery National Policy.Method:The data, which was chosen by the group in order to unify and qualify the attendance, were extracted from interview file.They concern soci- al insertion,social family net (relationships), accessibility to health service, assistance, retirement fund, autonomy and physical activities.The sample was consisted by 36 questionnaires, concerning a implantation period of 6 months. Results: 25% belong to age range from 70-75; 61% are female; 44% are widows; 25% are married; 11% are single; 61% are in elementary school; 22% are illiterate; 61% are retired; 66,5% sleep alone; 83% can walk; 61% do their hygienic skills by their own; 50% receive their retirement at the bank; 66,5% have a care taker; 86% use the public health net; 66,5% are not inserted in family healthy program; 77,5% are sedentaries; 61% have no leisure; 52,5% have no knowledge about the elderly laws.Conclusions: The sample population has low level of education, high level of illiterates, which drives to difficulties in accessing to information. This can cause difficult ties in procedures comprehension, laboratories test results, medication instructions and other issue related to elderly care as:suitable communication, affection and qualified services. The lack of knowledge of Eldery Estateute shows the necessity of information about their rights which leads to be prioritized in day-by-day professional activities. Because of this,this work group have elaborated educative material,have created integrated committees,organized thematic activities about rights, social protection,violence, discrimination, necessary care and special orientation to elderly and their relatives.

#### **PD7 880 THE PERCEPTIONS OF THE ADMINISTRATORS OF NURSING CARE INSTITUTIONS TOWARD ACCEPTING FOREIGN NURSING CARE WORKERS**

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Introduction: In August 2008, Japan opened her nursing care labor market for foreign workers for the first time in history, and 208 young people from Indonesia arrived in Japan. They are currently learning the Japanese language and will be assigned to nursing care institutions in February 2009. The purposes of this nationwide mail survey, funded by the

Mitsubishi Foundation, of both administrators and nursing care workers of nursing care institutions were to explore how they perceive accepting foreign workers in their institutions and to find out what kinds of preparations are needed, if they decide to accept them. Methods and materials: Data were collected in March 2008, and 689 responses from administrators and 609 responses from nursing care workers were obtained, and the response rates were 29.7% and 28.5%, respectively. Results: Preliminary analyses revealed that about 67% of the administrators responded that they would accept foreign workers either actively or reluctantly, while 78% of the nursing care workers responded similarly. Among those administrators who would accept foreign workers, "personality of foreign workers (59%)" was cited as the most important quality, followed by "Japanese proficiency (50%)" and "attitudes toward work (48%)." Moreover, almost all administrators(99%) showed their concerns about hiring foreign workers, and their biggest concern was "the communication with older people, their family members and colleagues (90%)." Then, "the misunderstanding and troubles caused due to different values, living and eating habits and religions (80%)" and a lack of "the Japanese writing and reading abilities (72%)" followed. Conclusions: Many different programs need to be prepared in advance in order to accept foreign nursing care workers. Personal help (e.g., food menu and counseling) could be handled by the accepting institutions, while large-scale programs, including the Japanese educational programs and housing programs, should be handled by prefectural governments.

**PD7 881 POLITICS OF MANAGERIALISM IN ELDERCARE – INDIVIDUAL NEEDS OF THE ELDERLY ARE SUBORDINATED STRUCTURAL GUIDELINES**  
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**Introduction** The function of public home care service is to tend to the daily needs of the elderly concerning individual care of the home and the body when the elderly cannot manage on their own. The Swedish welfare state, and public eldercare of today in particular is under transformation in many respects. Organisational restructuring, such as downsizing, mainly influenced by New Public Management are some of the factors that have affected home care service. The managerial reform which distinguishes the administration of care from the actual care work, involves a special professional group, care managers, whose tasks are concentrated around needs-assessment practices. **Methods and materials** The managerial reform is the applied organising model in the investigated municipality in one of the bigger towns in Northern Sweden. The empirical material consists of qualitative in-depth interviews with six female care managers. The care managers' arguments are analysed discursively with focus on how they describe the needs-assessment procedure and how they refer to the elderly's needs. **Result** The analysis reveals that it is not the individual elderly person's social needs that are focused on to begin with. Repeated reference is made to municipality's finances, and this constitutes the guiding principles applied by care managers. The care managers appeared to comprise a homogenous group since they tended to agree about the guidelines in the needs assessments. **Conclusion** The care managers seem to estrange themselves from the social needs of the elderly when presenting their arguments in the needs assessments. There is often an ambition to find other solutions to the elderly's needs in order to economise with the municipality's resources. In that respect individual needs are subordinated structural organisation, which has consequences for the care given to the elderly people.

**PD7 882 NOVOCERONTS AND THEIR HOUSING PREFERENCES! RESEARCH OF A HOUSING-ASSOCIATION ABOUT LIVING OF ELDERLY PEOPLE TOMORROW**  
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**Introduction:** Many (elderly) people in the Netherlands live in apartments and homes developed by housing-associations. These housing-associations aim to develop adequate housing for people with limited finances. In preparing for the future housings associations are faced with three questions: 1. What are the wishes of the new elderly/ novogeronts, within 10 or 15 years? 2. What does that mean for the way of living with respect to: - quality of housing (type housing, facilities, parking, relationship with caregivers, volunteers, etc.) - quantity: how many houses of which type are needed? 3. How can novogeronts participate in planning, building and living together with caregivers? **Methods:** Methods used are: desk-research, survey and interviews among future novogeronts. Desk-research is executed with national studies on housing of elderly people. In the survey novogeronts of tomorrow (=the current renters of single apartments and family-homes) are interviewed by questionnaires on their preferred housing in the future (10 or 15 years). Topics include: environment in relationship to shopping, transport, home equipment, ways of living together with other novogeronts or caregivers and services. Data-analyses include frequencies, means and cross tabs. In the qualitative study interviews with sub samples of the survey respondents provide depth and context to the survey data (individual and group focus interviews). **Results and conclusions:** Based on these quantitative and qualitative data the researchers develop recommendations to the housing-associations for future planning of housing for the new elderly: quality, quantity and client involvement.

**PD7 883 THE DISTINCT NEEDS OF LONG-TERM CARE RESIDENTS WITH AND WITHOUT SIGNIFICANT COGNITIVE LOSS OVER TIME**  
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The majority of research within long-term care (LTC) has emphasized the physical health of residents, has been cross-sectional in design and has focused almost exclusively on residents with dementia. Few longitudinal studies have followed participants over intervals longer than 1 year. In contrast, the current study set out to examine the experience of LTC residents with and without significant cognitive loss over a 2-year period comparing the psychological well-being of groups over time. Significant Group x Time interaction effects were observed between residents with and without significant cognitive loss in life satisfaction and depressive symptomatology. Results of this study underscore the need for longitudinal measurement in LTC research, the use of multivariate statistical procedures and the need to identify and meet the distinct needs of residents with and without significant cognitive loss.

**PD7 885 A LIFE-COURSE, MIXED METHOD ANALYSIS OF SOCIAL CLASS AND DIABETIC OUTCOMES OF OLDER ADULTS**

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**Background:** We examined disparities in health outcomes by social class among older adults with diabetes. Using trajectory analysis, we aimed to (1) determine differential health decline associated with socioeconomic status; and (2) examine the correlates of this relationship proposed examined in cross-sectional research (insurance trajectories and health behaviors/adherence to the diabetic regimen). **Methods:** Using a mixed-model approach, we examined trajectories 14-year Health and Retirement Study data (n=1903) on health outcomes (self-reported global measure and ADLs/IADLs) with three measures of social class: (a) educational attainment; (b) reported childhood SES; and (c) an income/wealth composite variable. We triangulated qualitative and life history calendar data from a small, community-based sample of older adults with diabetes (n=30) to elaborate on trajectory shapes by measures of social class and to examine the causal pathways underlying relationships between different indicators of socioeconomic status and transitional health outcomes. **Results:** Controlling for race/ethnicity, sex, and age, more education, higher reported socioeconomic status during childhood, and greater income/wealth were, for the most part, significantly negatively associated with sharper rates of health decline among diabetics ( $p<.05$ ). Over time, those without a high school degree had 70% decreased odds of better health than high school graduates. College graduates were 187% more likely than high school graduates to report better health. Triangulation with qualitative and life history calendar data confirmed these three findings, preliminary analysis suggests that while insurance status and health behavior/regimen adherence explains a portion of this difference; however, the association remains controlling for those covariates. More specifically, early life conditions, exposure to stressful life circumstances, and less favorable experiences with the health system, and views of health-promoting activities and resources and "luxuries" each arise as themes related to sharper decline in health.

**PD7 886 DEVELOPING RESEARCH MINDEDNESS WITHIN SOCIAL WORK PRACTICE**

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Current policy acknowledges the significance of 'evidence-based' social work practice (e.g. The Strategy for Older People in Wales, 2008-2013). The often problematic relationship between research and social work has however been well documented. This paper introduces a project aimed at developing research activity amongst social work within two Welsh, local authorities and is linked to an existing piece of research exploring the development of preventative services for older people in Wales. Within this context, it is argued that creative social work practice should be 'research reliant'. This presentation will consider the development and implementation of a model promoting 'research mindedness' amongst social work practitioners. Social workers were brought together within each agency to consider the tasks implicit in their developing 'research mindedness'. Discussion was focussed upon the currently perceived relationship between research and social work and the justifications for research use. Participant observation and staff interviews were used to obtain information regarding initial levels of and attitudes towards research involvement amongst members of the group and to evaluate the project as it progressed. A grounded analysis of findings was undertaken and used to develop the specifics of the 'research-practitioner' model. Difficulties were encountered in terms of implementing the model, particularly in terms of engaging social workers. Practitioners expressed concerns about the additional time needed to participate in research activity. Findings suggest the potential for capacity related issues to significantly influence the level of research engagement amongst social work staff. This paper will evaluate the impact of the model overall (through identifying increases in research activity and understanding). Analysis of findings will support a clearer understanding of the factors that both support and inhibit the development of evidence based social care.

**PD7 887 ADVERSE EFFECTS OF PUBLIC MANAGEMENT IN THE FIELD OF ELDER CARE**

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**Introduction** The starting point in this study is that the knowledge base of elder care doesn't fit easily with either the normative ideals of the public sector, nor with care managers' ambition to develop a professional knowledge base that can be separated from political decision making. Elder care research has shown that political decisions on values, preferences and entitlements are crucial for the effectiveness of interventions and therefore an unavoidable part of elder care practice. Methods and materials In this study public management solutions in Swedish practice are used to develop a theoretical discussion on elder care professionalism based on 1) intervention research that has highlighted the importance of taking the clients' values into account in order for work practices to produce good effects 2) examples of decision making in Swedish elder care on how intervention research is used in practice. Results Policy makers are adjusting management solutions to the organisational ideal of separating political and professional decision making. Precedence can't be given to contextual and ethical logics of care work even though this is documented as effective in intervention research and has high legitimacy among care managers. The normative ideals of the public sector support care managers striving for a professionalism that can be separated from political decision making. This has consequences for the effects of work practices for clients. Conclusion Public management solutions serve care managers' interest of professionalization rather than their ability to use the knowledge base of elder care in order to produce good effects for clients. The political character of professionalization needs to be addressed by methodological developments of elder care research and deliberative approaches to elder care practice.

**PD7 888 CAN THE CONCEPT OF**

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**Introduction:** In the UK, as in many other advanced welfare states, the state mechanisms that formerly operated to provide security in later life are subject to challenge and change. At the same time, achieving security in old age is increasingly seen as an individual responsibility with many different possible outcomes. Many older people who were the beneficiaries of a universalist approach to health and social security across their life course now face markedly different approaches to health and social care provision and pension entitlement as well as forms of social security based around consumerist modes of delivery. This paper will outline the experiences of people with long-term health conditions aged over 60 living in North East England and examine the reasons why they did not claim their full UK state benefit entitlements. Methods: 25 people aged over 60 were purposively sampled from a larger quantitative study on health and welfare benefits from four family doctor practices in Newcastle upon Tyne. Semi-structured interviews were undertaken with participants to establish whether they were receiving their full state benefit entitlement and to assist those who were not. Results: Fourteen of the 25 participants were entitled to, and received, a financial award (median income gain £57, €84, \$101), yet prior to the study none of these participants were aware of their entitlements, nor actively claiming them. Conclusions: We suggest that the apparent lack of take up of entitlements among this group of older people can be conceptualised in terms of a generational 'welfare habitus' which helps explain how the relations of social structure and individual practice accumulate over the lifecourse to influence the ways in which people interact with the welfare system in later life.

**PD7 889 RACIAL AND ETHNIC DISPARITIES BETWEEN RESIDENTS AND CAREGIVERS AND ABUSE AND NEGLECT IN MARYLAND NURSING HOMES**

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**Introduction** Studies of nursing homes have not taken account of the full set of factors that affect the extent to which long-term residents are free from abuse and neglect and are satisfied with their living conditions. Research tends to focus narrowly on only a few circumstances that influence the functioning of nursing homes, such as staff characteristics, type of institution, or kinds of residents, but neglects issues such as race and ethnic disparities between residents and staff. Because many residents are not able to speak effectively for themselves, true rates of abuse and neglect are unknown. Methods and materials We have conducted a pilot study of two nursing homes in Maryland in preparation for a representative, state-wide study to measure the levels of satisfaction and the extent to which residents experience abuse and neglect, and important underlying factors such as race and ethnicity of residents and caregivers. Maryland, compared to other states, has one of the highest proportions of Black nursing home residents. The study involves interviewing nursing home administrators, nurses, nursing assistants, and residents or their family members. We have tested survey instruments and reviewed procedures for conducting the study. Results Pilot study participants have recommended that we: o Obtain endorsements from key state officials to persuade reluctant nursing homes to participate. o Visit each home to explain the study purposes and plans for data

collection. o Design questionnaires to follow the format and measurement units of reports that administrators already complete for state and federal agencies. o Do not offer cash payments or gifts, except, perhaps, for Nursing Assistants. o Report the study results to administrators and staff and conduct training at the nursing home on lessons learned. Conclusions A study of nursing homes, focusing on resident satisfaction, racial disparities and abuse and neglect, is feasible.

**PD7 890 UNDERSTANDING AND INTERPRETING THE SUGGESTED MODELS FOR GROWING OLD IN PUBLIC POLICY: MAKING THE INVISIBLE VISIBLE**

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**Introduction:** Issues of late life are currently subject to debate and policy reform that can impact the shape of what it means to be old in Western society. However, at present, there is a limited understanding of the models that underlie policies on aging and how policy responses contribute to shaping the social expectations of late life. Methods: In this paper we use theoretical approaches derived from cultural studies and object relations (psychodynamic) to examine trends in contemporary policy that are visible and less visible. Drawing on the archaeology and genealogy of Foucault and the unthought and unintended of Bollas, we will clarify some of the steps needed to operationalize the discussion around the hidden or subjugated messages within international, national and local policy discourse on aging. Results: The paper outlines a guideline for approaching policy texts on aging. To better illustrate our method and highlight the more overt and unexpressed messages within policy documents we will provide illustrations of change over time and geographic difference. Within each, we ask ourselves why these shifts are occurring, why now, and reflect on the implications of each. Conclusion: Making the invisible visible through this type of analysis may lead to approaching and understanding the ways in which ageing and notions of late life are shaped and sustained by public policy. It may then lead us toward developing policy models that better reflect the diversity of older people's lived experiences.

**PD7 891 IS LESS SOCIAL PARTICIPATION BY OLDER PEOPLE ASSOCIATED WITH LOWER SUBJECTIVE WELL-BEING?**

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**INTRODUCTION:** In many countries, governments pursue a policy of offering older persons greater opportunities for participation in society, based on the assumption that this will also improve their subjective well-being. Currently, however, it is not known whether this assumption is valid. **METHODS:** In this study we relate the social participation and the subjective well-being aspects of both older and younger persons to an array of social and health-related determinants. Linear structural equation modelling of data of a sample selection of the Dutch population is analysed. The sample size is 5,826, including 847 respondents of 65 years or more. **RESULTS:** In terms of social participation, older people participate less in work, cultural and leisure activities than younger people. When it comes to subjective well-being, we find that older people with physical disabilities are more likely to lag behind in perceived physical health than in mental health and happiness. In a multivariate model relating objective participation to subjective health and happiness, correlations are much weaker than expected. We find that the severity of physical disability, in interaction with age groups, plays a central mediating role in explaining the associations. **CONCLUSION:** It is striking to find that social participation, perceived health and happiness are much less closely related than is often assumed. Their determinants differ widely in nature and strength. The empirical model leads to rejection of the hypothesis that more participation by older people is associated with higher subjective well-being.

**PD7 892 UNDERSTANDING THE EVERYDAY EXPERIENCES OF LOSS IN LATE LIFE**

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**Intro:** Normative ideas of age and stage-based transitions are inherent within research and thinking about aging. However, while larger conceptual and practice models take experiences such as decline for granted, they reflect less on the ways in which older people may interpret and subjectively interpret decline. In particular, how issues of loss and depression may impact older people's late life transitions. Most research tends to focus on acute loss and depression rather than the ways in which loss and depression may be experienced across the lifecourse and thereby integrated into older people's assessments of their lives. **Method:** This poster discusses the theme of loss identified within data from the Late Life Transitions Project; a Social Sciences and Humanities Research Council funded research project. This poster reflects on 30 qualitative interviews conducted with community-residing seniors from diverse social backgrounds in Montreal. Data were collected and analyzed using narrative analysis with the intention of better understanding the types of loss that older adults encounter on a daily basis. **Results:** Findings presented are

related to the types of loss, responses/reactions, and coping strategies used to integrate loss into experiences of aging. Our results suggest that older people's everyday experience of loss center on the loss of spouse, shifting identities and cognitive decline. Narrative excerpts will be used to illustrate the discussions made by older people as they situate themselves, and address their everyday experience of loss in later life. Conclusions: Such discussions inform professional understandings of loss in late life, and may provide guidance to plan interventions that are more relevant to older people's experiences. More importantly, they frame experiences of loss and decline along the normative ideas of age and stage based transitions, giving us better insight on older people's experiences in late life.

**PD7 893 HOW DO ELDERLY PEOPLE LIVING AT HOME PERCEIVE ASSISTANCE IN MEDICINE MANAGEMENT?**

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Introduction. Aging is frequently accompanied by chronic conditions and multimorbidity, resulting in higher use of medication. Furthermore, a majority of elderly persons live at home, and often have cognitive, visual or physical limitations that may decrease their ability to take medicines accurately, which makes taking prescribed drugs a complex task. The aim of this study was to describe the elderly person's perception in achieving assistance with their medication, and how this influences their autonomy. Methods and materials. This qualitative study involved audio-taped interviews with 25 persons aged 85+ years. Inclusion criteria were: being cognitively intact (Mini-Mental State Examination >23), living at home, and taking medicines regularly. Data was collected in Stockholm, Sweden, in May-June 2005, and analysed using content analysis. Results. Findings revealed that most participants who received help with their medication management were very pleased with that help. However, lack of trust in the medical service, was also described by some of the elderly persons. This distrust lead them to not follow their medical treatments. The most important components for older people were to have good cognitive ability, to be independent, and to get support with their medicines from a close person as a back up. Conclusion. The results indicate that even though a majority of the participants were very pleased with their medicine management, there was, however, a need for assistance in delivering the medicines to their homes. To observe the life of an older person as a whole is important in nursing care, so that the person's behaviour can be understood, since how older people manage to handle their medicines may have an impact on their autonomy and on health-care resource utilisation. Without proper medication many of them would not function well and would not be able to remain at home.

**PD7 894 SOCIAL CAPITAL AMONG THE ELDERLY: IMPLICATIONS FOR PHYSICAL AND MENTAL HEALTH**

J. NORSTRAND\* (Boston College, Chestnut Hill, United States of America)  
A. GLICKSMAN

Introduction: The importance of aging in place is becoming increasingly acknowledged as growing number of people reach old age. However, we still have limited understanding of how the social environment impacts the elderly. Goal: This paper examined the relation of individual level social capital, defined as the perception of neighborhood, to health outcomes, (self-rated health and depressive symptomatology). Method: Community health survey collected in 2006 by the Public Health Management Corporation provided a sample of 3219 elderly (60 years and over) living in Philadelphia and 4 surrounding counties. Factor analysis and summary scores provided three social capital constructs (neighborhood, social networks and participation). Step-wise linear regression modeling was carried out with socio-demographic predictors (age, sex, education, minority status) in first step and three social capital constructs in the second step. Results: Neighborhood and participation social capital constructs were unique predictors of physical health outcomes whereas neighborhood and social network social capital constructs were unique predictors of mental health outcomes even when socio-demographic indicators were accounted for. Regression models explained 13% and 9% of the variance for both physical and mental health outcomes, respectively. Conclusions: Findings suggested that key aspects of social capital were important for both physical and mental health among the elderly. As little has been done looking at social capital among older adults, this study furthers our understanding of how older persons relate to their social environment in terms of physical and mental health.

**PD7 895 WHY IS EVERYONE AT THIS CLINIC AGED 30 TO 40? USING LIFE COURSE PERSPECTIVE TO UNDERSTAND HOMELESSNESS**

A. OUDSHOORN\* (The University of Western Ontario, London, Canada)  
C. WARD-GRIFFIN(1), H. BERMAN(1), C. FORCHUK(1), B. POLAND(2) - (1) The University of Western Ontario (London, Canada); (2) University of Toronto (Toronto, Canada)

Introduction: In a study of a homeless clinic in Ontario, Canada we were intrigued to find that a strikingly significant majority of the homeless clients were aged 30 to 40. In this presentation we will use Elder's Life Course Perspective to help understand the observed phenomenon. This observation challenges the notion that homelessness is entirely of one's

own making, otherwise the age demographics of homeless clients would mirror the general population, and points more towards what Elder terms Institutionalized Pathways. Methods: In this study we conducted a critical ethnography of a community health clinic for people who are experiencing homelessness. To do so, we utilized multiple, concurrent methods, including in-depth interviews with homeless clients of the centre. These interviews, based on a semi-structured, narrative-focused design, provided us with insight into the life histories of homeless persons from a variety of backgrounds. Findings: Elder's Life Course Perspective involves three components of 'Institutionalized pathways and social aggregates', 'Personal life course', and 'Developmental or aging trajectory'. Although 'Personal life course' played a role in individuals' pathways into homelessness, the narratives that homeless participants told shed much more light on oppressive structures. Particularly, what Elder terms 'Institutionalized pathways' involved stagnant social assistance rates, national housing policy changes, a service gap after the age of 25, and changes to the mental health care system. In this presentation we will explore these Institutionalized pathways and suggest an explanation for the limited age demographic of homeless persons in Ontario, Canada that involves the intersectionality of other factors beyond biological age. Conclusion: Particularly, Life Course Perspective offers a means to conceptualize homelessness in a way that involves an understanding of oppressive social structures, in addition to personal agency.

**PD7 896 ELDER ABUSE: A CANADIAN APPROACH TO MEASURING PREVALENCE**

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G. DAOUST(1) - (1) Faculty of Social Work, University of Calgary (Canada)

A recent Expert Roundtable on Elder Abuse in Canada identified the critical need to collect data on the prevalence and incidence of elder abuse to inform policy development. International estimates of elder abuse vary; Canadian data is almost non-existent. The lack of empirically tested standardized instruments is a critical impediment to this aim. This presentation discusses the development and validation of The Elder Abuse Questionnaire. Methods: Fifteen focus groups which provided conceptualizations of elder abuse from less frequently heard older adults and care providers and a survey of published instruments served as a foundation for developing a culturally-appropriate instrument that includes a broad range of types of abuse. The pilot instrument was assessed by community residing older adults (n=50) with and without victimization histories in group and individual interviews. Test-retest reliability of the instrument is currently being assessed by calculating intraclass correlation coefficients for each of the items at two week intervals with questionnaires administered to older adults (n=125) in four urban centres across Alberta, Canada. Internal consistency reliability and homogeneity of the questionnaire will be calculated for each of the major forms of abuse with Cronbach's alpha. Criterion validity is assessed through Kappa coefficients comparing clinical assessment for the presence or absence of each of the major domains of elder abuse with the questionnaire self-report of abused older adults (n=50). This sample is also used to assess construct validity by comparing the presence or absence of each of the major categories of abuse on instrument to the Vulnerability to Abuse Screening Scale (VASS) using a two-way Anova. Results: Psychometric properties of the instrument will be presented. Conclusion: This instrument is intended to provide population-based estimates of the prevalence and determinants of elder abuse to inform policy, service and research.

**PD7 897 SOCIAL DETERMINANTS OF OLDER ADULTS KNOWLEDGE OF COMMUNITY SUPPORT SERVICES**

M. DENTON\* (McMaster University, Hamilton, ON, Canada)  
T. JOSEPH(1), J. PLOEG(2), J. LILLIE(1), B. HUTCHINSON(2), N. AKHTAR-DANESH(2), K. BRAZIL(2), J. MILLEN PLENDERLEITH(2) - (1) University of Guelph (Guelph, Canada); (2) McMaster University (Hamilton, Canada)

Introduction: Community Support Services (CSSs) have been developed in Canada and other Western nations to enable persons coping with health or social problems to live in their own homes. This paper addresses to what extent is knowledge of CSSs structured by the social determinants of health. Methods: In a telephone interview, 1152 older adults were read a series of vignettes and asked if they were able to identify a CSS they may turn to in each situation. Binary logistic regression was used to determine factors related to knowledge of CSSs. Results: Significant determinants of knowledge of CSSs include: age, with older age groups having slightly less knowledge of CSSs; gender, with females more likely to have knowledge of CSS; and income, with higher income groups having a greater likelihood of knowledge than lowest income levels. Perceived social support increases the odds of having knowledge of CSSs. Both membership in organizations and number of information sources that a person could name are significant predictors of the odds of having knowledge of CSSs. Conclusion: Our results confirm and update the literature, especially with regard to gender. Further, these research results underscore the breadth and depth of the social determinants of health as important indicators of people's differential ability to exercise some control over the health futures of themselves and the people they care for. Thus, in a health promotion model where good health is more than the absence of disease, what matters is the ability to marshal resources to maintain independence in an interdependent social support network. People who have scored highly on the social

determinants of health are best positioned to be able to independently call on CSSs when in need.

**PD7 898 DEVELOPMENT OF PROTOTYPE RESIDENCE UNITS OF FEE-CHARGED WELFARE HOUSING FOR THE AGED IN KOREA**

T. KIM\* (Major of Architectural design, Jeju-Shi, Jeju Special self-Governing Province, Republic of Korea)

This study brings a focus on the development of prototype residence units of fee-charged welfare housing for the aged through a comparative analysis in Korea and Japan. Accordingly, its purpose is to develop the prototype residence units on the basis of fundamental data collected from the plan of fee-charged welfare housing for the aged in Korea in terms of its construction scale and functional features. As for data from Japan, architectural plans or brochures were collected from 32 out of 100 institutions that had been selected out of 270 fee-charged welfare housing institutions for the aged in Japan. As for data from Korea, plans from 7 out of 8 institutions were analyzed. Its data and analysis are as follows. First, the area of each section of an institution was calculated after its scale was adjusted in order to have a more accurate analysis on the scale of each section of the institution. And the feasibility of data was examined by comparing the area with the gross floor area stated in the publication of Japan Fee-Charged Housing for the Aged. The analysis of data is composed of the appropriate area of a housing unit, composition of its space, comparison of its rooms and study on its appropriate area. According to the result of the analysis, Prototype A ( $50m^2$ ) and Prototype B ( $65m^2$ ) were recommended in consideration of its appropriateness, spatial function, and circumstances in Korea. Type A ( $50m^2$ ) has a bedroom, kitchen, dining room and bathroom designed for one aged couple or one aged person. Type B ( $65m^2$ ), in contrast to Type A, is spacious and composed of 2LDK that can be converted appropriately. And also we will propose amendment of welfare law for the aging in Korea to be spread prototype Residence Units.

**PD7 899 FEARS AND FEARS COME TRUE: THE EXPERIENCES OF OLDER CARE RECIPIENTS OF LIVE-IN FOREIGN HOME CARE AND THEIR FAMILY MEMBERS**

L. AYALON\* (Bar Ilan, Ramat Gan, Israel)

**OBJECTIVES:** Foreign home care services provided to frail older adults by individuals from the developing world is a global phenomenon. This study evaluated the challenges associated with live-in foreign home care from the perspective of older care recipients and their family members. **METHODS:** Qualitative interviews with twenty-three family members and seven older care recipients. Interviews were analyzed thematically. **RESULTS:** Three main themes were identified. The first theme concerned the intense fears associated with witnessing the decline of the older care recipient and the subsequent employment of a foreign home care worker. The second theme concerned the actual negative experiences within this caregiving setting, whereas the third theme concerned ways family members and older care recipients coped with these challenging experiences. **CONCLUSIONS:** A major challenge to this caregiving arrangement is the establishment of trust. Yet, many experienced violations of trust that resulted in abuse and neglect, which further intensify fears and concerns about this caregiving arrangement. The same coping methods used to maintain this arrangement, despite fears and concerns are the ones responsible for maintaining the older care recipient in an abusive situation.

**Wednesday July 8th**

**Track A – Biological Sciences**

**PA8 001 NEURONO-GLIAL LIPOFUSCINO- AND CEROIDO-LYSIS - NEW BRAIN LONGEVITY WAYS IN ANTI-AGING MEDICINE**

D. RIGA\* (Al Obregia Clinical Hospital of Psychiatry, Bucharest 8, Romania)

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Introduction Lipopigments (LPs) - lipofuscin and ceroid - the main hallmark of brain vulnerability, chronic distress, senescence and connected pathology, progressively accumulate during ontogenesis, in both neurons and glia of mammalian brains. Therefore, neuronal and glial lipofuscino- and cerido-lysis, followed by glial LPs taking over, processing and transport, with capillary elimination can represent an efficient anti-aging and regenerative therapy. Methods Different rat brain regions of CO (control old) and TO (treated old) groups were investigated by qualitative and quantitative microscopy (light, fluorescence and electron microscopy). TO group received for 2 months a specific and original (patented) anti-aging and rejuvenation therapy (AA-R T), with synergistic neurometabolic, antioxidative, lipofuscino(cerido)-lytic, neurovascular and nootropic actions. Results In CO group, neurons and all types of glia (astrocytes, oligodendrocytes,

but especially microglia) are filled with important LPs storages, having regional specificity. Thus, the glial paradox appears in brain senescence and aged-related pathology. Neuroglia - mitotic cells (having moderate-to-high rate of divisions) are overloaded with LPs conglomerates, up to 90% (characteristic of neurons - post-mitotic cells), other than phagocytic-degraded neuronal apoptotic bodies. In this way, the glial systems play an important role in the collection of neuronal LPs. Owing to the transporting properties, and migration capacity of microglia, glial cells deposit the LPs clusters in pericapillary areas. These natural purge mechanisms are activated and completed by AA-R T long term administration. In addition, neuronal and glial LPs suffer qualitative (disruption and dissolution) and quantitative (reduction) changes, with regional peculiarity. Moreover, therapeutic-activated glia (particularly microglia) turn into brain garbage (LPs) collectors, processors and transporters, with final elimination from endothelial cells into capillary lumen. Conclusion AA-R T represents a new prospect in the deceleration of normal and pathological cerebral aging, with increase of neuronal health and longevity.

**PA8 002 BRAIN AND SPLEEN OF LONG-LIVING MICE SHOW SIMILAR PROTEIN OXIDATION MARKERS TO THOSE IN ADULTS**

M. DE LA FUENTE\* (Hospital Universitario La Paz, Madrid, Spain)

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**Introduction:** The aging process is result of an oxidant/antioxidant imbalance and accumulation of oxidative end-products that leads to functional loss. Thus, aging is accompanied by impairment of the nervous and immune systems, as well as of their bidirectional communication. This could explain the loss of homeostasis, and the age-related morbidity and mortality. In this context, it is of great interest to study the oxidation levels in long-living subjects, to understand why those individuals achieve very old age in good health. **Methods:** Adult ( $28\pm 4$  weeks), old ( $76\pm 4$  weeks) and very long-living ( $128\pm 4$  weeks) Balb/c female mice were used. They were sacrificed, and brain and spleen were removed. Specific markers of protein oxidation, lipoxidation and glycoxidation, namely glutamic semialdehyde (GSA), aminoacidic semialdehyde (AASA), carboxyethyl-lysine (CEL), carboxymethyl-lysine (CML) and malondialdehyde-lysine (MDAL), were measured by gas chromatography-mass spectrometry. **Results:** The results showed similar protein oxidation in both brain and spleen from adult and long-living animals, with the exception of AASA in proteins from brain, which was decreased in the long-living as compared to adults. Conversely, all oxidative markers in brain were increased in the old age with the exception of AASA. These changes with age were less marked in spleen, where all protein alteration markers showed an increasing trend, which was significant only in the case of MDAL. Conclusion: Controlled protein oxidation in brain and spleen, leading to preserved function, could be a key mechanism for the achievement of healthy aging and longevity. Accumulation of oxidized proteins over time occurs earlier in brain than in spleen, which might show that the nervous-immune impairment that takes place during ageing could begin in the brain. Support: MICINN (BFU2008-04336) and UCM Research Group (91037ENEROINN) grants. RETICEF (RD06/0013/0003).

**PA8 003 CHANGES IN CHYMOTRYPSIN- AND CASPASE-LIKE ACTIVITIES OF THE 20S PROTEASOME WITH AGING AND LONGEVITY**

M. DE LA FUENTE\* (Complutense University of Madrid, Madrid, Spain)

S. RATTAN(1), L. ARRANZ(2) - (1) Aarhus University. Danish Centre for Molecular Gerontology (Aarhus, Denmark); (2) Complutense University (Madrid, Spain)

Damage to macromolecules that occurs with aging is corroborated by accumulation of oxidative end-products, such as oxidized proteins, which leads to functional loss. In addition to increased protein oxidation over time, decreased protein turnover could also take place and contribute to this accumulation of oxidatively modified proteins. The 20S proteasome is the complex in charge to actively recognize and degrade these products. However, controversial results have been described on the changes in its activity with age. Moreover, it is of great interest to study the 20S proteasome activity in long-living subjects, for understanding why those individuals achieve very old age. **Methods:** Balb/c female mice of different ages: adult (30 weeks), old (80 weeks) and long-living (130 weeks) animals, were used. They were sacrificed, and heart, liver, lungs, kidneys, axillary nodes and peritoneal leucocytes were obtained. Chymotrypsin- and caspase-like activities of the 20S proteasome were investigated by enzymatic fluorometric kinetic assay. The results demonstrate better preservation of both enzymatic activities in long-living than in old subjects, with respect to the adults. Changes in old age show interesting particularities depending on the organ or even the enzymatic activity considered. Whilst the activity of the 20S proteasome decreases in heart and lungs, other localizations show no changes (axillary nodes) or even increased function (liver, peritoneal leucocytes). In kidney, chymotrypsin-like activity decreases with age, whereas caspase-like activity increases. Conclusion: The aging process is not linked to a general decrease in the 20S proteasome activity. Nevertheless, the changes in this activity could contribute to the accumulation of oxidized proteins in certain localizations. Moreover, the maintenance of adult-like activity of the 20S proteasome seems to be a marker for achievement of healthy

aging and longevity. Funding: MICINN(BFU2008-04336), UCM Research Group(910379ENEROINN), RETICEF(RD06/0013/0003).

**PA8 004 THE LONGEVITY OF SPONTANEOUS DWARF RAT (SDR) AND A POSSIBILITY OF A NEW ANIMAL MODEL FOR AGING RESEARCH**

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(2) University of Human Arts and Science (Saitama, Japan)

Spontaneous Dwarf Rat (SDR), a dwarf rat strain derived from Sprague-Dawley (SD) rats, is an experimental model for pituitary dwarfism and has growth hormone (GH) deficiency. The body weight of SDRs reduces to one-third that of normal SD rats. There are a few articles that dwarf mice (e.g. Snell and Ames mouse) have a tendency to prolong their lifespan. In order to reveal the relationship between the dwarf rat and longevity, we investigated lifespan, various hormones associated with metabolism and age-related diseases in SDRs. The mean lifespan of SDRs were 29.3 ± 3.3 months in male and 26.8 ± 5.3 months in female. They were increased by 20-40% in males and 10-20% in females, comparing to the reported longevity data of SD rats. The concentration of GH was significantly lower in SDRs than in SD rats. Both IGF-1 and insulin levels were also decreased compared to SD rats. Moreover, the concentration of thyroxin showed 70% reduction from SD rat level. Comparing to the reported pathological data of SD rats, the pathology of SDRs was characteristic in pituitary and mammary tumor decreases, severe chronic nephropathy decrease, and incisor malocclusion and cerebral hemorrhage appearances. The greater part of chronic nephropathy cases was of mild degree. Our findings suggest that changes of these metabolism-associated hormone levels and decrease of age-related diseases may prolong the lifespan of SDRs. Therefore, SDRs, with different characters in endocrinology, longevity, and pathology from those of SD rats, are considered to have a possibility of a new animal model for an aging research.

**PA8 005 COMPARISONS OF CHARACTERISTICS OF "DELAYER" AND "SURVIVOR" AMONG CHINESE OCTOGENARIANS IN TAIWAN**

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Introduction Longevity studies used to classified older people into "escaper", "delayer" and "survivor", which represent different characteristics in the follow-up. Similar studies in Taiwan are lacking. The main purpose of this study is to compare clinical characteristics of Chinese octogenarians and to evaluate clinical outcomes among them in one-year follow-up. Methods and Materials Residents aged over 80 years of Banciao Veterans Care Home were invited for study and were enrolled when they were fully consented. Inter-RAI Minimum Data Set Nursing Home 2.0 Chinese version (MDS-NH 2.0) was implemented for all participants. "Delayer" and "survivor" were defined according to their disease history. Physical functional status, cognition and mood were compared between both groups. Clinical outcomes (mortality, hospital admissions and emergency department visit) were compared. Results In total, 336 residents were enrolled (mean age= 84.4 ±4.0 years, all males) for study. Overall, 108 participants (32.1%) were delayers and 228 (67.9%) were survivors. Delayers were more physically independent than survivors (96.3% vs. 88.2%, P=0.15). However, comparisons of age, cognition (evaluated by mini-mental status examination) and depressive moods (evaluated by geriatric depression score) between groups were similar. In clinical outcome evaluation, delayers were less likely to be hospitalized (0.3±0.04 vs. 0.43±0.03, P=0.02). However, the comparisons between one-year mortality and emergency department visit were similar. Conclusions Among Chinese octogenarians in a veterans care home in Taiwan, delayers were more physical independent and less likely to be hospitalized in 12-month follow-up. However, mental status, mortality and emergency department utilization were similar. A long-term cohort observation study is needed to clarify the roles of delayers and survivors in longevity study.

**PA8 006 PARENTAL LONGEVITY INFLUENCES ON MORTALITY TRAJECTORIES IN HUMANS**

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Introduction. Positive effects of paternal and maternal longevity on offspring's lifespan are well established. However little is known about effects of parental longevity on the shape of offspring's mortality trajectories. Methods and materials. To address this problem, we studied familial transmission of human lifespan from parents to offspring using particularly reliable and complete data on European aristocratic families for extinct birth cohorts (born 1800-1880). Mortality of four categories of offspring was analyzed: (1) having long-lived parents (both parents lived 80 years or more); (2) having short-lived parents; (3) having long-lived father and (4) having long-lived mother. The cutpoint (80 years) was selected based on our previous results showing significantly higher heritability of lifespan after

parental age equal to 80 years. Parameters of Gompertz model were calculated for adults survived to age 40 years and over using Stata streg procedure. Results. Mortality in all groups of offspring demonstrates a convergence at older ages for both sexes. The intercept parameter of Gompertz model is increasing and the alpha parameter (actuarial aging rate) is decreasing with decreasing longevity of parents. The lowest intercept parameter and the highest actuarial aging rates are observed for sons and daughters of long-lived parents. Offspring with one long-lived mother and one long-lived father have intermediate values of intercept and slope Gompertzian parameters. Conclusion. Although children of long-lived parents have lower mortality at younger ages, their actuarial aging rate is consistently higher compared to the children of short-lived parents. Thus, the familial advantage in lifespan practically disappears at ages over 100.

**PA8 007 SOME BIO-GERONTOLOGICAL PECULIARITIES OF LONG-LIVERS IN AJARA REGION OF GEORGIA**

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The phenomenon of longevity is greatly dependent upon the natural and social environment rather than being only genetically determined. Therefore, the investigation of the issue requires a comprehensive approach. At present, under way is an energetic research to identify age biomarkers of different types, to study age-related diseases, etc. Long-livers over 90 years of age in Ajara region (Southern Georgia), 60 persons in total, of whom 47 were women, were studied. Investigated were the long-livers' genealogy, gender ratio and reproductive capacity, also studied was the spread of blood group antigenic markers in long-livers. According to literary data, the frequency of the ABO system marker genes is definitely associated with the age dynamics. The first-group carriers are less liable to dangerous diseases currently spread in the world. An experiment to reveal an association of blood group antigens with longevity was carried out. Blood group antigens used to be studied by means of an immunochemical technique. Incidence of the said antigens in long-livers was compared to the respective indicator in the Adjarian population. It can be said that the longevity of the people under study is genetically conditioned, since 76% of them had one long-liver (91 year of age and over) parent. The genealogical method established that the absolute majority of the investigated long-livers are from numerous families and that about third of them are the fourth child of the family. All the studied had a stable partner during a long-term and happy matrimony. The most stressful event in their lives they consider the decease of the spouse. Irrespective of the fact that both very early and late marriages are observable in the long-livers, 66% of them created a family at the age between 18 to 30 years of age. Given local traditions, it implies the first sexual intercourse, especially in women. Notwithstanding the fact that the region is traditionally known for families having many children, 52% of the studied long-livers have less than three children, 80% of which are between 60 to 77 years of age. Particularly noteworthy is that the last delivery in long-living women is fixed at the age over 40 years. The incidence of phenotypic variants in blood group antigens in long-livers differs from the indicator generally found in the population; in long-livers, prevail the individuals – carriers of blood group O(I) -56% A(II) 36%; in the general population the persons – carriers of the said blood group constitute – O(I) -47%, A(II) -26%. The investigated group of long-livers lives in a relatively safe environment though under rather hard social conditions. They are distinguished for cheerfulness, are joyful and well-disposed. It can be said that their longevity to a great extent is conditioned by the hereditary factor; a favorable effect is also rendered by the presence of a stable partner and family environment, as well as the reproductive period length. As regards the frequency/incidence of blood group antigens, we can, based on the study data, conclude that the O(I) and A(II) blood antigens are in a definite correlation with longevity.

**PA8 008 METHYLATION STATUS AND AGEING; FINDINGS FROM THE BELFAST ELDERLY LONGITUDINAL FREE-LIVING AGEING STUDY (BELFAST)**

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Introduction: DNA methylation helps stabilise chromatin and silences genes, whereas hypomethylation may lead to genomic instability and enhanced gene promoter activity. Because epigenetic alterations in gene expression, that do not involve coding sequence modifications, can accumulate with age and are associated with some age-related disorders, including cancer, we assessed the degree of global methylation and methylation of the P16 suppressor gene in healthy octo/nonagenarians from the Belfast Elderly Longitudinal Free-living Ageing Study (BELFAST). Methods: We used bisulfite treatment of DNA and simultaneous PCR of multiple DNA repetitive elements, as a measure of global methylation (Line 1) and methylation of P16, a tumour suppressor gene, in DNA separated from 40 subjects (70- 99 years), from the BELFAST study and compared these with 36 patients (70-89 years) with leukaemia. Results: There was almost 90% global methylation for octo/nonagenarian subjects, with no difference between subjects aged 80-90 years and 90-99 years, nor between the sexes with a good degree of homogeneity. Comparative 70 year old patients with leukaemia had =/ <70% global methylation. By contrast P16, the tumour repressor gene, was only 2% methylated in BELFAST

octo/nonagenarians compared with 12% in older leukaemic subjects. Cluster analysis separated BELFAST octo/nonagenarians completely from leukaemic subjects. Conclusions: Octo/nonagenarians in the BELFAST study showed a high degree of global methylation suggesting genomic stability. The lower methylation of P16 could suggest a more active tumour suppressor role in the 'old old' subjects. Understanding better the signatures in global and candidate gene methylation status may help guide us to pathways underlying the mechanisms for good quality ageing and longevity.

#### **PA8 009 BENEFICIAL METABOLIC PROFILE MARKS FAMILIAL LONGEVITY AT MIDDLE AGE**

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Introduction-Research in model organisms has identified conserved pathways, most notably insulin/IGF-1 signaling, whose modulation can dramatically extend lifespan, but their relevance for human healthy longevity is controversial. We aim to identify early beneficial features of human longevity. Methods and Materials-Research on human longevity is difficult because so few people reach old age, and when they do, proper controls are lacking. We therefore designed the Leiden Longevity Study, in which we recruited 420 Caucasian families together constituting a cohort of 991 nonagenarian siblings with exceptional familial longevity, 1365 of their offspring, and 621 of the partners thereof. Results-Compared to the group of their partners, the offspring of nonagenarian siblings displayed, already at middle age, a lower prevalence of myocardial infarction (2.4% vs 4.1%, p=0.03), hypertension (23.0% vs 27.5%, p=0.01), diabetes mellitus (4.4% vs 7.6%, p=0.004), use of cardio-vascular medication (23.0% vs 28.9%, p=0.003) as well as lower blood pressure (139.1 vs 144.5 mmHg, p=0.04), lower serum levels of glucose (p<0.001), insulin (p=0.03), LDL- over HDL-cholesterol ratio (p=0.02) and triglycerides (p=0.03) and higher homeostasis model assessment of insulin sensitivity (0.79 versus 0.65, p=0.01). Serum levels of free triiodothyronine (fT3) were also lower in the group of offspring compared to partners (p=0.04), but not the ratio of insulin-like growth factor-1 over insulin-like growth factor binding protein 3 (IGF-1/IGFBP3). Conclusions-We identified insulin sensitivity but not IGF-1 signaling as an early beneficial feature of human familial longevity. Moreover, our data hint at a role of the thyrotroph axis in its regulation.

#### **PA8 010 G-2548A AND G19A LEP, AS WELL AS K109R, Q223R, K656N LEPR POLYMORPHISMS ARE ASSOCIATED WITH HEALTHY EXTREME LONGEVITY**

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Introduction: The length of life depends on the rate of aging and on the presence or absence of age-related diseases, such as cardiovascular disease, type 2 diabetes, and cancer. The risk of their development depends on multiple environmental and genetic factors, including possession of certain variants of various genes. Leptin (LEP) and LEP receptor (LEPR) co-regulate lipid and glucose metabolism. We hypothesize that certain LEP and LEPR polymorphisms might influence health and longevity. Materials and methods: Genomic DNA was isolated from blood mononuclear cells of 148 centenarians, as well as of 414 young controls and of 209 myocardial infarction controls. Genotypes of the G2548A and G19A LEP, as well as K109R, Q223R and K656N in LEPR functional polymorphisms were assessed by RFLP method and correlated with clinical data (non-parametric Mann-Whitney U test). Results: Centenarians possessing the AA genotype of the Q223R LEPR polymorphism had a significantly lower fasting glucose level than the GG and AG+GG carriers (p=0.006 and p=0.0016, respectively). In addition, centenarian carriers of the K656N GG and GG+GC variants had significantly higher HDL level than CC genotype carriers (p=0.03 and p=0.043, respectively). The GG genotype of the G-2548A LEP promoter polymorphism was significantly more frequent (p=0.025), while AA genotype of the K109R LEPR polymorphism was significantly less frequent (p=0.049) in centenarians compared to young controls. We also found that GG and GA genotypes of the G-2548A and AA genotype of the G19A LEP polymorphisms were significantly more frequent (p=0.048), while AA genotype of the K109R LEPR polymorphism was significantly less frequent (p=0.047) in centenarians than in young myocardial infarction sufferers. Conclusion: We conclude that certain variants of LEP and LEPR might influence the length of life, and have an impact on the risk of myocardial infarction.

#### **PA8 011 DETECTING SENESCENCE IN ARCTICA ISLANDICA: THE OLDEST SPECIES KNOWN TO SCIENCE**

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Introduction The ocean quahog, *Arctica islandica* is not just the oldest living bivalve, it is also the oldest non-modular, non-colonial animal known to science. With the maximum

life span potential ever increasing and currently standing in excess of 400 years the clam has recently gained interest as a potential model organism for ageing research. The biology, demography and pathology of *A. islandica* is being investigated as part of an ongoing research project which involves a collaboration between marine biologists, demographers and biogerontologists. The aim of this work is to develop the species as a novel model species for ageing research. Although it has gained recent attention from ageing researchers the type of senescence experienced by the species is still to be determined. We will discuss what is known about the biology of *A. islandica*, observed age-associated changes and previous ageing research undertaken on the species and discuss future directions for ageing research with *A. islandica*. Methods Through a combination of approaches including investigating age associated changes on the histology of organ systems, analysis of cellular proliferation rates, resistance of cell cultures to stress, ability to establish cell cultures and demographic analysis of discrete populations we will investigate ageing in *A. islandica*. Results Whilst the investigation is on going preliminary results suggest that reproduction does not decline with age, in fact it increases with the size of the animal which demonstrates indeterminate growth. Demographic analysis provides no evidence of increasing mortality rates with age. Conclusion The type of senescence experienced by *A. islandica* is still to be confirmed. Early results suggest it is a candidate for negative senescence as reproduction appears to increase with size, and therefore age. Investigations into age associated changes in functionality are on going and will be instrumental in determining the type of senescence experienced.

#### **PA8 012 ENHANCED GLYCOGENESIS IS CRITICALLY INVOLVED IN SENESCENCE**

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The responses of glycogenesis to physiological or environmental stimuli have often been implicated in age-related diseases. However, it is not clear whether the glycogenesis is directly related to aging process. In the present study, we investigated the involvement of enhanced glycogenesis in cellular senescence and its relevance to organismal aging process. Glycogen accumulation, glycogen synthase (GS) activation, and glycogen synthase kinase 3 (GSK3) inactivation commonly occurred in diverse cellular senescence models, including the liver tissues of aging F344 rats. Subcytotoxic concentrations of GSK3 inhibitors (SB415286 and LiCl) were sufficient to induce cellular senescence with increased glycogenesis. Interestingly, the SB415286-induced glycogenesis was irreversible, as were increased levels of reactive oxygen species and gain of senescence phenotypes. GSK3 inactivation using siRNA and dominant negative GSK3beta mutant (K85A) also effectively induced senescence phenotypes, and GS knockdown significantly attenuated the stress-induced senescence phenotypes. Taken together, these results clearly demonstrate that augmented glycogenesis is not only common, but also directly linked to cellular senescence and aging, suggesting GSK3 and GS as novel modulators of senescence, and providing new insight into the metabolic backgrounds of aging and aging-related pathogenesis.

#### **PA8 013 AGING ALTERS THE ABILITY OF THE SKIN TO RESIST TO PRESSURE-INDUCED ISCHEMIA IN HUMANS**

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Introduction: The aged skin is particularly exposed to pressure ulcers in contrast to healthy skin that is protected from pressure-induced ischemic damage because of the presence of pressure-induced vasodilation (PIV) that relies on small nerve fibers and endothelial function. Since aging alters both nervous and vascular systems, the aim of this study was to test the ability or inability of the cutaneous blood flow to adapt to local applied pressure by assessing PIV in non-neuropathic and neuropathic older subjects compared to young subjects. Methods: We studied 34 subjects divided according to their age (20-35 or 60-75 years) and the presence of peripheral neuropathy diagnosed by the neuropathy symptom scores. Laser Doppler flowmetry was used to evaluate the cutaneous responses to local pressure application at 11.1 Pa/s (PIV), acetylcholine and local heating (44°C). Quantitative sensory tests were used to evaluate the sensory nerve fiber function. Results: The non neuropathic older subjects had an impaired PIV compared to young subjects and the neuropathic older subjects were totally deprived of PIV, leading to an early pressure-induced cutaneous ischemia. The non neuropathic older subjects had a functional abnormality of small sensory fibers, whereas the neuropathic older subjects had a severe sensory deficit affecting both small and large sensory fiber function. The cutaneous endothelium-dependent responses to acetylcholine and local heating were equally reduced in both groups of older subjects, showing a comparable endothelial dysfunction. Conclusions: The ability of the skin to adapt to localized pressure is impaired in older subjects and is related to the severity of the sensory fiber dysfunction. These results suggest that an aggressive preventive care should be focused on the older subjects

presenting a sensory deficit at admission, since these subjects would be particularly at risk for pressure ulcer occurrence.

**PA8 014 STUDY OF A MODEL OF SUCCESSFUL AGING: THE LOU/C/JALL RAT STRAIN.**

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**INTRODUCTION:** Aging is commonly associated with physiological alterations and apparition of cognitive deficits. The goal of our study was to evaluate the aged-related memory deficits and the underlying mechanisms in two strains of rats: 1) The Sprague-Dawley rats (SD) considered to age normally with apparition of aged linked pathologies such as obesity, insulino-resistance, and 2) The Lou/C/Jall (LC), known for its metabolic characteristics, and considered to have increased longevity without obvious physiological alterations. **MATERIAL & METHODS:** "Young" (3-4 months old), "old" (24-25 months old) and "senescent" (28 months-old) SD and LC rats were used. Their properties were compared using behavioral tasks, electrophysiological and biochemical approaches. **RESULTS:** We first tested the mnesic capacities using the object recognition task. Old LC rats were never impaired whatever the delay of retention whereas SD rats were memory-deficient. Synaptic plasticity in neuronal networks was then studied in the same rats by extracellular recordings performed in hippocampal slices. Long Term Potentiation, considered as a neuronal substrate of memory, was significantly impaired in aged SD rats but not in LC rats. Western Blot analysis of hippocampal tissues showed a decrease in NR2A subunits of glutamatergic receptors in aged SD and LC rats and a decrease in NR2B and GluR1 subunits in aged SD only. Other parameters such as the hippocampal content of the amino acid D-serine (mandatory for the expression of synaptic plasticity), or astroglial glutamate transporters (GLAST and GLT-1) significantly affected in SD, remained unchanged in aged LC. These last data indicate a preservation of astroglial function in LC strain during aging. **CONCLUSION:** Altogether, the results support the Lou/C/Jall strain as a model of healthy aging, not only when considering its preserved metabolism, but also in term of cognitive, synaptic plasticity and astroglial functions.

**PA8 015 INCREASE OF XANTHINE OXIDASE ACTIVITY IN SEVERAL**

**ORGANS FROM TRIPLE-TRANSGENIC ADULT MICE FOR ALZHEIMER DISEASE**

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**Introduction:** Alzheimer's disease is a neurodegenerative disorder accompanied by inflammation and oxidative stress, which has been scarcely studied at peripheral level. In previous studies, we have observed a premature neuroimmunoendocrine aging in a triple-transgenic 3xTgAD mouse model for Alzheimer's disease. Therefore, oxidative stress (increase of oxidants and decrease of antioxidants), which has been proposed as the main cause of aging, may play a dual important role among the biological processes underlying the onset and progress of the disease in this animal model. In the present work, we have investigated the xanthine oxidase activity (XO), as a good marker of oxidant state, and the total anti-oxidative capacity (T-AOC) in several peripheral organs of adult 3xTg-AD mice at early stages of AD, when all cognitive and electrophysiological deficits are already observed but only intraneuronal  $\beta$ A is detected. **Methods:** Tissues homogenates from liver, thymus, lung, spleen, kidney and heart of 6 month old female adult 3xTgAD and Non-TgAD mice were studied. XO activity as well as T-AOC were evaluated. **Results:** In general, XO activity was increased in transgenic mice with respect to the Non-TgAD control group in all organs studied, the differences being highly significant in heart, spleen and thymus. However, we have also seen that the total antioxidant capacity did not show any differences between genotypes in the organs analyzed. **Conclusion:** 3xTgAD adult mice show an oxidation state, measured by the increase in XO activity at peripheral level, which is not linked to changes of total antioxidant capacity. The results suggest the relevance of oxidative stress at early stages of the disease and its relation to their premature neuroimmunoendocrine aging. **Support:** Fundació LaMarató 2006-062930, SAF2006-13642, UCM Research Group (910379ENEROINN), MEC (BFU2005-06777) and MICINN (BFU2008-04336) grants. RETICEF (RD06/0013/0003).

**PA8 016 PUTATIVE ROLE OF A NOVEL P53-DEPENDENT CELLULAR SENESCENCE RELATED GENE, TARSH IN TUMOR SUPPRESSION.**

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Normal primary culture cells represent irreversible arrest of proliferation, namely cellular senescence, with distinctive morphological changes after serial cell divisions. Recent studies show that cellular senescence plays as a primary role to repress the cancer formation, producing apoptosis and even lead to ageing *in vivo*. We have characterized that murine TARSH (target of NESH-SH3/Abi3bp) as a cellular senescence related gene because of its transiently robust induction in the early phase of mouse embryonic fibroblasts (MEFs) replicative senescence and its gene expression was suppressed in human lung carcinoma specimens and thyroid carcinomas. However, little is known about the molecular mechanism underlying the regulation of TARSH in tumorigenesis. In this report, to elucidate veiled physiological function of TARSH in replicative senescence and trigger of tumor suppression, we carried out the retrovirus produced short hairpin RNA (shRNA)-mediated TARSH gene knockdown in MEFs. We analyzed the effect of TARSH deficiency in cell cycle, proliferation, apoptosis, and genome instability followed by tumorigenesis. We demonstrated that TARSH-suppressed MEFs were drastically inhibited their proliferation in a p53-dependent manner. We also found that TARSH expression was necessary for cell cycle progression since its decline preciously represented the accumulation of G0/G1 population with a concomitant activation of a cyclin-dependent kinase inhibitor, p21<sup>Cip1</sup> whose expression was tightly controlled by p53. Interestingly, reduced TARSH expression induced caspase-3-mediated apoptosis in a p53-dependent manner. Moreover, we noted that TARSH depletion frequently represented aberrant number of centrosomes, which probably causes aneuploidy as the hallmark of the cancer. TARSH is involved in the maintenance of genome stability in concert with p53-dependent cell cycle regulation. Therefore, in TARSH-absent condition, genome instability was induced by centrosome amplification in addition by growth arrest and consequently binucleation or multicentrosome were evoked.

**PA8 017 AGE AND BODY MASS INDEX CONTRIBUTION TO STANCE CONTROL**

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Introduction Human balance control change with age, resulting in an impaired ability to maintain stance and to move independently. Advancing age usually brings physiological changes in muscle properties, declined function and deficits in the sensory systems and functional impairments in mobility. Another important limitation related to balance control is body weight. Today, the obesity is a common problem which is associated with many serious complications that affect and impair quality of life. The aim was to investigate age-related changes in balance control and the relative contribution of body mass index (BMI). Materials and methods We examined 80 healthy subjects (20-82 year; 23 men, 57 women) with characteristic: age (mean year  $\pm$  SD)  $47.28 \pm 20.92$ , BMI (kg/m<sup>2</sup>)  $23.45 \pm 3.23$ . Body sway was measured during four conditions of quiet stance: stance on a firm and on a foam surface with eyes open and closed. The duration of one trial in each condition was 50 seconds. The balance control was assessed by CoP (center of foot pressure) parameters. Results The results showed that age, BMI and sensory deficit are related to gradual increase of CoP parameter values. The largest increase of body sway was observed during stance on foam surface with eyes closed and the most complex view on postural steadiness was provided by root mean square (RMS) parameter. There were a strong correlation between age and RMS and also between BMI and RMS. Conclusions Increased body sway and slight balance impairment due to age, conditions with sensory deficit and BMI are manifested by significant increase of the CoP parameter values. The findings are in accordance with earlier age-related studies and with fact that body weight may be an important risk factor for balance impairment and falling. Acknowledgements: Supported by European grant FP6 SENSACTION-AAL.

**PA8 018 HOMOCYSTEINE AND INFLAMMATION AS MAIN DETERMINANTS OF OXIDATIVE STRESS IN THE ELDERLY**

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Introduction Oxidative stress is commonly observed in the elderly and could be involved in age-related diseases. However, the determinants of superoxide anion overproduction are not clearly understood. Methods and materials Superoxide anion production was evaluated using a lucigenin-based chemiluminescence method in 478 elderly subjects (304 women, 174 men;  $79.5 \pm 7.1$  years). Homocysteine (Hcy) metabolism (homocysteinemia, vitamin B12, plasma, and erythrocyte folates), inflammation (CRP, fibrinogen,  $\alpha$ -1 acid glycoprotein), lipid parameters (total cholesterol, triglycerides, HDL and LDL cholesterol),

and nutritional parameters (albumin, transthyretin) were determined. Results The results show that HCY levels ( $p < 0.001$ ) and superoxide anion production ( $p = 0.04$ ) increase with aging, but CRP does not. Highest HCY ( $> 20 \mu\text{M}$ ) (OR 1.83 (1.09–3.07),  $p = 0.02$ ) and CRP over 5 mg/L (adjusted OR 2.01 (1.15–3.51),  $p = 0.01$ ) are the main determinants in superoxide anion production in the elderly. These clinical data are confirmed in an *in vitro* study using THP-1 monocyte-like cells. Incubation with HCY thiolactone (HTL) ( $0$ – $200 \mu\text{M}$ ) and LPS ( $0$ – $20 \text{ ng/ml}$ ) dramatically enhances NADPH oxidase expression and activation. Moreover, a synergic action was evidenced for low concentrations of HTL ( $20 \mu\text{M}$ ) and LPS ( $5 \text{ ng}$ ). Conclusion Taken together, the clinical data and *in vitro* experiments support the hypothesis that moderate homocysteineemia and low-grade inflammation synergically enhance NADPH oxidase activity in the elderly.

**PA8 019 LOSS OF REDUNDANCY IN OLDER ADULTS REFLECTED BY A CHANGE IN THE SLOPE OF THE FRAILTY INDEX WITH AGE.**

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Background. We tested the proposition, based on the reliability theory of aging, that deficit accumulation in aging systems results in loss of redundancy, which can be reflected as a slower rate of aging as deficits accumulate to approach a limit. Methods. Data came from the 2305 people, aged 70+ years at baseline, who participated in the clinical sample of the second wave of the Canadian Study of Health and Aging. We evaluated changes in the slope of the relationship between age and the Frailty Index at differing levels of deficit accumulation, as a measure of system redundancy / reserve, and estimated the limit to deficit accumulation in relation to age. Results. An age-invariant limit to deficit accumulation was demonstrated at about 0.7. The rate of deficit slowed from 0.04 amongst the fit to 0 amongst the most frail. The slope of the mean value of the FI in relation to age in community dwelling people older adults was 0.03; in institutionalized people, it was 0. The intercept of the 0-slope line in institutionalized people was 0.4, vs. 0.55 in community-dwelling older adults. Conclusion. As predicted by the reliability theory of aging, the rate of deficit accumulation slows with increasing frailty. A Frailty Index derived from data routinely collected as part of a Comprehensive Geriatric Assessment can estimate loss of redundancy in elderly people.

**PA8 020 FATIGUE DEFORMATION OF DNA AND CELL STRUCTURES IS THE KEY MECHANISM OF AGEING**

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Literature data irrefutably evidence for the deformation origin of physiological, physical and chemical stress effects on biological tissues (BT), cells growth and proliferation, differentiation, diseases and ageing, which is irresistibly identical to the stiffening or softening deformation of solids with the appropriate production of lattice defects with various dimensions (reactive oxygen species, ROS, in mitochondria of BT stimulate oxidative stress in cells, etc.). Our comparisons of the mechanisms of plasticity (MP) in living BT under arterial blood pressure alterations (this work), oscillating metabolic transformations and stresses, in various states of different materials under load [1] show that MP are strictly the same on atomic-to-cosmic scale lengths. This is the irrefutable argument in proof of the new paradigm [1] of the decisive role of MP and phase mismatch-interface stresses in or between gene chemical compartments, genes, growing and differentiating cells, in each stage of their phase transition modes: biochemical reactions, the origin, development and medical treatment of endogenous diseases, kinetics of ageing and growth of robust and cancerous cells, adaptation, origin of species and populations, etc. In terms of this paradigm the ageing of BT is a typical fatigue mechanical deformation of cells up to their stiffening and fracture (apoptosis). Softening of BT with physical, biochemical, physiological, etc. methods changes the mechanical fatigue limit of the materials, increase the longevity (life span) of BT and the rate of their hardening/ageing. And this is in line with the epidemiological, clinical and experimental investigations, tumor growth, etc. [1]. 1. Kisel V. P., Kisel N.S. Proc. 2nd Int. Conf. "Functional foods for chronic diseases", Nov.15–16, 2005, Dallas, USA. Ed. by D.M. Martirosyan, Richardson, TX, USA, 2006, pp 213 – 234.

**PA8 021 DO HISTORICAL CHANGES IN HUMAN MORTALITY REPRESENT CHANGES IN INTRINSIC AGEING?**

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Introduction: A new approach to mortality modelling (Milne EMG: The natural distribution of survival. *J. Theor. Biol.* 2008, 255:223–360) suggests mortality rates arise from interaction of two distinct risk categories, characterised by two parameters: rate of functional redundancy decay ('a') and level of interactive hazard ('k'). Effects of interventions considered to alter intrinsic ageing (dietary restriction, heat, oxygen tension) are expressed within this model exclusively as parameter 'a' changes in various species. Methods: National cohort and period human mortality data recorded in the Human Mortality Database were used to test the hypothesis that historical variations in human mortality reflect alterations exclusively in interactive risk (i.e. parameter 'k' changes), and not changes in intrinsic ageing rate (parameter 'a'). Results: From 1751 to 1900, birth

cohorts died out in accordance with the hypothesis. Variation in parameter 'k' also diminished over time. Deviations from the historical pattern, notably in women, appeared in cohorts from the early 20th century, and were mirrored in 20th century period data, but did not fit a pattern of intrinsic ageing change. Instead, with respect to predicted patterns, they displayed downward displacement of mortality rates from middle to old age, disappearing in the latter years of life. Conclusion: Historical data, analysed thus, are consistent with the hypothesis of an unchanging rate of human intrinsic ageing, and a falling level of interactive hazard, whose decreasing variation may reflect falling societal inequalities. The timing and pattern of 20th century deviation from predicted patterns appears consistent with exposure to increasingly effective health and social care and may reflect what Oshansky termed 'manufactured time'. The significance of this observation is that, if historical changes in human mortality do not reflect changes in intrinsic ageing, then causes of mortality that have changed cannot, themselves, be causes of intrinsic ageing.

**PA8 022 FEASIBILITY AND ACCEPTABILITY OF MUSCLE BIOPSY IN EPIDEMIOLOGICAL STUDIES: FINDINGS FROM THE HERTFORDSHIRE SARCOPENIA STUDY**

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Introduction Sarcopenia is associated adversely with disability, morbidity and mortality but understanding of its aetiology is limited. Epidemiological study findings suggest developmental influences may be important as associations have been seen between birth weight and both adult muscle mass and strength. Our aim was to ascertain the feasibility and acceptability of obtaining muscle tissue from older people, with known birth weight in the context of an epidemiological study to identify cellular mechanisms underlying the association between low birth weight and sarcopenia. Methods 105 men with documented birth weight participating in the Hertfordshire Sarcopenia Study consented for detailed physiological quantification of muscle mass, strength and a biopsy of the vastus lateralis using the Weil-Blakesley conchotome. Muscle tissue was processed for immunohistochemical, electron microscopy and molecular studies. Acceptability was ascertained by questionnaire and a pain Visual Analogue Scale (VAS). 100mm on the scale indicated severe pain. Results 102 out of 105 participants had a muscle biopsy. Three participants who did not have a biopsy were on treatment that may have influenced wound healing. 93 participants provided feedback. The median pain VAS score during the procedure was 7mm (Interquartile range [IQR] 1–34), 4mm (IQR 0–16) one day after the procedure and 1mm (IQR 0–4) 7 days after the procedure. 60 (64%) participants were back to their normal levels of activity one day after the procedure. 85 (91%) found this procedure acceptable and would have the procedure again. There were no serious wound complications. Conclusion Muscle biopsy is both feasible and acceptable in epidemiological studies when appropriate clinical and research expertise is available. The availability of biopsy tissue will allow myofibre and capillary quantification as well as investigation of anabolic and catabolic molecular pathways contributing to sarcopenia. This study has considerable potential to inform the development of beneficial life course interventions for sarcopenia.

**PA8 023 BDNF IN THE BRAINSTEM DORSAL VAGAL COMPLEX: A ROLE IN AGE-RELATED DYSREGULATION OF FOOD INTAKE?**

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Introduction. The dorsal vagal complex (DVC) mediates the satiety reflex, which is modulated by circulating hormones and neural drive from hypothalamus. Brain-derived neurotrophic factor (BDNF) is an anorexigenic signal downstream of the satiety-controlling hormone leptin, both in the DVC and hypothalamus. Its expression decreases in the aging forebrain. The present study was aimed at identifying changes in BDNF signalling in the DVC of aged rats and examining the effect of a long-term moderate caloric restriction (LTMCR). Methods and materials. Nineteen to 20-month-old male Sprague Dawley rats either fed ad libitum (AL) or subjected to a 40% caloric restriction, from 8 months of age until death, were used ([www.rqr.com](http://www.rqr.com)) and compared with 2-month-old AL rats. BDNF content of DVC and serum concentrations of BDNF and leptin were determined by immunoassays. BDNF immunohistochemistry was performed on fixed sections of rat brains. BDNF and leptin receptor mRNA levels were assessed by real-time RT-PCR. Results. BDNF protein content of the DVC increased 2-fold in AL aged rats compared with young AL rats and old CR rats. In contrast, serum BDNF concentration was not different among the three groups. Serum leptin level was increased 10-fold in AL aged rats compared with young AL and old CR animals. TrkB and p75 BDNF receptor mRNA levels were increased 1.7–2-fold in aged AL rats, while truncated forms were not altered. LTMCR did not regulate BDNF receptor levels. Neither aging nor LTMCR affected ObRb leptin receptor mRNA levels. Finally, daily food intake was not altered in old AL rats compared with younger rats. Conclusion. The increase of BDNF/BDNF receptor levels in

the DVC and leptin concentration in the serum of AL rats, and the maintenance of youthful levels of BDNF and leptin in CR rats, suggest the development of a resistance to the leptin-BDNF-dependent satiety effect in aging.

**PA8 024 INDUCTION OF CELLULAR SENESCENCE BY PHOSPHOLIPASE A<sub>2</sub> IN HUMAN FIBROBLASTS THROUGH AN ROS-MEDIATED P53 PATHWAY**

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**Introduction:** Secretory PLA<sub>2</sub> (sPLA<sub>2</sub>) is involved in various cellular physiological and pathological responses, especially in inflammatory responses. Accumulating evidence suggests that inflammation is an underlying basis for the molecular alterations that link aging and age-related pathological processes. However, the involvement of sPLA<sub>2</sub> in cellular senescence is not clear. **Materials and Methods:** Cellular senescence in human dermal fibroblasts (HDFs) induced by sPLA<sub>2</sub> treatment was measured by senescence-associated  $\beta$ -galactosidase (SA- $\beta$ -gal) activity staining, p53/p21 Western blotting, and cell cycle analysis. ROS levels were detected with dihydrorhodamine 123 or lucigenin. The levels of p53 or p16 mRNAs were knocked down with p53 or p16 shRNA retroviral vectors. **Results:** sPLA<sub>2</sub> treatment induced cellular senescence in HDFs. sPLA<sub>2</sub>-induced senescence was observed in p16-knockdown HDFs and p16-null mouse fibroblasts, but not in p53-knockdown HDFs and p53-null mouse fibroblasts. Treatment with sPLA<sub>2</sub> increases ROS production, and an antioxidant, N-acetylcysteine, inhibits sPLA<sub>2</sub>-induced cellular senescence. **Conclusion:** These results suggest that sPLA<sub>2</sub> plays a role in cellular senescence in HDFs during inflammatory response by promoting ROS-dependent p53 activation and might therefore contribute to inflammatory disorders associated with aging.

**PA8 025 DIFFERENTIAL RESPONSE TO AIN-93 DIET IN SENESCENCE ACCELERATED MOUSE (SAM) P8 AND R1 STRAINS**

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The senescence-accelerated mouse (SAM) is an animal model of accelerated aging established by T. Takeda et al. SAM consists of series of SAMP (prone) and SAMR (resistant) lines. SAMP8 strain has much shorter life-span by approx. 50% than control strain, SAMR1. The AIN casein-based diets are frequently used not only for nutritional studies but also for toxicologic and gerontologic research as well. However, various adverse effects of the high casein diet have been reported. In this study, we investigated the effects of AIN-93 casein-based diets on growth and survival of SAMP8 and SAMR1 mice. Four different mouse strains (SAMP8, SAMR1, C57BL and DBA/2, all male) were used in this experiment. The mice of each strain were divided into two groups at the age of 4 weeks and fed with standard diets (CRF-1 or CE-7) or with AIN-93G/M casein-based diets for 12-weeks or through their usual life-span. Although the body weight of both AIN-93 and standard diet groups increased during the 12-week period, more rapid weight gain was observed in SAMR1 mice fed AIN-93. No significant difference was observed in liver between two diet groups within each strain except SAMR1. There was no significant difference in the weight of lean tissues (epididymal and mesenteric WAT and BAT) between two diet groups in SAMP8, C57BL and DBA/2. However, SAMR1 fed AIN-93 shows a remarkable increase in the weight of lean tissues compared with the standard diet group. Although no significant difference in average life span of SAMP8 between two diets, the life span of SAMR1 fed AIN-93 was shorter than the corresponding group fed the standard diet. The SAMR1 strain respond more strongly to AIN-93 casein-based diets than SAMP8, C57BL and DBA/2, including body weight and growth, and the accumulation of lean mass tissues.

**PA8 026 INCREASE OF MEGALIN AND CUBILIN IN THE KIDNEY GLOMERULI OF SENESCENT RATS WITH PROTEINURIA**

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A progressive deterioration of renal structure and function occurs during aging. Age-related albuminuria is due to increased permeability of the glomerular basement membrane and/or decreased resorption of albumin at proximal tubules. We previously found that the amount and distribution endocytic receptors, megalin and cubilin, were changed in the kidney of rats with age. Both receptors predominantly express in the proximal tubules but not in glomeruli of rat kidney. In this congress, we reported that both megalin and cubilin are increased in the kidney glomeruli of senescent rats with proteinuria. The distributions of megalin and cubilin in the kidney were determined by immunohistochemical analysis using affinity purified antibodies. The glomeruli were isolated by a sieving method.

Megalin and cubilin levels of glomeruli were determined by an immunoblot analysis. Immunohistochemical studies showed that the amounts of both receptors especially megalin, began to increase with age in the capillary wall and cells such as epithelial cells and endothelium. To confirm the presence of megalin and cubilin in the glomeruli shown by immunohistochemical studies, an immunoblot analysis was carried out on the isolated glomeruli from young and old kidneys. Weak but significant immuno-reactive signals were detected in the glomerular fractions. The signals for both receptors increased with age. The amounts of endocytic receptors, megalin and cubilin were increased in the kidney glomeruli of senescent rats that exhibited proteinuria.

**PA8 027 CAVEOLAE-MEDIATED ENTRY OF S. TYPHIMURIUM INTO SENESCENT HOST CELLS**

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Elderly individuals have an increased susceptibility to infections due to age-related anatomical, physiological and environmental factors. However, the mechanism of ageing dependent-susceptibility is not well known. Here, we found that entry of *S. typhimurium*, which can cause a variety of diseases in humans and animals, was increased in nonphagocytic senescent host cells. In addition, we showed that caveolae might involve in entry of salmonella in senescent host cells. When caveolae structures were disrupted by methyl-beta-cyclodextrin, invasion level of *S. typhimurium* was remarkably decreased in senescent cells. To confirm the specific role of caveolae, we used lentiviruses to express siRNA of caveolin-1 and full length of RFP-conjugated caveolin-1. When we down-regulated caveolin-1 by siRNA in senescent cells, *S. typhimurium* invasion was decreased like that of young cells. In contrast, the over-expression of caveolin-1 in HeLa cells lead to increase of invasion levels of *S. typhimurium* like inducible senescent HeLa cells. Moreover, caveolin-1 was highly expressed in aged target organs to infection of *S. typhimurium*. These results suggested that high levels of caveolae in aged host cell might be related with increased susceptibility to infections in elderly individuals.

**PA8 028 INVESTIGATING THE ROLE OF LAMIN A IN WIEDEMANN RAUTENSTRAUCH SYNDROME**

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Wiedemann-Rautenstrauch syndrome (WRS) is a rare autosomal recessive disease with features of premature aging recognizable at birth. Our previous work in four clinically well-defined patients suggest that LMNA/C mutations are not associated with WRS; but we cannot discard the hypothesis that another gene associated with Lamin A metabolism may be responsible for WRS. In order to evaluate this hypothesis skin biopsies were obtained from a 13-year-old female and a 20-years-old boy both diagnosed with WRS and a 20-years-old unaffected boy. Fibroblasts from an Hutchinson Gilford Progeria Syndrome patient (HGPS, 1824 C-T) were obtained from the Coriell Institute Repositories. All different biopsies were used to establish primary cell cultures. We culture all primary fibroblasts in MEM (supplemented with sera, glutamine and antibiotics) to maintain them as close to physiological conditions as possible. Upon reaching confluence cells were passaged 1:3 with weekly medium change. The passage number of each cell type was recorded. Immunofluorescence microscopy was used to determine the variation in nuclear morphology between WRS, HGPS and control fibroblasts. We also perform immunoblotting to investigate the level of progerin, if any, in the different fibroblast groups. Representative data from WRS, HGPS and unaffected control cells show that only HGPS cells have a significantly high number of cells with an irregular shape of the nuclear envelope. In contrast, WRS cells have small nuclei compared with HGPS or Control cells. Analysis of Lamin A/C expression detects an additional band with retarded electrophoretic mobility in HGPS cells extracts (progerin) but not in one WRS or in the control cell extracts. The results suggest that expression of anomalous Lamin A is not related with WRS pathology direct or indirectly, however it could be a nuclear gen related with nuclear volume that could be responsible or reflects the anomaly observed in this neonatal progeroid syndrome.

**PA8 029 ANDROGEN RECEPTOR-MEDIATED ACTIVATION OF ENDOTHELIAL NITRIC OXIDE SYNTHASE VIA PI3K/AKT AND ERK SIGNALING**

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**Background:** Epidemiological studies have shown that androgen deficiency in elderly men is associated with the higher incidence of cardiovascular disease and endothelial dysfunction. Although vasodilator action of testosterone has been reported, its action on endothelial nitric oxide synthase (eNOS) is not known. We therefore investigated the effect

of testosterone on eNOS activity and its molecular mechanism using human aortic endothelial cells. Methods and Results: Human aorta endothelial cells (HAEC) were cultured in steroid-deprived phenol red-free medium. Physiological concentrations of testosterone (1-100 nmol/L) augmented nitric oxide (NO) production, as measured by DAF-2 fluorescence, at 10-30 min. NOS activity as measured using the L-arginine/L-citrulline conversion assay and nitrite/nitrate production as determined by a nitrite assay were twice increased by testosterone compared to vehicle. In parallel, testosterone rapidly increased the phosphorylation of eNOS (Ser1177) in a concentration dependent manner, peaking at 30 min after stimulation. eNOS activation by testosterone was associated with the phosphorylation of Akt and ERK1/2, and was partially blocked by an Akt inhibitor, SH-5 and a PI3K inhibitor, wortmannin and by a MEK inhibitor, PD98059, suggesting that both PI3K/Akt and ERK pathways are involved in the signaling of eNOS activation by testosterone. The effects of testosterone on eNOS activation and NO production were abolished by androgen receptor (AR) antagonists, nilutamide and flutamide, or by siRNA for androgen receptor, but were not inhibited by estrogen receptor antagonist ICI 182780 and transcriptional inhibitor actinomycin D, suggesting the nongenomic activation of eNOS via androgen receptor. Coimmunoprecipitation study demonstrated that, in a ligand-dependent manner, testosterone increased AR-associated p85 $\alpha$ . Conclusions: These results indicate that the nongenomic signaling of androgen receptor triggered by testosterone induces a rapid activation of eNOS and subsequent NO production via PI3K/Akt and MEK/ERK pathways in vascular endothelial cells.

#### **PA8 030 AGE-RELATED CHANGES IN THE CENTRAL REGULATION OF ENERGY METABOLISM IN RATS**

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Introduction: Long-term body weight (BW) regulation shows two characteristic age-related trends: obesity of the middle-aged, and anorexia of aging (sarcopenia). These observations suggest regulatory changes in energy balance. Methods and materials: The effects of intracerebroventricular (ICV) administration of neuropeptide Y (NPY), corticotropin-releasing-factor (CRF) or alpha-MSH were recorded on food-intake (FI) and BW in various age-groups of male Wistar rats. FI was recorded in a Feedscale system (Columbus), body temperature (Tc), activity (ACT), heart rate (HR), feeding frequency (FF) and feeding duration (FD) in a biotelemetric (MiniMitter) system. ANOVA repeated measures were used for statistical analysis. Results: Central injection of NPY increased, while CRF suppressed FI. Both effects were attenuated in the 24 or 12 months-old rats vs. the 3 months-old age-group. The anorexigenic effect of ICV alpha-MSH-injection was minimal at 1.5-months, very pronounced in 3-4 months-old rats, then at ages of 6 and 12 months it decreased, to become maximal in the oldest (24-26 months-old) group. The alpha-MSH-infusion induced transient anorexia and BW fall at 4-months, while in 24-months-old rats a sustained and pronounced fall in FI and BW developed. In old rats both the initial FF and its fall to alpha-MSH-infusion were lower than in young ones. FD decreased similarly in both groups. In old rats HR exhibited a more pronounced and lasting elevation (suggesting a rise in metabolic rate) than in young animals, and a similar transient rise in daytime Tc as in the young groups. Conclusions: The effects of central regulatory peptides show age-related alterations. The catabolic effects of alpha-MSH were different depending on age: the pronounced effect in the young adult group gradually decreased, but reached again a peak in the old animals. Such changes might contribute to the explanation of both obesity in the middle-aged and sarcopenia in the old. (OTKA 49321, ETT 271/2006)

#### **PA8 031 ACCUMULATION OF OXIDIZED MACROMOLECULES DOES NOT PRECEDE THE ONSET OF AGE-RELATED NEURAL DEFICITS.**

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Introduction The increasing amount of oxidized macromolecules in ageing humans and animals is thought to contribute to sensory and cognitive deficits at higher age. The observation that the brains of patients suffering from dementia display an increased oxidative damage, as well as the therapeutic effects of anti-oxidants in memory disturbances suggest that oxidative damage is a primary cause of age-related deficits in neural functions. Previously we reported that animals lacking CB1 receptors show an early onset age-related cognitive deficits. Therefore we asked whether an increased oxidative damage of neurons contribute to the ageing-phenotype in the absence of CB1 signalling. Materials and Methods Partner recognition and hearing abilities of wild-type and null mutant mice were compared in different age-groups. The amount of oxidized lipids and proteins was measured in the brains after the behavioural tests. Results Cnr1-/- animals showed an early onset of reduction in partner recognition. Furthermore, they lost the reactivity to higher sound frequencies. Interestingly, the amount of oxidized macromolecules was age-dependently lower or similar, but never higher in the knockouts compared to the wild-type animals. Only a very moderate increase in the amount of oxidized proteins but not in lipids was observed at the onset of reduction in neural functions in both strains. Conclusion Increased oxidative damage does not contribute to the ageing phenotype of Cnr1-/- mice. There is no massive increase in the amount of oxidized

macromolecules preceding the neural deficits, suggesting that oxidative damage does not contribute to the initiation of age-related memory/sensory disabilities in ageing wild-type or Cnr1-/- animals.

#### **PA8 032 PVF2, A PDGF/VEGF-LIKE GROWTH FACTOR, CONTRIBUTES TO AGE- AND OXIDATIVE STRESS-ASSOCIATED CHANGES IN DROSOPHILA MIDGUT STEM CELLS**

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Age-associated changes in stem cell populations have been implicated in age-related diseases, including cancer. However, little is known about the underlying molecular mechanisms that link aging to the modulation of adult stem cell populations. Drosophila midgut is an excellent model system for the study of stem cell renewal and aging. Here we describe age-related changes in the number and activity of intestinal stem cells (ISCs) and progenitor cells in Drosophila midgut. We determined that oxidative stress, induced by paraquat treatment or loss of catalase function, mimicked the changes associated with aging in the midgut. Furthermore, we discovered an age-related increase in the expression of PVF2, a Drosophila homologue of human PDGF/VEGF, which was associated with and required for the age-related changes in midgut ISCs and progenitor cell populations. Taken together, our findings suggest that PDGF/VEGF may play a central role in age-related changes in ISCs and progenitor cell populations, which may contribute to aging and the development of cancer stem cells.

#### **PA8 033 REVISITING THE METABOLIC SCALING HYPOTHESIS: DATA FROM THE BALTIMORE LONGITUDINAL STUDY OF AGING**

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Introduction: several inter-species and intra-species investigations evaluated the relationship between resting metabolic rate (RMR) and body mass (M), which is expressed as an allometric equation of the form  $RMR=aMb$  where 'a' is a constant, 'b' is a metabolic scaling exponent (MSE). Throughout phylogeny, the MSE is considered a universal evolutionary feature of living organisms, and the value of the MSE has been vigorously disputed being 0.66 or 0.75. Up to now there is no conclusive evidence in spite of intensive study, particularly in humans. We investigate the relationship between RMR and M and the value of the metabolic scaling in men and women at baseline and across their lifespan. Methods and materials: 1,227 participants from the Baltimore Longitudinal Study of Aging evaluated every two years from 1958 to 1982. Height and weight are measured, body mass index is determined as kg/m<sup>2</sup>. RMR is estimated by indirect calorimetry and expressed as kcal/m<sup>2</sup>/hr. Three ten-minute samples of expired air are analyzed for O<sub>2</sub> by the paramagnetic method (Beckman Paramagnetic O<sub>2</sub> analyzer model G-2) and for CO<sub>2</sub> by infra-red absorption (Beckman Model LB-1). Results: 3,141 evaluations collected over an average follow-up of 19 years. The RMR is proportional to M<sup>0.62</sup> in men and M<sup>0.38</sup> in women. The effect of age on the MSE is almost negligible in both sexes at baseline (in men b1=-0.001, 95%CI:-0.002, -0.0001, and in women b1=-0.002, 95%CI:-0.003, -0.001) and it remains almost unchanged when the longitudinal data are analyzed in men (b1=-0.002, 95%CI:-0.0029, -0.0018). Conclusion: the MSE is 0.62 in men and 0.38 in women and it does not change across their lifespan. These findings challenge about 70-year-old paradigm suggesting that the MSE 0.75 is universally applicable in all living organisms, and question the notion that the 0.75 is justified by the fractal nature of nutrient supply networks.

#### **PA8 034 XPD AND WRN mRNA IS REDUCED WHILE THEIR PROMOTERS METHYLATION IS UNALTERED IN BLOOD MONONUCLEAR CELLS OF CENTENARIANS**

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Introduction: It is suggested that normal aging is associated with inefficient DNA repair, among others. This might be a result of various mechanisms, including altered expression and/or function of proteins involved in this process. A decrease of global methylation and hypermethylation of CpG islands located in the promoters of selected genes are observed

in aged cells. Hypermethylation of the promoter results in transcription inhibition. Until now, expression and methylation of XPD and WRN were not analyzed with respect to age progression. Materials and methods: Total RNA and genomic DNA were isolated from blood mononuclear cells of young (Y, age range 22-37 years) and middle age (M, age range 65-69 years) controls, as well as of near-centenarians and centenarians (C, age range 89-102 years). 1. XPD and WRN expression assessment: Each RNA was reverse-transcribed with random hexamers and subjected to real-time PCR with XPD and WRN-specific sets of primers. 2. Methylation assessment: Genomic DNA was bisulfite-modified, PCR-amplified with XPD and WRN promoter-specific primers, and cloned into the pGEM-T vector. 3 clones were sequenced from each person's sample. Results: We found that the amounts of XPD and WRN mRNA were significantly lower in blood mononuclear cells of C compared to younger age groups. However, methylation of the XPD and WRN promoters was not significantly changed in age-related manner. Conclusion: We conclude that the significant decrease of the amounts of XPD and WRN mRNAs in blood mononuclear cells of near-centenarians and centenarians is not a result of hypermethylation of the XPD and WRN promoters.

#### **PA8 035 CENTROSOMAL HYPOTHESIS OF CELLULAR AGING AND DIFFERENTIATION: NEW DATA**

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A number of aging theories attribute initiation of aging processes to DNA. However, there are a lot of data, which suggest that epigenetic, cytoplasmic factors may be of crucial importance. The cloning phenomenon would not be possible if "aging factors" were within the cell nucleus, because the age of cells of a cloned organism would be the same as the age of a cell donated nucleus. The process of nucleus "reprogramming" suggests existence of a structure, which anew "winds up" a cell clock and initiates the processes of cell differentiation. We considered the centriole might be such a structure (Tkemaladze, Chichinadze 2005a, b). That publication was followed by new data, confirming our concept. In particular, we suggested that small interfering RNA (siRNA) and microRNA might be involved in the processes of information storage and reproduction. At the time of our publication there were no data on nucleic acids in centrosome but in 2006 five different RNAs (named cnRNA – centrosomal RNA) were extracted from the oocytes of shellfish *Spisula solidissima*. Analysis showed that cnRNA was not a part of nucleus genome. If cnRNA is shown to possess the same regulatory function as siRNA and miRNA, i.e. regulation of gene expression on posttranscriptional level, it will be valuable evidence confirming our concept. Another study showed that those daughter cells of germinative stem cells of males of *Drosophila melanogaster*, which differentiates, contain daughter centrosome, while those, which retain stem features, contain the centrosome of the mother cell (Spradling, Zheng, 2007). The authors of that article themselves put the question: is centrosomal inheritance a clue for stem cell features, which has been searched for so long time? That research confirms our concept on centrosome as a structure, which determines the process of cell differentiation.

#### **PA8 036 INSULIN-LIKE GROWTH FACTOR- 1 AND INSULIN RESISTANCE AS RISK FACTORS FOR ALZHEIMER DISEASE**

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Aims: To identify the role of the insulin-like growth factor 1 (IGF-1), fasting insulin and homeostasis model assessment estimate of insulin resistance (HOMA-IR) in the development of Alzheimer Disease (AD). Method: Descriptive study. Elderly control subjects, patients with mild cognitive impairment (MCI) and Alzheimer disease (NINCDS-ADRDA criteria) were included. With a blood test, we determined the IGF-1, fasting insulin and HOMA serum levels. We assessed demographic data, medical history (diabetes mellitus, high blood pressure, dyslipidemia), functional status (Katz index for basic activities of daily living) and Lawton index for instrumental activities of daily living and cognitive scale (Minimetal State Examination:MMSE). Statistical analysis SPSS 14.0. p: 0.05 Results: Sample: 48 subjects were included (control subjects: 16, MCI: 6, AD: 26 (GDS 4: 21 subjects, GDS 5: 5). Main age: 78 years (65-90). Significant differences in GF-1 serum levels were found between control group and AD group ( $p < 0.001$ ), with lower levels in AD group, and although no significant, we found differences between control group and MCI group ( $p < 0.06$ ). Related to HOMA levels, statistical significant differences were observed when compared Control vs AD group ( $p < 0.004$ ) with lower levels in subjects with AD, and control vs MCI group ( $p < 0.002$ ). No statistical differences were observed in MCI vs AD group for any of the parameters. Conclusions: 1. IGF1 serum levels are lower in patients with MCI or AD than in subjects without cognitive impairment. 2. Insulin resistance (fasting insulin and HOMA) in MCI and AD is lower than in control subjects. 3. The findings of this study suggest that low levels of IGF-1 and insulin resistance could

be consider as a risk factor for the development of mild cognitive impairment and Alzheimer Disease.

#### **PA8 037 OXYS RATS AS ANIMAL MODEL OF AGE-RELATED MACULAR DEGENERATION: POTENTIAL FOR PATHOGENESIS AND THERAPEUTIC APPROACH**

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Introduction Pathogenesis of age-related macular degeneration (AMD), the leading cause of blindness in the world, is associated with oxidative stress and neovascularization but exact mechanism remains poorly understood. Recently we showed that accelerated-senescence OXYS rats strain is a suitable model for AMD and can be used for study of AMD pathogenesis and trial of new therapeutic approaches. Here we studied the connection of chorioretinal dystrophy (CRD) in OXYS rats with vascular endothelium growth factor (VEGF) gene expression and the effect of mitochondria-targeted antioxidant SkQ1 (10-(6?-plastoquinonyl) decyltriphenylphosphonium) on these parameters. The distinctive feature of this type of antioxidants is the ability to penetrate and to accumulate in mitochondria - the main source of reactive oxygen species in cells. Materials and methods OXYS rat's retinas were examined ophthalmoscopically and VEGF gene expression was studied. SkQ1 was supplemented with diet (from 1.5 to 3 months, 250 nmol/kg) or given in eye's drops (from 9 to 11 months, 250 nM). Results CRD signs were registered in 21-25% of 1.5 month-aged OXYS rats and incidence reached 100% at 3-4 months. VEGF expression level was twice lower ( $p < 0.002$ ) at 3 month-aged OXYS rats and negatively correlated with degree of CRD ( $r = -0.61$ ). To the age of 12-14 months clinical CRD symptoms increased simultaneously with choroidal blood flow reduction and ischemia development. VEGF expression was similar in OXYS and Wistar rats and positively correlated with retina injury ( $r = 0.69$ ). SkQ1 supplementation with diet prevented CRD development in OXYS rats and increased VEGF expression in 3 month-old OXYS rats. SkQ1 eye's drops reduced CRD signs and decreased VEGF expression ( $p < 0.019$ ) at 12 months. Conclusion We suggest that CRD development in OXYS rats is associated with changes of VEGF gene expression, as it is known for humans. Mitochondria-targeted antioxidant SkQ1 has prophylactic and therapeutic effects on CRD in OXYS rats improving expression of VEGF gene.

#### **PA8 038 MITOGENIC RESPONSE OF SENESCENT HUMAN DIPLOID FIBROBLASTS TO LPA AND ACI**

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Introduction: In a previous study, we showed that a phospholipid growth factor lysophosphatidic acid (LPA) as well as adenylyl cyclase inhibitor SQ22536 (ACI) increase proliferative potential of senescent human diploid fibroblasts (HDFs). The present study was designed to elucidate the molecular mechanism underlying LPA- and ACI-induced proliferation of senescent HDFs. Since the AMPK activity, as measured by the level of phosphorylated AMPK $\alpha$  on Thr172, increases during cellular senescence and phosphorylation of p53 on Ser15 by AMPK is required for p21waf1/cip1 expression, we compared the phosphorylation status of AMPK and p53, and the expression level of p21waf1/cip1 after treatment with LPA and ACI. Methods and materials: Cell cycle was analyzed by flow cytometry. Confocal immunofluorescent staining was performed in cultured young and senescent HDFs, immunohistochemistry in biopsy samples of human skins, and Western blotting in the cell lysates. Results: Both LPA and ACI induced senescent cell proliferation by increasing S phase entry. The active form of AMPK (p-Thr172-AMPK $\alpha$ ) increased in senescent HDFs and aged human back skin cells. LPA increased phosphorylation on Ser485/491 and reduced the accessibility of the Thr172 phosphorylation site thereby inhibiting its catalytic activity, presumably by activating cAMP-dependent protein kinase (PKA). However, ACI reduced phosphorylation of AMPK on Thr172 and decreased its catalytic activity by reducing the protein level of tumor suppressor serine/threonine protein kinase LKB1. The levels of p-Ser15-p53 and p21waf1/cip1 were also decreased by both LPA and ACI treatment of senescent cells. Conclusion: Both LPA and ACI inhibit the catalytic activity of AMPK by differently regulating phosphorylation status of AMPK, increasing senescent cell proliferation.

#### **PA8 039 THE NUCLEAR RECEPTOR RORALPHA AS A NEW ASTROCYTIC CONTRIBUTOR TO BRAIN AGING INFLAMMATORY PHENOTYPE**

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The nuclear receptor RORalpha and the interleukin-6 (IL-6) are both widely expressed in the organism and implicated in the pathogenesis of several age-associated diseases. RORalpha exerts multiple functions including down-regulation of inflammatory processes

in the periphery and neuroprotection against age-related neuronal death in the central nervous system (CNS). IL-6 is an inflammatory mediator displaying neuroprotective property. The overlapping of the effects of RORalpha and of IL-6 suggests a link between them, despite their different subcellular localization in the brain. IL-6 is mainly produced by astrocytes and RORalpha has been until now considered as exclusively neuronal. We hypothesized that RORalpha is also expressed in astrocytes, key cell mediators of CNS inflammation and we investigated the relation of RORalpha with astrocytes and IL-6. We used the staggerer mutant mice that express a loss of function mutation in the Rora gene. We performed comparative studies of wild-type and homozygous staggerer astrocyte cultures and used immunohistochemical analysis, real-time RT-PCR, IL-6 detection assay, sequence analysis, reporter gene and electrophoretic mobility shift assays (EMSA). We show that RORalpha is expressed in astrocytes and that this expression is up-regulated by proinflammatory cytokines. We also identified the Il-6 gene as a RORalpha target and demonstrated that RORalpha exerts bi-directional control of Il-6: direct transactivation to maintain basal IL-6 expression and indirect repression via inhibition of the NF- $\kappa$ B pathway in an inflammatory context. Thus RORalpha contributes to maintain IL-6 homeostasis in the brain. IL-6 is among inflammatory mediators that increase with age in healthy subjects. Depending of when and how IL-6 is applied in animal models, it can either promote neuronal survival or trigger neurodegeneration and cell death. The link we provide between RORalpha, IL-6 and astrocytes adds to the growing role of astrocytes in aging and related disease in the brain.

#### **PA8 040 CELLULAR STRESS RESPONSES OF HUMAN SKIN FIBROBLASTS REFLECT DIFFERENCES IN HUMAN LONGEVITY**

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Introduction: Aging is the result of the accumulation of damage, caused by intrinsic as well as extrinsic sources. In humans, cellular responses to stress have not been related to longevity so far. Here, we investigated the relation between cellular responses to stress in fibroblasts from donors with different chronological age and different genetic background. Materials and methods: Fibroblast were isolated from subjects from the Leiden 85-plus Study for the contrast in chronological age (20y, n=10, vs. 90y, n=10) and from the Leiden Longevity Study for the contrast in genetic background (offspring of long-lived siblings, age 60y±9, n=40, vs. the general population, age 61±8 years, n=40). Fibroblasts were exposed to rotenone and hyperglycemia. Senescence was assessed by measuring Senescence Associated- $\beta$ -galactosidase (SA- $\beta$ -gal) activity by flow cytometry. Apoptosis/cell death was measured with the Annexin V-assay and cell-cycle analysis (Sub-G1 content). Results: Cells from old subjects showed higher baseline levels of SA- $\beta$ -galactosidase activity ( $p=0.022$ ) and higher stress-induced increases (rotenone:  $p=0.009$ , hyperglycemia:  $p=0.100$ ). Cells from old subjects showed higher baseline levels of apoptosis/cell death (AnnexinV+/PI+ cells:  $p=0.100$ , Sub-G1:  $p=0.085$ ) but lower stress-induced increases (only for Sub-G1:  $p=0.071$ ). Cells from offspring did not show different SA- $\beta$ -galactosidase activity and apoptosis/cell death, but did show lower stress-induced increases for SA- $\beta$ -galactosidase activity (rotenone:  $p=0.125$ , glucose:  $p=0.003$ ) and more apoptosis/cell death (Annexin V+/PI- cells:  $p=0.072$ , AnnexinV+/PI+ cells:  $p=0.035$ , Sub-G1:  $p=0.161$ ). Conclusion: Cells from old subjects show more SA- $\beta$ -gal activity under non-stressed conditions and are less prone to undergo apoptosis in response to stress. Under conditions of stress, cells derived from offspring from long-living siblings show less SA- $\beta$ -gal activity and more apoptosis/cell death than cells from their partners. Differences in cellular responses to stress thus represent potential biomarkers for human longevity.

#### **PA8 041 IMPROVING EFFECTS OF GROWTH HORMONE TREATMENT ON 5-HT SYNTHESIS AND PERFORMANCE OF RADIAL MAZE TASK**

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Introduction: Cognitive function declines with age. Both growth hormone (GH) and serotonin play a role in adult memory processing, and hippocampus could be a target for these effects. The present study aims to assess the effects of chronic treatment with growth hormone (GH) on brain serotonin (5-HT) synthesis and working memory in aged rats. The accumulation of 5-hydroxytryptophan (5-HTP) after decarboxylase inhibition was used as a measure of the rate of tryptophan hydroxylation in the brain *in vivo*. Previously, rats were tested in the 8-arm radial maze after GH treatment. The modulation of tryptophan hydroxylation and working memory test were assessed also in young rats for comparisons. Methods: Male young (3 months, n=12) and aged (20 months, n=12) Wistar rats were used. Animals were maintained under controlled conditions (22 °C, 70% humidity, 12/12 LD cycle). Aged rats received GH (1 mg/kg, s.c., twice daily for 4 weeks). Control rats received equal volumes of saline vehicle. After the treatments, to test radial maze memory task, trials were judged complete when rats had chosen all 8 baited arms or spent 20 minutes in the trial. After that, rats were sacrificed by decapitation and hippocampus and striatum samples analyzed by HPLC with electrochemical detection. Results: Tryptophan hydroxylation decreased significantly in the hippocampus (48%) and striatum

(44%) of aged rats indicating an impairment in serotonin synthesis with age. However, when aged rats were repeatedly treated with GH, an important increase in tryptophan hydroxylation in hippocampus (118%) and striatum (163%) was observed. These observations correlated with an impairment of task performance in radial maze in aged controls and an improvement in the rats treated with GH. Conclusion: The 5-HT enhancing properties of GH might explain, at least in part, the cognitive improving effects of chronic GH treatment in aged rats. Supported by SAF2007-66878-CO2-02 from MEC.

#### **PA8 042 RESTORATIVE EFFECTS OF GROWTH HORMONE TREATMENT ON CEREBRAL DOPAMINE SYNTHESIS AND MOTOR COORDINATION**

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Introduction: During the normal process of aging, alterations in dopaminergic functions are known. The aim of the present study was to assess the effects of chronic treatment with growth hormone (GH) on dopamine synthesis and motor ability (rota-rod) in aged rats. The accumulation of 3,4-dihydroxyphenylalanine (DOPA) after decarboxylase inhibition was used as a measure of the rate of tyrosine hydroxylation *in vivo*. Also young rats were assessed for comparisons. Methods: Male young (3 months, n=12) and aged (20 months, n=12) Wistar rats were used. Animals were maintained under controlled conditions (22 °C, 70% humidity, 12/12 LD). Aged rats received GH (1 mg/kg, s.c.) or saline twice daily for 4 weeks. After treatments, all animals were evaluated for motor ability and balance by using rota-rod. The rats were given prior training sessions to acclimate them to rota-rod apparatus. Rats were placed on the rotating rod and the length of time on the rod was taken as measure of competency. Each rat performed 5 separate trials and the results were averaged. After that, rats were sacrificed by decapitation and samples of striatum analyzed by HPLC with electrochemical detection. Results: Tyrosine hydroxylation was decreased significantly in the striatum of aged rats (34%) indicating impairment in dopamine synthesis with age. However, when aged rats were treated with GH, an important increase in tyrosine hydroxylation in striatum (55%) was observed. When control aged rats were tested using rota-rod impaired their skill and increased the number of falls compared to the young control group. However GH treatment resulted in significant improvement in fall off time as compared to control aged rats. Conclusion: The results indicate that repeated treatment with growth hormone might aid to improve the descent in dopamine neurotransmission and motor coordination that normally occurs as a consequence of aging. Supported by SAF2007-66878-CO2-02 from MEC.

#### **PA8 043 HYDROGEN-RICH PURE WATER PREVENTS SUPEROXIDE FORMATION IN BRAIN OF VITAMIN C-DEPLETED SMP30/GNL KNOCKOUT MICE**

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Introduction Hydrogen is an established anti-oxidant that prevents acute oxidative stress. To clarify the mechanism of hydrogen's effect in the brain, we administered hydrogen-rich pure water ( $H_2$ ) to senescence marker protein-30 (SMP30)/gluconolactonase (GNL) knockout (KO) mice, which cannot synthesize vitamin C (VC). In this study, we found that hydrogen-rich pure water scavenges superoxide in the brain slices from VC-depleted SMP30/GNL KO mice. Methods and materials SMP30/GNL KO mice were divided into groups with free access to either hydrogen-rich pure water ( $H_2$ ), VC water (VC), or pure water ( $H_2O$ ) for 33 days. The  $H_2$  group drank hydrogen-rich pure water the VC group drank pure water containing VC (1.5 g/L), whereas the  $H_2O$  group drank pure water without  $H_2$  and VC. Total VC was measured by using a high-performance liquid chromatography (HPLC)-electrochemical detection method. Superoxide anion radical formation in brain slices was estimated by a real-time biophysics imaging system. Results Total VC levels in the brain from ingestion of  $H_2$  or  $H_2O$  groups were 6% lower than those of VC group. Superoxide anion radical formation in the group given  $H_2$  was a 27.2% lower than that in the  $H_2O$  administration group. Conclusion Hydrogen-rich pure water acts as antioxidant that prevents superoxide anion radical formation in the VC-depleted brain *in vivo*. This study indicates that intake of hydrogen-rich pure water has beneficial effects that increase resistance to the excessive oxidative stress prevalent in many states of physiologic degeneration.

#### **PA8 044 ASSESSMENT SCALES AND CONSENSUS GUIDELINES ENCODED IN FORMAL LOGIC**

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INTRODUCTION We discuss computerized assessments and guidelines, with formal logic for vague reasoning. The formal structures describe information structured e.g. within DSM-IV, NINCDS-ADRDA, assessment scales and ICF. METHODS AND MATERIALS The architecture related to decision making is the following: - text based assessment scales and consensus guidelines - guidelines and rules written in formal logic - logic based on terms and principles of logical consequence - signatures (operator domains) producing the terms of the logical language - ground category defining notions of 'sets of objects' For

example, by "Alzheimer's disease with cerebrovascular disease" we usually mean patients fulfilling the clinical criteria for 'possible' AD and who also present either clinical or brain imaging evidence of relevant CVD. Qualifications like 'possible' need to be situated in a signature, and the ground category must be selected. In the Cornell scale for depression in dementia, the variable "lack of energy" as a physical sign is assigned the value of either '0', '1' or '2', where '0' is attached with the "meaning" 'absent' and scores '1' and '2' are reserved for changes occurring accutely. In this example 'lack of energy' is internalized for the CSDD scale, and is then, intentionally or not, unrelated e.g. to ICF's b1300 on energy levels. RESULTS We present a formalizations of logic based on ground categories involving lattice-values sets. We also demonstrate software architectures involving methodology for database management and client/server scenarios. We merge assessment scales as used within multi-professional municipality observe-assess-decide groups with consensus guidelines as used e.g. within early clinical diagnosis of dementia in processes of dementia investigations. CONCLUSION We have presented paradigms for non-classical substitution showing the underlying categories. The distinction between set-theoretic operations and operations on lattice-valued sets are presented within underlying ground categories.

#### **PA8 045 MANOMETRIC DISORDERS IN ELDERLY PATIENTS.**

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Introduction: Description of pHmetry and manometry findings in patients 65 years or older seen in a Gastroenterology Service is necessary to study the spectrum of esophageal disorders in this patients. Methods and Materials: Observational and descriptive study, in 84 patients 65 years and older who attended at consult of Gastroenterology between January 2007 and November 2008. We recorded; demographic data, manometric and phmetric results in 73 of these patients. Results: Mean age 72,09 years ( $\pm 4.5$ ); 65,48% female. Reason for the evaluation: to discard motor disorder related to gastroesophageal reflux in patients with typical symptoms (53,57%), study of esophageal dysphagia not related to other symptoms (15,48%), pre-surgical evaluation (10,71%), positioning of pHmetric electrodes (7,14%). Manometry was normal in 13 patients (15,48%). 29 patients presented upper esophageal sphincter disorders (hypotensive 75,86%). In esophageal body we observed: nonspecific esophageal hypomotility (37,74%), ineffective esophageal motility (28,30%), nonspecific esophageal hypercontraction (11,32%), diffuse esophageal spasm (11,32%). Disorders of lower esophageal sphincter in 37 patients: hypotensive (83,78%). We observed registers compatible with hiatus hernia in 38 patients (45,24%). We performed esophageal phmetry in 73 patients. There were no statistical relation between pathologic gastroesophageal reflux and hiatus hernia ( $p = 0,814$ ). However there were relation between reflux and hypotensive lower esophageal sphincter ( $p = 0,008$ ). Conclusions: 1.- Is very important to consider the use of manometry and pHmetry studies in elderly patients because up to 84,52% of such patients seen had any manometric disorder, which can be related to potential benefits in diagnosis, treatment and follow up. 2.- Hypotonic lower esophageal sphincter is related with lower gastroesophageal reflux in elderly patients however there were no statistical relation with hiatus hernia. In this way hypomotility can be related not only with reflux but also other pathologies seen in elderly patients such as dysphagia or alimentary impastation.

#### **PA8 046 DOMAIN-SPECIFICITY OF NEUROPSYCHOLOGICAL TEST ASSOCIATED WITH APOE ε4 IN ELDERS WITH MILD COGNITIVE IMPAIRMENT**

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Introduction: This study was aimed to elucidate the association between Apolipoprotein E(APOE) ε4 and neurocognitive function using neuropsychological test in community-dwelling elderly samples with mild cognitive impairment(MCI). Methods: Total 236 samples aged 75 and under diagnosed with MCI in the recent year and completed the Korean version of the Consortium Establish a Registry for Alzheimer's Disease (CERAD-K) neuropsychological assessment protocol, were recruited. Genomic DNA was extracted from the venous blood and APOE genotyping was done in this group. Their cognitive performance was compared by the occurrence of the APOE ε4 allele. Results: The impact of ε4 allele was significant in the Word List Recall Test(WLRT,  $F=5.764$ ,  $df=1$ ,  $p=0.021$ ) in community-dwelling elderly samples aged 75 years and under. Conclusion: The conclusion to be drawn here is that community-dwelling elderly samples with ε4 allele in MCI had a significantly lower performance on the WLRT in the CERAD-K neuropsychological test batteries. Therefore, we can predict that MCI samples with ε4 allele may have significant lower performance in delayed recall than immediate recall, especially in verbal episodic memory in community-dwelling elderly samples aged 75 and under. Key words : MCI, Apolipoprotein E(APOE), CERAD-K, Neuropsychological test.

#### **PA8 047 USE OF VARIABILITY, SPEED AND ACCELERATION PARAMETERS TO EVALUATE POSTURAL BALANCE IN OLD VS YOUNG INDIVIDUALS**

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**INTRODUCTION:** Poor postural balance control (stability) is one of the major risk factors for falling. If individuals at risk of falling are to be identified at an early stage, good knowledge and sensitive measurements of postural stability are essential. In addition, in order to develop effective intervention strategies such knowledge is of major importance.

However, no single postural stability parameter has effectively been able to identify individuals at risk of falling. Hence, there is a strong need for development and identification of sensitive postural sway parameters in various demographic groups. The aim of this study was to explore differences in postural stability between physically active old (O) and young (Y) women using newly developed sway parameters.

**METHODS AND MATERIALS:** Center of pressure (CoP) excursion was measured (100 Hz) by force plate (AMTI) analysis in old ( $72.5 \pm 6.3$  years) and young ( $25.8 \pm 1.6$  years) women during static 2-leg (bilateral) and 1-leg (unilateral) standing (15-s) with eyes opened. **RESULTS:** O demonstrated elevated CoP sway length, mean velocity, sway area, confidence ellipse area, velocity and variability in the medio-lateral and anterior-posterior plane compared to Y ( $p<0.0001-0.01$ ). Further, CoP acceleration was greater in O than Y ( $p<0.0001-0.01$ ) except in the M-L direction during 2-leg stance. An elevated ratio of bilateral-to-unilateral CoP velocity was observed in O compared to Y ( $p<0.01$ ), indicating that O had greater relative impairment in unilateral postural stability compared to stable bilateral stance. **CONCLUSION:** Postural sway parameters were identified (COP M-L & A-P velocity, acceleration, variability and ratio) that could effectively demonstrate differences in postural balance control between physically active old and young women.

#### **PA8 048 OXIDATIVE DNA DAMAGE IN PERIPHERAL LYMPHOCYTES OF PATIENTS WITH ALZHEIMER DISEASE**

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Introduction: Oxidative stress is increasingly believed to be involved in a number of neurodegenerative disorders. In this work, we investigated oxidative DNA damage and antioxidant capacity in patients with Alzheimer disease. Material and methods: The study was performed in 12 patients affected by Alzheimer disease (AD) diagnosed by the Department of Geriatrics, San Carlos Clinic Hospital of Madrid. We also analysed, as a control group, 11 individuals of both sexes who were aged-matched with AD patients. The SCGE (Single Cell Gel Electrophoresis or Comet Assay) was used to asses DNA damage in lymphocytes. This method detects strand breaks and alkali-labile sites in single cells, using Tail DNA%, Comet length and Tail moment as DNA damage parameters. Antioxidant capacity assay was performed in plasma by FRAP method. Bilirubin was also assessed in plasma. Results: Significant differences ( $P<0.01$ ) were observed in DNA damage between AD patients and controls: TailDNA%,  $4.11 \pm 0.21$  vs.  $2.02 \pm 0.11$ ; Comet Length in  $\mu\text{m}$ ,  $44.78 \pm 1.69$  vs.  $24.53 \pm 0.98$ ; Tail moment in arbitrary units,  $3.54 \pm 0.27$  vs.  $1.00 \pm 0.09$ , all data expressed as mean $\pm$ SEM (Standard Error of the Mean). After  $\text{H}_2\text{O}_2$  treatment of lymphocytes, oxidative DNA damage increase in both AD patients and control and we obtained significant differences ( $P<0.01$ ) between AD patients and controls (Tail DNA%,  $6.92 \pm 0.38$  vs.  $5.32 \pm 0.42$ ; Comet Length in  $\mu\text{m}$ ,  $63.82 \pm 2.48$  vs.  $49.35 \pm 2.31$ ; Tail moment in arbitrary units,  $7.30 \pm 0.62$  vs.  $4.41 \pm 0.41$ , all data expressed as mean $\pm$ SEM. Significant differences ( $P<0.001$ ) were, also, observed in plasma antioxidant capacity between AD patients and controls ( $0.43 \pm 0.04$  vs  $0.64 \pm 0.04$  mmol Trolox equiv./L). In AD patients a negative significant correlation was found between bilirubin and Tail moment increase ( $r=-0.972$ ,  $P<0.05$ ). Conclusion: Oxidative stress plays a key role in the process of neurodegeneration. AD patients have an elevated DNA damage caused by oxidative stress and decreased levels of some plasmatic antioxidants, such bilirubin, could increase the risk of DNA damage generation.

#### **PA8 049 CCN3 INHIBITS NEOINTIMAL HYPERPLASIA THROUGH MODULATION OF SMOOTH MUSCLE CELL GROWTH AND MIGRATION**

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Introduction: Elderly person are at a particularly high risk for cardiovascular events. However, the precise pathogenesis of atherosclerosis has not been fully understood. CCN3 belongs to CCN family, which constitutes multifunctional secreted proteins that act as matrixcellular regulators. We investigated the patho-physiological roles of CCN3 in the vessels. Materials and Methods: Rat smooth muscle cells (VSMC) proliferation was quantified by BrdU incorporation and the migration was examined using a chemotaxis chamber. CN3 knockout mice were created and vascular phenotypes, as well as the neointimal hyperplasia induced by photochemically-induced thrombosis, were investigated. Results: CCN3 suppressed the VSMC proliferation induced by fetal bovine serum (FBS), as well as by  $\beta$ platelet-derived growth factor-BB. The neutralizing antibody

for TGF- did not affect the growth inhibitory effect of CCN3. Moreover, CCN3 enhanced the mRNA expression of cyclin-dependent kinase inhibitors, p21 and p15, in VSMC. Gamma secretase inhibitor, an inhibitor of Notch signaling, inhibited the enhanced expression of p21 induced by CCN3. CCN3 also dose-dependently inhibited the VSMC migration induced by FBS. Finally, no obvious vascular phenotype was found in the CCN3 null mice. However, the histopathological evaluation of the arteries 21 days after the injury revealed a 6-fold enhancement of neointimal thickening in the null mice compared with controls. Conclusion: CCN3 suppresses neointimal thickening through the inhibition of VSMC migration and proliferation. Our findings indicate the involvement of CCN3 in vascular homeostasis, especially upon injury, and the potential usefulness of this molecule in the modulation of atherosclerotic vascular disease.

#### **PA8 050 NETAGE: AN ONLINE DATABASE AND NETWORK ANALYSIS TOOLS FOR BIOGERONTOLOGICAL RESEARCH**

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Introduction: The increasing amount of data on genes associated with aging, longevity, and age-related diseases (ARD) calls for a common platform for their integration and analysis. We have recently shown that the human longevity-associated proteins and the proteins involved in major ARDs act in a cooperative manner and could be organized as scale-free protein-protein interaction (PPI) networks (Budovsky et al., Mech. Aging Dev., 2007, 2009; Wolfson et al., Int. J. Biochem. Cell Biol., 2009). We have also shown that the network-based approach could be especially useful for predicting longevity-promoting targets. Systematic application of this approach for biogerontological purposes requires (i) a repository for networks associated with aging, longevity and ARDs, and (ii) the development of special tools for their analysis. Methods and materials: All data used for the construction of networks were automatically retrieved and processed from publicly available databases. Methods of computational biology and bioinformatics were used for network handling and analysis. Results: First, we extended our previous PPI network model by including microRNA-regulated gene expression. Using this model we created highly annotated networks for aging, longevity, and major ARDs. This was done by developing YABNA (Yet Another Biological Networks Analyzer), software program for creating, modifying, analyzing, and managing the networks. Finally, the constructed networks have been organized as a database which is now publicly available through the NetAge website. NetAge provides visualization and analytic tools, including node browsing, orthology information, microRNA and gene expression data, local or global network topology analysis as well as different kinds of simulations. Conclusions: The NetAge database will promote incorporation of a network-based approach into biogerontological studies, thereby contributing to the progress of systems biology of aging. Supported by the European Union FP7 Health Research Grant number HEALTH-F4-2008-202047.

#### **PA8 051 ARTIFICIAL ATMOSPHERE: EFFECTS ON GASEOUS EXCHANGE, STRESS RESISTANCE AND LIFE SPAN**

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Inverse relationship between metabolic rate and life span is a fundamental and well-documented fact. The relationship, however, is poorly studied in direct experiments, e.g. in artificial atmosphere (AA) with altered content of oxygen or other gases. The present study was undertaken in order to modulate life span and stress-resistance by elevated or declined content of atmospheric oxygen, carbon dioxide and noble gases - a problem actual not only in gerontology, but in medicine, submarines, space explorations, etc. Methods. Imagoes of *D. melanogaster* were kept in hypoxia, hyperoxia or hypercapnia modeled by supplementation of oxygen, carbon dioxide, nitrogen, helium and argon. The renewal of AA and feeding medium was carried out on the 'every other day' basis. The oxygen and carbon dioxide content was monitored by a gaseous analyzer. Results. Two identical series of experiments were performed during the winter-spring and spring-summer seasons. In both series we observed a dose-dependent decrease of the mean life span at the hyperoxia and extended life span at the hypoxia or hypercapnia. All in all, longevity inversely correlated with the oxygen consumption, i.e. animals exposed to hyperoxia demonstrated higher rates of oxygen consumption and shorter life span and vice versa. In assessment of the stress-resistance, survival at the heat shock (38°C, 30 min) was increased in hypercapnia and decreased in hyperoxia treated flies, whereas at exposure to 15% hydrogen peroxide the survival was several folds higher at both hypercapnia and hyperoxia. At the alkaline feeding medium (pH=11.8), no significant effects of hyperoxia or hypercapnia on survival were observed. Conclusions. AA can modulate gaseous exchange rate, stress-resistance and life span of drosophila.

#### **PA8 052 ORION: EFFECT ON GASEOUS EXCHANGE, ANTIOXIDANT DEFENSE, STRESS-RESISTANCE, DEVELOPMENT AND LIFE SPAN**

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Orion is a multicomponent drug with impressive anti-cancer effects shown in mouse and human cell cultures and clinical investigations initiated in Institute of Oncology AMS Ukraine since 2007. The authors cherish an idea that Orion could also possess stress-endurance enhancing and longevity-promoting effects. Methods. Orion was supplemented to the feeding medium of *D. melanogaster* in a wide range of concentrations and initial age of flies. Body Vo<sub>2</sub>, Vco<sub>2</sub>, pH, SOD and catalase activity and age-dynamics of survival were determined. Stress resistance was assessed by monitoring survival at the heat-shock, hyperoxia, hypoxia, hypercapnia, acidic (pH=1.6) or alkaline (pH=11.8) feeding mediums, peroxide supplementation, starvation, etc. Results. In optimal concentrations, Orion ameliorated survival of larvae and pupae, increased life span and stress resistance of imagoes. In contrast to the most life span extending treatments, e.g. antioxidants, longevity-promoting effect of Orion was higher when applied in the advanced ages (over 50-60 days). In such experiments, the so-called remaining mean life span could be extended by several folds. Specific anti-aging effects of Orion were also apparent when considering the longest-lived flies. Orion-treated animals could often reach 110-120 days of age (the longest championing up to 127 days), whereas control flies lived no more than 85-90 days. Orion did not significantly change body Vo<sub>2</sub>, Vco<sub>2</sub>, pH, SOD or catalase activity. In the stress-endurance tests, the drug increased survival at the heat shock and pH-related stresses but demonstrated little positive effects in the ROS-associated treatments (peroxide or 100 % oxygen). Most importantly, anti-aging effects of Orion could be inferred from the preliminary clinical investigations aimed to assess the functional status and biological age of patients before and after three weeks of the drug treatment.

#### **PA8 053 IMMUNE RISK PHENOTYPE BUT NOT CMV STATUS IS ASSOCIATED WITH NOSOCOMIAL INFECTION IN ELDERLY IN-PATIENTS.**

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Introduction: The immune risk phenotype is predictive of shorter survival of elderly patients and is comprised of CMV positive serology, increased CD8+T-cells, increased percentage of CD28- CD8+ T-cells. Objectives. To determine the immune risk phenotype and its association with nosocomial infections (NI) in elderly patients. 6 Methods and materials : 252 hospitalised elderly adults aged 85.2 ± years old were immunologically assessed on admission in geriatric units by measurement of percentages and absolute values (AV) of CD4+, CD8+T, NK and B cells, as well as of CD8 and CD4 naïve (CD45RA+CD62L+) /memory (central CD45RA-CD62L+ and peripheral CD45RA-CD62L-) /terminal effector T cells (CD45RA+CD62L-, or CD28- for CD8+T cells) by flow cytometry, using 5-color fluorescence labelling. During two months after admission, patients'progress was closely monitored, particularly for the detection of NI. Results: the incidence rate of NI was 39.4%. The most common infection site was pulmonary tract (n=64). The immune status of the population was studied by comparing two groups defined according to the absence (group I, n=155), or presence of one or more NI (group II, n=97). High levels of CD8+ T cells (% p=0.012, AV p=0.0066), and among them high levels of peripheral memory cells (% p=0.004, AV p=0.014), and terminal effector CD28- T cells (% p=0.0050, AV p=0.0015) correlated with NI. CMV positive serology was associated with elevated levels of total CD8+ T cells, CD8+ memory and terminal effector CD8+ T cells but not with infection. Conclusion: the immune risk phenotype is associated with an increased risk of infection and with positive CMV serology in the elderly hospitalized patient, but the latter did not correlate the occurrence of infection in our series.

#### **PA8 054 BENEFICIAL EFFECTS OF EGB 761 ON TARDIVE DYSKINESIA INDUCED BY HALOPERIDOL IN RATS.**

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Introduction Oxidative stress, glutamate toxicity and mitochondrial impairment may contribute to the pathophysiology of tardive dyskinesia (TD) whose risk increases with advancing age. Tardive dyskinesia is a syndrome characterized by abnormal involuntary movements (AIMs), often of the orofacial region, produced by long-term treatment with antipsychotic drugs such as haloperidol. The free-radical scavenger properties of EGb 761 and its ability to protect mitochondrial function prompted us to determine whether it could prevent TD. Methods and Materials Haloperidol (2 mg/kg/day) was administered chronically to rats using an Alzet pump implanted subcutaneously for 28 days. This treatment led to the development of abnormal oral movements, referred to as vacuous chewing movements (VCMs) and tongue protrusion that were consistently observed after Alzet pump implantation. Four randomized groups of 11 rats were assigned to the following oral treatments: water (control) and EGb 761 50,100 and 200 mg/kg/day. Haloperidol and EGb

761 treatments were initiated at the same time. The behavioural assessment was then regularly performed from day 8 to day 31. Results Eight days after the implantation of pumps, haloperidol treatment significantly increased the VCMs and tongue protrusions in rats as compared to sham-operated animals. Treatment with 100 and 200 mg/kg EGb 761 significantly decreased VCMs score (40 to 50 %) and tongue protrusion (50 to 60%). This effect was significant from 3 weeks after the treatment initiation to the end of the experiment. Conclusion The results show that chronic treatment with EGb 761 when co administered mitigates the development of the orofacial tardive dyskinesia induced by the neuroleptic agent in rats. These data support a beneficial effect of adding EGb 761 to patients treated by neuroleptics who show signs of extrapyramidal side effects due to their treatment.

#### **PA8 055 EGB 761 PROVIDES MEMORY RECOVERY IN A MODEL OF VASCULAR DEMENTIA IN GERBILS.**

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Introduction The objective of the study was to test the efficacy on memory recovery of EGb 761 on a model of vascular dementia induced by global cerebral ischemia in gerbils. This rodent model shows long-term cognitive impairments and those deficits are correlated with the patterns of ischemic lesions. Methods and materials Under isoflurane anaesthesia, the common carotid arteries of gerbils were occluded for 5 minutes. Gerbils were allowed to recover for 24h and then locomotor activity was quantified. Twenty one days after reperfusion, gerbils were tested for impairments in spatial memory using the object placement test. EGb 761 (60 mg/kg) and its vehicle were administered orally 3h after the occlusion and every day until sacrifice. Hippocampal damage was determined by counting the number of viable CA1 pyramidal neurons. Oxidative stress and expression of amyloid precursor protein (APP) and glial fibrillary acidic protein (GFAP) were evaluated by immunocytochemical analysis. Results No difference in time exploring each object was found among groups, thus excluding the possibility of different exploratory activity of the animals. A clear treatment difference in the memory performance of gerbils was observed; sham-operated discriminated between the old and the new location with a memory index of  $0.54 \pm 0.14$ , whereas animals subjected to ischemia did not ( $0.02 \pm 0.19$ ). Treatment with EGb 761 induced a significant spatial memory recovery ( $0.37 \pm 0.15$ ), an increased the number of living pyramidal neurons. Conclusion This study shows that EGb 761 provides in vivo neuroprotection and memory recovery against global cerebral ischemia, even when administered after the insult in gerbils. These data support further evidence of the efficacy of EGb 761 in the treatment of cognitive symptoms of vascular dementia in patients.

#### **PA8 056 INVOLVEMENT OF AKT-FOXO3A SIGNALING IN TOLL-LIKE RECEPTOR 9-MEDIATED ANTI-APOPTOSIS**

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Introduction: FoxO3a transcription factor plays an important role in longevity and tumor suppression by upregulating target genes involved in stress resistance and apoptosis. Toll-like receptors (TLRs) recognize a set of conserved molecular structures called pathogen-associated molecular patterns, which allow them to sense innate and adaptive immune responses. In this study, we investigated the role of FoxO3a transcription factors in TLR9-mediated anti-apoptosis of macrophages. Methods and Materials: The apoptotic nuclei were quantified by flow cytometry or annexin-V staining. To determine the subcellular localization of FoxO3a in cells, we used nuclear fractionation and Western blot analysis to detect the amount of FoxO3a in nuclei and cytoplasm. Real-time RT-PCR was performed using a Light Cycler 1.5. Cells were nucleoporated and allowed to knock-down the TLR9 mRNA using siRNA. Results: Stimulation of macrophages with TLR9 agonist prevented apoptosis induced by serum deprivation through increased expression of FLICE-like inhibitory protein (FLIP) and decreased expression of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL). Inhibition of TLR9 by siRNA or an inhibitor suppressed CpG ODN-mediated anti-apoptosis. Analysis of signaling pathways revealed that the anti-apoptotic effect of CpG ODN required phosphorylation of FoxO3a and translocation from the nucleus to the cytosol of FoxO3a. Overexpression of FoxO3a increased apoptosis by serum deprivation and CpG ODN blocked these effects through FLIP and TRAIL expression. In addition, Akt activation was involved in CpG ODN-induced phosphorylation of FoxO3a, expression of FLIP and TRAIL, and anti-apoptosis. Conclusion: The results demonstrate the involvement of Akt-FoxO3a signaling in TLR9-mediated anti-apoptosis and indicate that FoxO3a is a distinct transcription factor for FLIP and TRAIL regulation. The effective control of FoxO3a by TLR9 stimuli is likely to be important to regulate aging and age-dependent diseases, including atherosclerosis and cancer. This work was supported by KOSEF grant (R01-2007-000-20087-0) and by the MEST grant (R13-2005-005-01003-0).

#### **PA8 057 MITOCHONDRIAL DNA REJUVENESCENCE: RESISTANCE IS NOT FUTILE.**

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INTRODUCTION: The role of mitochondrial abnormalities and mitochondrial DNA (mtDNA) deletion mutagenesis in the etiology of skeletal muscle fiber loss with aging has

been extensively characterized. We previously reported that satellite cells do not accumulate aging-associated mtDNA deletions, and that resistance exercise (RES) training resulted in "mitochondrial gene shifting" and improved mitochondrial oxidative capacity in the skeletal muscle of older adults. To delineate the protective mechanism underlying this effect, we investigated the influence of 6 months of RES training in 16 older adults ( $70 \pm 5$  y, female = male) on the phosphorylation-mediated activation of Akt/mTOR/PGC-1α (ATP) signalling cascade – central regulators of cellular protein synthesis, mitochondrial biogenesis, and skeletal muscle hypertrophy. METHODS and MATERIALS: We analyzed muscle biopsies taken from the vastus lateralis before and after training for protein content of PGC-1α, and total and phosphorylation status of p38 mitogen-activated protein kinase (p38 MAPK), and p44/42 MAPK (ERK1/2), MAPK-interacting kinase 1 (Mnk1), protein kinase B (Akt), tuberin (TSC2), mammalian target of rapamycin (mTOR), 90 kDa ribosomal S6 kinase (p90 RSK), ribosomal protein S6 (rpS6), and AMP-activated protein kinase (AMPK), and satellite cell content. RESULTS: RES training increased protein content of PGC-1α (40%) and phosphorylation status of ERK1/2 (76%), Mnk1 (56%), Akt (76%), TSC2 (68%), mTOR (54%), p90 RSK (40%), and rpS6 (85%), and satellite cell content (19%) ( $P < 0.05$  for all). CONCLUSION: We conclude that the RES training-induced activation of the ATP signalling cascade promotes mitochondrial oxidative capacity, cellular proliferation, survival and anabolic processes concomitantly resulting in hypertrophic- rejuvenescence of the skeletal muscle in older adults. We propose that RES training is a viable therapy for attenuating and/or "reversing" mitochondrial abnormalities associated with sarcopenia. (Funded by the Canadian Institutes of Health Research – Institute of Aging, and Mr. Warren Lammert and Ms. Kathy Corkins).

#### **PA8 058 INFLUENCES OF AGEING AND THE LIFE-EVENTS ON THE OLDER WOMAN'S WEIGHT**

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Objective: It is said that gain and loss of weight is a barometer for health condition. The purpose of this study is to find out if there are any influences of aging and the life-events on the older woman's weight. Subject: One case who measured her height and weight twice a day, at the hour of rising and before bed time for 15 years continuously. Methods: Data was analyzed how the height and weight changed according to aging and some life-events happened during 15 years. The life events were 1) retirement and going abroad to study, 2) environmental changes there, 3) entering the graduate school, 4) again environmental changes there, 5) then returning to Japan. The measuring instrument was the KDS digital height, weight, sitting height machine DST210. Results: 1. The change of height and weight by aging. The height gradually decreased and weight increased for 15 years. 2. The change of weight by life-events. 1) The weight was decreasing after retirement and going abroad. Then 2~3 years later, weight was increasing. 2) The weight was again decreasing after the entrance to the graduate school. Then, returning to Japan, the weight was increasing steadily. It was considered that going abroad to study after the retirement at 60 gave the subject a great deal of psychological stress. When the subject entered the graduate school, the stress became strong again. When the subject became accustomed to the life of study abroad, and returning to Japan, the stress was relieved. Conclusion: It is suggested that the height decrease by aging. While, changes of weight can not be explained only by aging: it is suggested that life-events, relating to the stresses, influence on them, negatively or positively.

#### **PA8 059 RHOA REGULATES AMYLOID- $\beta$ (A $\beta$ ) BINDING VIA $\beta$ 2-INTEGRIN, AND SUPEROXIDE PRODUCTION IN BV2 CELLS IN RESPONSE TO fA $\beta$**

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Introduction: Amyloid- $\beta$  (A $\beta$ ) is one of the main factors to cause Alzheimer's disease. Although fibrillar A $\beta$  (fA $\beta$ ) activates microglial cells that release toxic compounds including reactive oxygen species to induce partial neuronal death, the receptor for fA $\beta$  which transmits its signal and the mechanism of interaction between A $\beta$  and microglia via a specific receptor remain unclear. Methods and Materials: We examined the interaction of microglial cells (BV2) and fA $\beta$  on a gelatin-coated plate. To find specific receptor for fA $\beta$ , several type of antibodies were administered, which neutralize specific receptor for fA $\beta$ . To reveal implication of RhoA in these processes, Tat-C3 toxin (Rho inhibitor) was administered to the cells, and si-RhoA, and various types of RhoA constructs were transfected into BV2 cells. Results: The interaction of cells to fA $\beta$  was markedly enhanced by RhoA inactivation induced by Tat-C3, dominant negative RhoA, and si-RhoA, whereas lysophosphatidic acid (LPA) reduced it. To identify the receptor for M $\alpha$ L, - $\alpha$ fA $\beta$ , we added antibodies such as anti-CD36, -SR-A, -integrin M $\beta$ 2 to the cells to mask receptors: among them M $\alpha$ L $\beta$ 2, and - $\alpha$ - $\beta$ 1, - $\beta$ 2, -anti- $\beta$ 2-integrin antibody mostly suppressed cell binding to fA $\beta$ . In addition, anti- $\beta$ 2-integrin antibody also suppressed the increased

interaction between BV2 cells fA $\beta$ . Conclusion: RhoA regulates interaction between cells and fA $\beta$ : RhoA inhibition stimulates  $\beta$ -integrin-mediated cell interaction to fA $\beta$ .

**PA8 060 GENE EXPRESSION PROFILE IN MOUSE HIPPOCAMPUS FOLLOWING LOSS OF MOLAR TEETH**

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Introduction: It has been demonstrated that loss of molar teeth cause deficits in spatial memory accompanied with various pathological changes in rodents, but the molecular basis of the effect is not well understood. To investigate changes in gene expression in the hippocampus of aged mice following the loss of molar teeth, DNA microarray analysis was performed. Methods and materials: 18-month-old male C57BL/6J mice were deeply anesthetized and all of their upper molar teeth were extracted. The control animals were treated with anesthesia alone. They were bred and maintained for 4 months under conventional conditions and total RNA was extracted from the hippocampal tissue at 22 months of age. Equal amounts of cRNA from 5 mice in each condition were combined and hybridized to Affymetrix GeneChip Mouse Genome 430A 2.0 arrays, which contains 22,600 probe sets representing transcripts of about 14,000 kinds. The results of microarray analysis were analyzed by bioinformatics. Results: Significantly changes in expression following tooth extraction were observed in 90 genes: 21 genes were up-regulated and 69 genes were down-regulated. Some of these genes are already known to be involved in the functions or diseases of the nervous system, such as neurotransmission, neuron development, risk factor of schizophrenia, etc. In particular, Ryr1 and Gria2 (AMPAR) genes, which were down-regulated by loss of molar teeth, were reported to be involved in signaling pathway in long-term depression (LTD) of spatial working memory in hippocampus. Conclusion: These results suggest that loss of molar teeth could affect various events in the central nervous system at gene expression level. Moreover, it is suggested that loss of molar teeth can induce the impairment of hippocampal LTD in aged mice through the alteration of gene expression.

## Track B – Health Sciences and Geriatric Medicine

**PB8 061 THE FREQUENCY OF ANXIETY IN PATIENTS WITH A FIRST TIME DIAGNOSE OF MILD DEMENTIA**

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Introduction: Although anxiety may cause considerable suffering to patients with dementia and their carers, relatively little is known about its features in this group of patients. This study aimed at examining the frequency of anxiety among patients diagnosed with mild dementia for the first time. Methods and materials: From March 2005 to March 2007, outpatients referred to clinics in geriatric medicine and old age psychiatry in Western Norway were screened for participation in a dementia study (DEMVEST). All 196 included patients were diagnosed with dementia (DSM-IV criteria) for the first time and had a MMSE score > 19. Dementia subtype diagnoses were based on established criteria. Anxiety was assessed based on information from both caregivers (NPI Anxiety subscale) and patients (anxiety item from the MADRS). Results: Based on caregiver ratings, 21% of the total sample had clinically significant anxiety, and an additional 20% had subclinical anxiety. One third of the patients reported feeling anxious at least from time to time. There was a weak but significant correlation between caregiver and patient ratings of anxiety ( $p=.036$ ). Female sex ( $p=.042$ ) and lower education ( $p=.028$ ) were significantly associated with higher levels of anxiety, whereas age, duration of illness or MMSE scores were not. Anxiety was most frequent in patients with Dementia with Lewy bodies and least frequent in patients with Vascular dementia (53% vs. 36% on the NPI subscale, 49% vs. 18% on the MADRS item). Conclusion: These data suggest that anxiety is common among patients with first time diagnosed mild dementia, particularly in patients with Dementia with Lewy bodies. Changes in the frequency and severity of anxiety over time as the disease progresses should be examined in future studies.

**PB8 062 CLINICAL CONSEQUENCES OF ANXIETY IN MILD ALZHEIMER'S DISEASE AND DEMENTIA WITH LEWY BODIES**

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Introduction: Alzheimer's disease (AD) and Dementia with Lewy bodies (DLB) are two of the most common types of degenerative dementia in elderly. Previous research has

demonstrated differences in the cognitive and neuropsychiatric profiles of DLB and AD patients. However, relatively little is known about the role of anxiety in the subtypes of dementia. This study aimed at assessing anxiety among patients with AD and DLB and examining its relationship to MMSE scores, functional ability and caregiver distress in the two groups. Methods and materials: Throughout a period of two years, outpatients referred to clinics of geriatric medicine and old age psychiatry in Western Norway were screened for participation in a dementia study (DEMVEST). The current study sample comprised 167 patients diagnosed for the first time with mild dementia (129 with probable AD, 38 with probable DLB) and MMSE >19. In this cross-sectional study, anxiety was assessed with the NPI anxiety subscale, functional ability with the Rapid Disability Rating Scale-2, and caregiver distress with the Relative Stress Scale. Results: 53% of the DLB and 39% of the AD patients had anxiety on the NPI subscale. The differences between the groups in anxiety frequency and severity (5.32 vs 4.22) were not significant. The groups did not differ in their MMSE total scores, nor were the MMSE total scores associated with anxiety. Patients with DLB performed significantly better than patients with AD on the MMSE subtest for memory and the subtests scores were related to anxiety severity ( $r=-.49$ ,  $p=.030$ ). Although caregiver distress and impairment in functional ability were higher among the DLB patients, they were not associated with anxiety. In the AD group, high anxiety was associated with lower functional ability ( $r=-.43$ ,  $p=.006$ ) and higher caregiver distress ( $r=.40$ ,  $p=.007$ ). Conclusion: Anxiety seems to have more severe consequences for AD patients than DLB patients.

**PB8 063 CAN PSYCHOMOTOR DECLINE ON SPEECH PRODUCTION IN MILD ALZHEIMER'S DISEASE BE DUE TO REDUCED CEREBELLAR GRAY MATTER?**

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Introduction: Increasing data indicates that important declines on psychomotor functions occur at the early stages of Alzheimer's disease (AD) and prior to serious cognitive impairment. These changes are mainly related to complex motor functions requiring the involvement of mental capacities for their execution such as in walking or speech articulation. Strong evidence suggests that the cerebellum may play a crucial role on these functions. Because little is known about psychomotor changes on speech production in mild AD and its relationship to the cerebellum, the present study seeks to evaluate different aspects of word generation and the extent to which speech articulation measures correlate to gray matter volume in the cerebellum. Methods and materials: Participants were 20 healthy elderly and 20 mild AD patients. A comprehensive test battery was utilized to assess cognitive capacity. From the battery, four verbal tasks were digitally recorded and further employed for the analysis of psychomotor parameters in word production. Spectrographic analyses were performed on the sound waves of the recorded data. Reaction times (RT), word articulation time and voice intensity were quantified. Structural MRI scans suitable for voxel based morphometry were collected. For each subject the cerebellum was extracted and normalized to a custom template. A linear regression analysis was performed between the gray matter segments and speech scores. Results: Spectrographic results show declines in word production in the AD group in terms of RT, word articulation and principally on voice intensity. AD patients scored lower in speech performance and cognitive tasks than controls though, speech declines were more regular. Pilot analyses of MR images show positive correlation between speech data and gray matter volume in the lateral area of the cerebellum. Conclusion: Results suggest that psychomotor decline on speech production are identifiable changes present in mild AD that relates to cerebellar structural changes.

**PB8 064 EARLY VERSUS LATE-ONSET DEPRESSION IN A PROSPECTIVE AGEING STUDY IN GERMANY**

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Introduction: Depressive disorders are a frequent condition in the elderly. The age of onset determines two different clinical features, one of them, the late onset depression (LOD) has been associated to an increased risk for developing a Mild cognitive impairment (MCI) or dementia. In this study we investigated if this association applies for a representative community sample in Germany too. Methods and materials: Prevalence of affective disorders was investigated in 500 community-dwelling subjects from the birth cohort 1930/32 of the Interdisciplinary Longitudinal Study on Adult Development and Aging (ILSE). Participants were carefully screened for physical and mental health. In all subjects, the structured clinical interview according to DSM-III-R (SCID) and neuropsychological test batteries were applied. The first examination wave (t1) was conducted in 1994-95, t2 in 1998-99 and t3 in 2005-08. MCI was diagnosed according to the ageing associated cognitive decline criteria of the IPA working party. Subjects were also classified by age of onset of depression: early-onset depression (EOD) <65 years or LOD  $\geq$ 65 years. All diagnoses were result of a consensus conference under supervision of senior consultant in old age psychiatry. Results: 381 participants (189 females, 192 males) of the cohort were re-examined in t3, 60 of them had at least one major depressive (MD) episode until t3

yielding a lifetime prevalence rate of 15.7% (EOD= 12.3% and LOD=3.4%). Within the subjects with an MD, patients with LOD were more likely to have a MCI (58%) in comparison to subjects with EOD (27%;  $\chi^2= 4.0578$ ,  $p<0.05$ ). Conclusion: These results support the hypothesis of LOD as a risk factor for MCI and are in concordance with previous studies.

**PB8 065 BRAIN PERfusion CHANGES IN RELATION TO MTL ATROPHY IN AMCI: DEAFFERENTATION AND PLASTICITY?**

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Introduction. Cortical atrophy is correlated with the progression of neuropathological lesions within the medial temporal lobes (MTL) in Alzheimer's disease (AD). On the opposite, hypoperfusion and hypometabolism begin by posterior cortices, particularly in the posterior cingulate cortex whereas no neurofibrillary tangles are reported in these areas at early stages. Our aim was to determine which local and remote functional changes result from MTL volume loss at the predementia stage. Methods and Materials. To investigate this issue, we studied the relationship between entorhinal and hippocampal MR volumes and whole-brain SPECT perfusion through voxel-based SPM correlative analysis in 19 amnestic MCI (aMCI) patients with a memory profile suggestive of early AD ( $p < 0.005$ ). Results. Right MTL atrophy was positively correlated to remote posterior perfusion of the posterior cingulate cortex, and negatively correlated to remote anterior perfusion of the right medial and dorsolateral prefrontal cortex. There was no local correlation between volumes and perfusion within the MTL. Conclusion. These findings provide further insight into functional changes that result from MTL volume loss during the predementia stage of AD. The positive correlation between MTL volumes and posterior cingulate perfusion may reflect the deafferentation of a temporo-cingulate network due to mediotemporal degeneration. The paradoxical negative correlation between MTL volumes and prefrontal perfusion may result from recruitment of an alternative anterior temporo-frontal network, through a possible compensatory perspective.

**PB8 066 COGNITIVE DECLINE AND INFLAMMATORY STATE**

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Introduction. The involvement of inflammatory mediators in the development of neurodegenerative diseases such Alzheimer Disease (AD) has been largely studied with not univocal results. Methods and Materials. We have studied blood levels of interleukin-1 $\beta$  (IL-1 $\beta$ ), interleukin-6 (IL-6) and tumor necrosis factor  $\alpha$  (TNF- $\alpha$ ) in 29 Mild Cognitive Impairment (MCI, of which 17 amnestic and 12 multiple domain type), 16 AD patients and 21 control subjects. We used Diaclone kit for ELISA to measure the levels of these cytokines. The statistical analysis was made using SPSS for Windows. Results. We found a statistically significant reduction of IL-6 levels between AD and MCI as compared to control subjects; considering separately the two different MCI types, there was a significant decreasing of IL-6 between multiple domain MCI as compared to control group. Conclusions. Our results show a reduction of the inflammatory state and immune system activation in patients with MCI and AD.

**PB8 067 DEMENTIA PREVALENCE AMONG ELDERLY KIEV RESIDENTS AND**

**COGNITIVE FEATURES OF MILD/MODERATE VAD AND AD**

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Purposes, Subjects and Methods: (1) To assess the prevalence of dementia among Kyiv inhabitants of 60 and older, we examined the randomized sample of inhabitants of three Kiev districts being characterized by populational stability (n=504). The respondents were interviewed in their homes using MMSE and LIEPAD - Quality of Life Questionnaire. (2) To assess the specificities of cognitive profile (MMSE, HDS, ADAScog, GDS, HIS) and qEEG in the patients with vascular (VaD) and Alzheimer (AD) type dementia, mild and moderate stages (n=80), of them: 43 with AD and 37 with VaD. Forty subjects were control. Results: Based on the population screening criteria, the dementia prevalence among Kyiv inhabitants aged 60+ was 10.4%. With increasing age, the number of demented subjects increased. Education, the number of years of study and mental type of work influenced positively the elders' cognitive status. Decline of cognitive status had a negative impact on their quality of life. As to the neuropsychological profile of AD versus VaD patients, both at mild and moderate stages, the prevalent impairment was found in the episodic memory. In VaD patients there was more prevalent impairment of executive

functions. In parallel, the prevalent relative intensity of theta-rhythm and the decreased relative intensity of alpha-rhythm, being more pronounced in the hippocampus projection areas, were found on the qEEG in the patients with AD compared to VaD patients. Alpha/theta coefficient was also informative in the former. Differences between neuropsychological profile and brain functional activity (qEEG data) were less pronounced in patients with AD and VaD with an increasing dementia severity.

**PB8 068 PREVALENCE OF TREATMENT WITH BENZODIAZEPINES IN A GERIATRIC'S DAY HOSPITAL DETECTED ON FIRST ADMISSION FOR CLINICAL EVALUATION OF MEMORY DISORDERS**

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Introduction: Many drugs can disturb memory functions. Benzodiazepines (BZD) are well known to be cause of amnesia with consequent cognitive impairment. Elderly patients are often polymedicated including benzodiazepines. Objectif of the study: The aim of this study is to evaluate the prevalence of treatment with benzodiazepines in patients admitted in a day hospital for assessment of memory disorders. Methods: Prospective study in a geriatric's day hospital on all patients admitted for memory disorders during one year (january to decembre 2008). We identified all patients treated with benzodiazepines, type of BZD, time of treatment and indication. Associated other psychotropic drugs are considered. Results: In 152 patients (all with MMSE of Folstein less than 28), 25 % are treated with BZD, 50 % of these drugs are long acting. 88 % of them take this treatment daily without interruption for more than one month. The indication is: anxiety 46 %, insomnia 28 %, agitation 12.8 %. Discussion: The prevalence of a treatment with benzodiazepines in our patients admitted for memory disorders is very important (25 %). In our memory assessment this kind of treatment may influence the neuro-psychological tests with difficulties to interpretate. These treatments are often prescribed for long periods (and longer than the indicated period). In our daily clinical practice we realised that it is very difficult to interrupt the treatment or to reduce the dosage in elderly patients. Conclusion: The prevalence of a treatment with benzodiazepines in elderly patients seen in memory consultation is very important (25 %). These drugs can worsen memory troubles already present and consequently complicate cognitive assessment. It seems important to reduce benzodiazepine prescription in association with the general practitioner of the patient.

**PB8 069 EFFECT OF DONEPEZIL ON RADIOLOGICAL AND CLINICAL MARKERS IN PATIENTS WITH AMNESTIC MILD COGNITIVE IMPAIRMENT: A RANDOMIZED, PLACEBO-CONTROLLED TRIAL**

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INTRODUCTION Several studies have demonstrated that the acetylcholinesterase inhibitor Donepezil has a beneficial symptomatic impact on patients affected by Alzheimer's disease (AD), not only on cognitive aspects, behaviors, but also on global functioning and on daily living activities, particularly in mild AD. The main objective of this study is to examine the effect of Donepezil on hippocampus volumes, a MRI marker of the disease progression, in a sample of patients with mild amnestic cognitive disorders evoking pre-demential stage of AD. METHODS AND MATERIAL: In this double-blind, randomized, placebo-controlled, two-parallel groups study, the objective is to enroll 240 patients that will receive 52 weeks of treatment with donepezil (10mg/d) or placebo. To be eligible, patients must meet all following criteria: (1) amnestic syndrome of temporal type measured by the Free and Cued Selective Reminding Test (free recall< $\text{or } =17$  or total recall<40 ), (2) preserved activities of daily living, and (3) global clinical dementia rating stage of 0.5. Subjects will be required to have structural brain MRI scan prior to baseline visit validated by a central reading structure. A second MRI will be realized at the final visit (12 months) or in case of premature withdrawal after 6 months. The primary outcome measure is the change from baseline in hippocampus volumetry (left+right) measured at MRI, using a semi-automatic segmentation technique. Secondary outcome of interests include evolution of neuropsychological performances and change in other brain MRI markers. RESULTS 28 French clinical sites and 24 MRI centres are involved in the study, inclusion objectives will be reached in April 2009. A full description of the sample and a comparison of treated and placebo arms for baseline radiological and clinical characteristics will be provided. CONCLUSION This study will allow evaluating the impact of Donepezil on MRI markers at early stage of AD disease.

**PB8 070 GROUP DIFFERENCES IN RESPONSE PATTERNS ON A MEASURE OF CONVERSATIONAL SKILLS IN DEMENTIA**

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**Introduction** Communication problems associated with dementia of the Alzheimer's type (DAT) have serious negative consequences on family caregivers. Despite recent advances in our knowledge of communication in DAT, several questions remain unanswered regarding strategies to minimize communication difficulties. The purpose of the current study was to examine differences in family caregiver responses on an empirically derived 74-item questionnaire on communication and DAT called the Perception of Conversation Index – Dementia of the Alzheimer type (PCI-DAT) by clinical stage. Methods and materials A total of 113 family members completed the PCI-DAT. They rated the communication skills of their relative (n = 84 with DAT; n = 29 controls) along five domains. The 113 family members were divided into clinical stage DAT and control groups: 44 early stage (EDAT), 22 middle stage (LDAT), 18 late stage (LDAT), and 29 normal controls. Results Discriminant correspondence analysis (DCA) was conducted to find group differences in response patterns on the PCI-DAT. DCA performs a principal components-type analysis. DCA identified 2 factors accounting for 98% of the variance in the data. Factor 1 represents differences in response style between the control and all DAT groups. Factor 2 represents differences between the DAT groups. The significance of the differences between groups was tested using computationally derived confidence intervals. The control group was significantly different from all DAT groups ( $p \leq .05$ ) and the EDAT group was significantly different from the LDAT group ( $p \leq .05$ ). Conclusion Reliable group differences in response patterns on the PCI-DAT were found. The difference between the control and DAT groups reflects presence/absence of dementia. The lack of reliable differences between the MDAT vs. EDAT and LDAT groups reflects the continuous rather than dichotomous nature of DAT progression. Patterns of performance on the PCI-DAT that differentiated groups will also be discussed.

**PB8 071 PREDICTORS OF RAPID COGNITIVE DECLINE AMONG DEMENTED SUBJECTS AGED 75 OR MORE: ("SUJET AGÉ FRAGILE – EVALUATION ET SUIVI" COHORT – SAFES)**

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**Objectives:** To identify factors predictive of rapid cognitive decline (RCD) among elderly subjects aged 75 or over suffering from dementia. **Methods:** The analysis concerned 250 patients drawn from the "Sujet Agé Fragile – Evaluation et Suivi" (SAFES) cohort, presenting a dementia syndrome at inclusion and followed up for at least one year. RCD was defined as the loss of at least 3 points on the Mini-Mental State Examination (MMSE) in the follow up period of 12 months. All patients underwent a standardised geriatric evaluation. Logistic regression was used to identify factors predictive of RCD. **Results:** In the study sample, 84 patients (33.6%) presented RCD. The factors identified in multivariate analysis as predictive of RCD were: high level of education ( $OR=7.8$ ,  $95\%CI=[1.9-31.2]$ ,  $p=0.004$ ), risk of depression ( $OR=1.8$ ,  $95\%CI=[1.02-3.18]$ ,  $p=0.048$ , and the initial MMSE score ( $OR=1.1$ ,  $95\%CI=[1.0-1.2]$ ,  $p=0.002$ ). Among subjects with a main caregiver (n=177), the predictive factors were malnutrition or risk thereof ( $OR=4.2$ ,  $95\%CI=[1.3-14.1]$ ,  $p=0.02$ ), risk of a fall ( $OR=2.6$ ,  $95\%CI=[1.1-6.1]$ ,  $p=0.03$ ), caregiver burden ( $OR=2.6$ ,  $95\%CI=[1.1-6.4]$ ,  $p=0.04$ ) and initial MMSE score ( $OR=1.1$ ,  $95\%CI=[1.0-1.3]$ ,  $p=0.004$ ). **Conclusions:** As soon as dementia is diagnosed in elderly subjects, information should be collected about the subject's socioeconomic status, nutritional status, risk of falling, mood state, and caregiver burden. This would enable the provision of appropriate therapeutic care, and make it possible to adapt follow-up in case of a risk of accelerated cognitive deterioration.

**PB8 072 A PACHYMEMINGITIS ASSOCIATED WITH A WALDENSTROM DISEASE, PRESENTING AS AN ACUTE CONFUSIONAL STATE**

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**Introduction** We report a case of a pachymeningitis associated with a Waldenstrom disease presenting as a confusional state. Clinical case An 80 years old woman with a past history of breast cancer was admitted to the geriatric ward for confusional state without any fever and rapidly progressive walking disorder. The physical and cognitive examination disclosed a temporo-spatial disorientation associated with a persecution delirium, a static and kinetic cerebellar syndrome, and a central vestibular syndrom. The cerebral MRI highlighted a pachymeningitis with gadolinium enhancement without intraparenchymatous lesion. An IgM monoclonal dysglobulinemia was disclosed in the blood sample and the cerebro-spinal fluid examination found an aseptic lymphocytic meningitis associated with monoclonal IgM. All immunological and carcinological assessments were in normal ranges. The osteo-medullary biopsy confirmed Waldenstrom disease diagnosis. Discussion Pachymeningitis are usually idiopathic, of infectious origin, auto-immune or

metastatic. The finding of a monoclonal IgM in the cerebro spinal fluid suggests the existence of an infiltration of the leptomeninges by the immunocytome. Conclusion We thus report an exceptional case of a pachymeningitis associated with a Waldenstrom disease, revealed only by central neurological symptoms.

**PB8 073 COGNITIVE TESTING IN GERIATRICS MOBILE TEAM**

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The aim of the geriatrics mobile team (GMT) is to provide a geriatric evaluation adapted to the frail elderly population in hospital wards. **Problems.** Screening for cognitive disorders is one of the essential missions of the GMT. In France only 50% of cognitive disorders are diagnosed most often at a moderately severe stage. The purpose of the GMT is not doing an etiologic diagnosis of these disorders, but to detect them whatever the stage (memory complaints, MCI, Alzheimer disease or confusion). **Helping the medical staff to take care of the patient.** Ladders and feasibility. Many validated scales exist for the detection of cognitive impairment. They are not all easy to use by GMT. After several years of decline, by comparing their sensitivity and specificity, it appears that the Mini Mental State (MMS), the test of the clock, and the Codex have seemed more appropriate to the testing. The latter two have the advantage of being faster to achieve (3 minutes). An assessment of autonomy and executive functions by the ADL and IADL is also necessary. **Limits.** However, cognitive testing by GMT have limits, related to the patient as the socio-cultural level or the reason for hospitalisation. There are also limitations related to the tests themselves, whose results are not necessarily synonymous with pathology. The cognitive screening in GMT is subject to several constraints. The time of the evaluation must be short in order to respond to numerous requests. The impossibility in this period to establish a definite diagnosis do not help to start a specific treatment. The GMT must adapt itself to the specificities of each ward. **Conclusion.** The GMT is an adaptable structure for the detection of cognitive impairment in hospital by its multi-disciplinary approach, repeated assessments, the use of simple, rapid reproducible sensitive and specific tests. The GMT try to interest the non geriatric medical staff to cognitive impairment to improve the global care.

**PB8 074 RETROSPECTIVE ANALYSIS OF THE RELATION BETWEEN ALZHEIMER'S DISEASE AND PRESBYCUSIS**

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**Objectives:** To evaluate the association between Alzheimer's disease (AD) and presbycusis **Methods:** Case-control study of 28 AD patients and 28 controls who had consulted in the neurology-geriatry outpatient's clinic between 1 January 2006 and 31 December 2007 for memory problems. The cases and controls were matched for age ( $\pm 1$  year) and sex. The following data were recorded: socio-demographic characteristics, associated comorbidities, level of autonomy (Lawton's and Katz's scales), nutritional status (MNA), cognitive (MMSE) and auditive evaluation (tonal liminar audiometry). Presbycusis was defined as mild for a hearing loss of 21-40 dB, and moderate when hearing loss was 41 dB or more. The strength of the associations was assessed by conditional logistic regression. **Results:** Average age of the study population was  $75.6 \pm 8.4$  years, with a majority (89.3%) of women. Average MMSE score was  $26 \pm 3$  for the controls, and  $21 \pm 5$  among the cases. Fifty subjects presented presbycusis (89.3%). Two cases and four controls had normal hearing. In total, 26 cases of presbycusis were observed among the cases: 10 mild (38.5%) and 16 moderate (61.5%). Among the controls, there were 17 mild cases (70.8%) and 7 moderate (29.2%). After adjustment for initial MMSE score, the multivariate analysis showed that the cases were more likely to suffer presbycusis than the controls, irrespective of the degree of severity of the hearing loss ( $OR=2.1$ ;  $p=0.61$ ,  $95\%CI[0.1-33.2]$ ). Among subjects suffering from presbycusis, AD was more often observed in case of moderate presbycusis than in the presence of mild presbycusis:  $OR=1.29$  ( $p=0.11$ ,  $95\%CI[0.6-311.8]$ ). **Conclusion:** This study shows the relation between Alzheimer's disease and presbycusis, in the occurrence or even acceleration of cognitive decline in AD. A prospective study with longitudinal follow-up would make it possible to gain greater insights into this association.

**PB8 075 DIFFERENCES IN TOTAL SCORE FOR THE MINI MENTAL STATE EXAMINATION DUE TO DIFFERENT BASELINE TIMES OF TESTING.**

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**Introduction** The Mini Mental State Examination is a widely used screening instrument for cognitive impairment and dementia. Patients admitted to a psychogeriatric hospital, are tested with the MMSE during their three first days. Procedural conditions during the examination are of importance for the patient's possibility of fully showing his or her potential during psychometric examination (Lezak 2004). The objective of the present

study was to investigate possible differences in total score on the MMSE on admission to psychogeriatric hospital due to baseline time of testing. Methods and materials This is a prospective and randomized study on the use of MMSE, where one group of patients was tested on the first day of admission (n=28) and the other (n=26) was tested on the third day of admission, both times called baseline. Both groups were tested again on the seventh day of admission. Change in MMSE scores were calculated for both groups, and mean deltas were compared using non-parametric statistical methods. Results The difference in delta values between the two groups were not statistically significant ( $p=0.086$ ) when using Mann-Whitney U-test (non-parametric). The mean change in MMSE-score from baseline to day seven was 0.79 (range -5.10; KI-0.35,1.92) points in the first day group and -0.58 (range-5.3; KI-1.37,0.22) in the third day group. A clinical relevant change was set to three points. Conclusion The mean change in score between baseline and seventh day was 0.79 in the first day group and -0.58 in the third day group. The difference in delta between the two groups was not statistically significant ( $p=0.086$  Mann-Whitney). With a clinical relevant change in MMSE score set to three points, the choice for baseline time for testing showed to be of limited clinical importance when using the MMSE on admission to a psychogeriatric hospital.

**PB8 076 COGNITIVE ASSESSMENT IN GERIATRIC POST EMERGENCY UNIT**  
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Introduction: The prevalence of cognitive alteration among geriatric patients admitted after transition from Emergency Room is unknown. The objective of this study was to evaluate the feasibility and the methodological limits of cognitive assessment in a geriatric in patient unit in the Toulouse University Hospital. Method : Our study was retrospective and trans sectional. 575 patients were assessed during nine months with the Mini Mental Status Examination (MMSE). Their mean age was 85.3, 74 % were living in the community. Reasons for hospitalization were mainly respiratory or urinary tract infections (20.5%), cardio vascular diseases (17.2%), neuro psychiatric disorders (15.3%). Results : Three hundred and twenty patients (56.2 %) underwent MMSE, the mean score was 18/30. Our cognition assessment pointed out that 64.9% had pathological results. One third of patients was already diagnosed with dementia. Acute cognitive alteration or delirium was the first reason for MMSE not to be performed. Predictive factors of non assessment with MMSE were a poor nutritional status and a loss of ADL abilities. Among patients without medical history of dementia, the mean score was 22/30. Most de novo detected patients with cognitive alteration (n:94) had a mean score between 20 and 23/30. Although the general practitioner were informed, only 38.3% of them were reevaluated later with the MMSE. Conclusion : Screening for cognitive alteration is feasible in geriatric post emergency unit. It allows diagnosing mild cognitive alteration in this population. Delirium detection needs to be associated. It seems that other screening tests could be shorter and easier to perform in post emergency unit, their sensibility and specificity could be evaluated in further studies. Nevertheless assessment of cognitive status could improve the medical management of these patients and can optimize their discharge.

**PB8 077 BASELINE CHARACTERISTICS OF PATIENTS RECEIVING INSURANCE COVERAGE OF CHOLINESTERASE INHIBITORS FOR ALZHEIMER DISEASE UNDER A POLICY OF 'COVERAGE WITH EVIDENCE DEVELOPMENT'**  
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Introduction: Studies of long-term effectiveness of cholinesterase inhibitors (ChEIs) are limited. In 2007, the provincial drug insurance plan (PharmaCare) of British Columbia (BC) Canada launched the Alzheimer Drug Therapy Initiative (ADTI), with coverage of ChEIs for mild-to-moderate Alzheimer Disease (AD) patients, defined with a Standardized Mini-Mental State Examination score (SMMSE) of 10 to 26 and a Global Deterioration Scale (GDS) between 4 and 6. The 'coverage-with-evidence-development' policy stipulated that studies of ChEI effectiveness be conducted simultaneously. Objective: To assess whether the covered population conforms with policy expectations enough to develop generalizable evidence of ChEI effectiveness. Methods: Administrative data from PharmaCare application forms including SMMSE, GDS, previous ChEI use, and demographic data were compared with census and AD prevalence data. Results: In the first year of the ADTI, 4156 patients received coverage. At 12 months, 70% remained on coverage and had prescriptions filled, while 11.9% were approved for coverage but never got prescriptions filled, and 4.4% were deceased. 5437 used ChEIs without PharmaCare coverage. Census and prevalence data indicate coverage reached approximately 25% of clinically eligible patients. The composition of dementia patients on coverage were 66% AD, 28% AD plus vascular dementia, 5% AD plus Parkinsonian features, and 1% AD plus other features. The mean SMMSE at initial coverage for both naïve (43%) and non-naïve patients were 20.2 with a GDS of 4.5. Among patients who had taken ChEIs for over 2 years, the mean SMMSE was 18.1 and mean GDS 4.7. Conclusion: Distributions of patient characteristics are consistent with expectations, particularly the greater proportion of mild cases. Low enrollment may be due to (1) PharmaCare coverage beginning only after a

family's annual eligible drug expenditure exceeds an income-adjusted threshold,(2) physicians' lack of knowledge or skepticism of ChEI effectiveness, or reluctance to test patients and submit PharmaCare application forms.

**PB8 078 EFFECT OF ETANERCEPT IN AN INTRACEREBROVENTRICULAR STREPTOZOZOCIN MODEL OF ALZHEIMER'S DISEASE IN RATS**  
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Introduction: Alzheimer's disease is a neurodegenerative disease accompanied with dementia. Rats treated with intracerebroventricular (i.c.v.) streptozotocin (STZ) are used as an experimental model of Alzheimer's disease. This model proposes that central STZ administration induces brain pathology and behavioral alterations resembling those in Alzheimer's disease patients. It is thought that inflammatory reactions are potential culprits in memory impairment and Alzheimer's disease. In this study, we aimed to investigate the beneficial effects of tumor necrosis factor alpha (TNF-alpha) antagonist etanercept in the ICV STZ induced cognitive deficits. Materials and methods: The experiments carried out on male Sprague-dawley rats weighing 250-300 g. Rats divided into two groups: the sham-operation group and the bilateral i.c.v. injection of STZ (3 mg/kg) group. The rats were treated with STZ twice, on days 1 and 3. The learning and memory behaviour was assessed using passive avoidance and Morris water maze tests. After confirmation of acquisition impairment with these tests, animals were divided into 2 subgroups. While the first group received no treatment, the second group treated with i.c.v. etanercept (0.3 mg/kg) for 10 days starting from the 25th day after STZ injection. The Morris water maze test was reapplied on the 35th day after STZ injection and then all the animals decapitated. Results and conclusion: ICV-STZ induced rats showed less cognitive performance in MWM and passive avoidance tests than the sham-operation group. On the other hand i.c.v. STZ used rats treated with etanercept were found to have a higher performance in cognitive tests than the animals injected i.c.v. STZ, but the differences were not statistically significant. These results show that TNF-alpha antagonist etanercept might be a potential agent in the treatment of cognitive impairment in Alzheimer's disease.

**PB8 079 SACCADIC EYE MOVEMENTS AND COGNITION IN OLDER ADULTS**  
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Introduction: Since saccadic eye movements (SEM) involve focused attention (FA) and reflect brain function, we investigated the relation between SEM parameters, scores of focused attention and cognitive status in cognitively normal older adults, patients with amnestic Mild Cognitive Impairment (MCIA) and mild Alzheimer's disease (AD). Methods: 73 normal older adults, 20 patients with MCIA and 20 patients with mild AD completed the pro and anti-saccade SEM paradigms and the following psychometric battery as appropriate: Stroop, Mattis Dementia Rating Scale (DRS) Wisconsin Card Sorting Test (WCST) California Verbal Learning Test (CVLT) Montreal Cognitive Assessment (MoCA) and Mini-Mental State Exam (MMSE). Results: In the normal group, saccadic reaction time (SRT) and coefficient of variation (CV) in anti-saccade, inversely correlated with the Stroop scores ( $p<0.005-0.05$ ) but not with the WCST. Z-scores correlated with the anti-saccade CV only at the expense of the Stroop score. Anti-saccade errors correlated negatively with the Stroop scores ( $p<0.001-0.01$ ) and positively with errors in the WCST ( $p<0.01-0.05$ ). Demographics and MMSE scores of MCIA and AD patients did not differ. Stroop scores inversely correlated with anti-saccade errors and CV in the AD group, but not in the MCIA group. Compared to cognitively normal older adults, patients with MCIA had significantly more errors and longer SRT in the anti-saccade paradigm only. Mild AD patients had significantly larger SRT, CV and errors in the pro and anti-saccade paradigms. AD patients had significantly larger CV (pro and anti-saccade) and pro-saccade errors than patients with MCIA. Conclusion: 1) SEM parameters correlate with FA scores in cognitively normal older adults. 2) Compared to normal, both AD and MCIA patients have more anti-saccade errors. 3) Patients with AD have larger CV (pro and anti-saccades) and pro-saccade errors when compared to normal and to MCIA. 4) SEM can distinguish between patients with MCIA and mild AD.

**PB8 080 INVOLVEMENT OF LIPOPROTEIN (A) PHENOTYPES IN THE ETIOLOGY OF CEREBRAL WHITE MATTER LESION**  
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Background and purpose: Lipoprotein (a) [Lp(a)] is well-known as a risk factor for atherosclerosis, however, the association between Lp(a) phenotypes and the etiology of cerebral white matter lesion, so-called leuko-araiosis, demonstrated by MR image with geriatric syndrome remains unclear. Methods: We conducted a study in 113 elderly patients with neuropsychiatric disorder by assessing of MR images and determining of Lp(a) phenotypes. They were divided into 4 groups according to the Fazekas scale for grading leuko-araiosis, and we compared the distribution of Lp(a) phenotypes and

background factors in each group. Results: Alzheimer's disease and cardioembolic stroke were frequently seen in groups with mild leuko-araiosis, whereas the frequencies of vascular risks, previous history of stroke and vascular dementia were high in group with severe leuko-araiosis. Multivariate analysis showed strong association of S4 homozygote of the Lp(a) phenotype to severe leuko-araiosis, indicating the S4 homozygote as an independent factor for severe leuko-araiosis as well as hypertension, a high level of Lp(a) of 40mg/dl or more. Among all patients, a high Lp(a) level and S4 homozygote, showing a low level of Lp(a), were seen in 20.4%, respectively. Conclusion: This contradictory finding that the high levels of Lp(a) and S4 homozygote was both associated with severe leuko-araiosis indicated the possibility of different mechanisms for developing white matter lesions.

**PB8 081 EFFECT OF DANCE-BASED EXERCISE PROGRAM ON MOBILITY AMONG OLDER ADULTS WITH DEMENTIA**

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Introduction Dance therapy is a therapeutic use of dance and movement which plays an important role in the process of promoting emotional, social and physical integration of human beings. We would like to present our experience with the Exercise Dance for Seniors (EXDASE) program for people with dementia. We conducted a randomized controlled trial to measure the effect of EXDASE program on mobility among older residential home residents in the Czech Republic. Methods and materials Twenty eight participants (mean age 83years; SD 8.6) were randomly assigned into an experimental or control group. All of them scored in the range of dementia in Mini Mental state examination (mean MMSE 19.8; SD 4.5). Participants in the experimental group completed three months dance-based exercise program designed for older adults with functional limitations. Mobility was assessed using chair-stand-test, 2-minute step test, chair sit-and-reach test, and timed up-and-go test before and after the intervention. Paired sample t-test statistic was used to calculate pretest to posttest differences in performance. Results Participants in the experimental group performed better in posttest compared to pretest and participants in the control group showed further decline in all measures. In the experimental group, we found a significant improvement in chair stand test ( $p=0.039$ ), the chair sit-and-reach test ( $p<0.01$ ), and the timed up-and-go test ( $p<0.01$ ). There was a significant decline in the 2-minute step test ( $p=0.46$ ) and the timed up-and-go test ( $p=0.033$ ) in the control group. Conclusions The findings indicate that the EXDASE program may help maintain or even improve mobility in a sample of low-functioning institutionalized older adults with dementia. This research project was supported by the grant 8487-3/2005 of the Ministry of Health of the Czech Republic and the institutional research plan MSM 0021620843 of the Faculty of Humanities, Charles University in Prague.

**PB8 082 TRANSCULTURAL ADAPTATION AND PSYCHOMETRIC VALIDATION OF A FRENCH-LANGUAGE VERSION OF THE QOL-AD**

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OBJECTIVES: The aim of this study was to assess the psychometric properties and the transcultural adaptation into French of the QoL-AD (Quality-of-Life in Alzheimer's disease). METHODS: Patients were recruited from six French hospitals and one Swiss hospital. Patients and proxy gave each an informed consent. A total of 120 patient-proxy pairs were recruited in six French hospitals and one French-speaking Swiss hospital to take part in the study. The patients presented mild to moderate Alzheimer's disease (MMSE  $\geq 10$ ). The QoL-AD includes 13 items and was administered by an interviewer for patients and was self-administered for caregiver proxies. Thus the psychometric validation enabled the study of feasibility, acceptability, convergent and discriminant validity, and reliability of the instrument. RESULTS: Patients were on average 82 years (SD=6) with a majority of women (64%). Proxies were mainly women and were on average 66 years (SD=15). The questionnaire was filled out on average in 8 minutes (SD=4) by patients and in 6 minutes (SD=4) by proxies. Principal components analysis revealed no evident multidimensionality. The French version of the QoL-AD showed good internal consistency (Cronbach's alpha coefficient  $\geq 0.70$ ) and good reliability ( $ICC > 0.80$ ) at a two-week interval, for patient and caregiver questionnaires. Convergent validity as indicated by correlation between the QoL-AD (disease-specific instrument) and the dimensions of the Duke Health Profile (generic instrument) was also good for eight dimensions in the Duke profile ( $p<0.05$ ). Discriminant validity showed a significant difference for depression ( $p=0.0025$ ) and did not show significant difference for two groups of dementia ( $p=0.11$ ). CONCLUSION: There is now a validated French version of the QoL-AD available,

following transcultural adaptation according to international recommendations, which possesses good psychometric qualities.

**PB8 083 FROM WALKING AREAS TO HEALING GARDENS FOR ALZHEIMER PATIENTS: METHODOLOGICAL PRINCIPLES OF DESIGN.**

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INTRODUCTION How adapted are nursing homes to Alzheimer patients care? How to design a secured healing garden for our establishment which treats patients with moderate or severe Alzheimer disease with frequent psychological and behavioral symptoms, often following a degradation of their physical health? MATERIALS AND METHODS We conducted two enquiries: one carried out in 21 geriatric homes in Lorraine about their gardens, one including a total of 55 nursing staff, patients and families in our establishment. The aim was to know more precisely about their experience, their needs and their desires in relation to the anticipated creation of a healing garden. RESULTS 90 % of the 21 participating establishments host patients with Alzheimer's disease and all have gardens. 62 % have specific adaptation to residents suffering from reduced mobility. Concerning Alzheimer patients, the only specific adaptation is a secured outdoor area, present in 38 % of the participating establishments. In none of them, any specific adaptation of the green space was part of the nursing concept. With the results of the second enquiry our team put together established concepts of non-pharmacological therapies, published data from existing healing gardens in a points-to-consider document about the state of the art for healing gardens. The design integrates an artistic approach in order to integrate specifically designed sculptures, which would stimulate patients in a targeted fashion, would invite all visitors including children to experience and enjoy sculptures by offering an interactive approach. Together with specialized staff, these sculptures are planned to be used for interactive therapeutic approaches. CONCLUSION This prompts us to offer a methodology which could help designers of healing gardens to even more specifically address the needs of Alzheimer patients, their families and the nursing staff and enhance the therapeutic potential of these green spaces.

**PB8 084 TOWARDS AN AGING SPECIFIC COGNITIVE PHENOTYPE**

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Introduction: Normative aging may not reflect the effects of "Aging Proper." We used growth mixture modeling (GMM) to demonstrate homogeneous aging subpopulations with discriminable cognitive trajectories, and argue that only one reflects Aging Proper. Methods and Materials: GMM was applied to six cognitive measures in 547 non-institutionalized septuagenarians followed up to 3 years. Minimal cognitive change was attributed to "Aging Proper". More aggressive change was attributed to "Aging et alia" on the assumption that aging is a universal process that represents the least possible influence on longitudinal cognitive change. Intraclass change in multiple cognitive measures was used to construct a multivariate "Aging Specific Cognitive Phenotype (ASCP)". Results: For each measure, multi-class models fit better than single-class models. The members of the Aging Proper trajectory class were highly concordant across measures. The ASCP was characterized by simultaneous decline in visuo-spatial function and improvement in verbal fluency. In contrast, "Aging et alia" was characterized by rapid declines in memory and executive function. "Aging Proper" had improved 10-year survival (Chi<sup>2</sup>: df 1;  $F = 14.57$ ,  $p < 0.001$ ), and lower rates of institutionalization after 10 years (at a mean age = 88.8 yr!) than "Aging et alia" (Chi<sup>2</sup>: df 1;  $F = 4.29$ ,  $p = 0.04$ ). Conclusion: Our data suggest that simultaneous decline in visuospatial function coupled with improving verbal fluency best describes the ASCP. They also suggest that Aging Proper is not associated with decline in memory task performance. Thus, previously reported age-related declines in memory are more likely to represent the effects of comorbid disease and not aging per se. A singular advantage of our method is that it associates each individual in the dataset with a specific trajectory class. Thus, for the first time, biomarkers can be associated with an aging specific cognitive phenotype.

**PB8 085 IMPACT OF MILD COGNITIVE IMPAIRMENT ON DRIVING SAFETY – EXPLORING THE EVIDENCE**

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Introduction: Mild cognitive impairment (MCI) is a syndrome characterized by a cognitive decline greater than expected for age. MCI is classified into four subtypes based on the

presence or absence of memory impairment and the impairment of only one or more than one cognitive domain. People with MCI preserve their ability to complete basic activities of daily living but may show minimal impairment in completing instrumental activities of daily living. As such, there is growing concern that MCI may affect fitness-to-drive. The objectives of this study are: to describe cognitive-related impairments and how these may potentially impact on driving safety; and, to identify psychometrically sound screening tools enabling health care professionals to better identify those with MCI who require a comprehensive pre-road and on-road assessment. Methods and materials: A structured analysis of the current literature on MCI, on cognitive abilities required for safe driving, on the link between affected abilities and driving behaviours, and on potential screening tools for at-risk drivers was completed. Results Cognitive functions that are impaired in each MCI subtype will be presented with a specific emphasis on the relationship between each type of cognitive impairment and its impact on driving. Psychometric properties of useful screening tools that identify affected domains in drivers with MCI will be discussed. Conclusion The theoretical analysis of the relationship between the cognitive impairments of MCI subtypes and the task of driving suggests that safe driving may be compromised in those with MCI. To date, this is an under-explored area of healthcare screening. A scientific framework is required that permits those with MCI to continue to drive while they are safe but, under a "best practice" model that ensures safety of the individual and of society.

**PB8 086 PATTERNS OF LOSSES OF BASIC ACTIVITIES OF DAILY LIVING IN ALZHEIMER PATIENTS. THE FRENCH COHORT REAL**

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Introduction: Functional decline in Alzheimer's disease (AD) patients is an important factor affecting quality of life, carries a high burden for caregiver, and places AD among the most costly diseases in terms of healthcare in Western countries. Little is known about progression of disabilities. A previous study in the French REAL cohort determined a leading pattern for losses of the 8 instrumental activities of the daily living of Lawton scale in AD women. The aim of the present study was to determine patterns of losses of abilities in the 6 Basic Activities of Daily Living (BADL) in men and women of the REAL cohort. Methods and material: Sixteen French university hospitals included in the non-interventional REAL cohort, from April 2000 to June 2002, 199 men and 488 women with mild to moderately severe AD (Mini-Mental State Examination scores between 10 and 26 at inclusion). Mean age of patients was 77.8 years. Data at inclusion were analyzed. The 6 BADL were assessed with the Lawton scale. Patterns of losses of abilities in the 6 BADL were described using Lawton binary quotation: 1 for full autonomy to perform an activity, 0 otherwise. Results: At inclusion data were complete, and for the majority of women (53%) the order of losses in BADL was physical ambulation, grooming, bathing, dressing, toilet and feeding. For 47% of men the order of losses was lightly different: physical ambulation, dressing, grooming, bathing, toilet and feeding. Conclusion: In this study the losses of the 6 BADL assessed with Lawton binary quotation followed 2 lightly different patterns for about half men and women. Lawton scale appears to us a very useful tool for the assessment and follow-up of such AD patients.

**PB8 087 TASK DIFFICULTY AFFECTS GAIT VARIABILITY DURING DUAL-TASK IN HEALTHY YOUNG AND OLDER ADULTS**

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Introduction. The attentional demands for regulating gait variability are typically examined with the dual-task paradigm. However, the level of difficulty of the concurrent cognitive task may influence gait control especially in the elderly. The present study investigates gait variability of healthy young and elderly individuals under conditions of different levels of dual-task demands. Methods and materials. Ten young and ten older adults walked on a treadmill at their self-selected pace under five conditions: without cognitive loading (control) and while performing a secondary task (dual-tasks): naming, reading (low demanding tasks), semantic fluency, phonemic fluency (high demanding tasks). Lower limb kinematics were recorded for 3 minutes of continuous walking for each condition. Temporal organization of gait variability was evaluated with the largest Lyapunov exponent (LyE) for each joint. Results. LyE values were significantly decreased at the ankle joint for both groups while performing the phonemic fluency task in comparison with control. No other differences were found between control and the rest of the dual-task conditions. The elderly group had significantly higher LyE values in comparison to the young at all joints for all conditions. No significant interactions were found between condition and group. Conclusion. Our findings support the idea that the difficulty of the cognitive task is important in shaping the relationship between cognition and gait control. Concurrent performance of the most difficult task resulted in reduced gait variability. This may be due to the task requirements that involve switching between letters, therefore,

demanding a high degree of flexibility, a key indicator of the integrity of executive function. The impact of phonemic fluency on gait variability might be more prominent in elderly patients given that pathological aging is primarily accompanied by a decrease in executive function.

**PB8 088 PSYCHOMETRIC CHARACTERISTICS OF THE RIVERMEAD BEHAVIOURAL MEMORY TEST (RBMT) AS AN EARLY DETECTION INSTRUMENT FOR DEMENTIA AND MCI IN BRAZIL**

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The Rivermead Behavioural Memory Test assesses everyday memory through ecological tasks which mimic daily challenges. It has been shown to correlate well with observed daily impairment and to differentiate normal aging from dementia. The objective of this study was to examine the validity of the RBMT as a memory assessment tool in a sample of Brazilian older adults with different degrees of memory impairment. Taking into account clinical, neuropsychological, and neuro-imaging data, participants were classified into normal controls (NC) (n=89), mild cognitive impairment (MCI) (n=90), and Alzheimer's Disease (AD) (n=82), according to Petersen's (1999) and NINCDS-ADRDA criteria. For RBMT profile scores, analyses revealed that internal consistency (Cronbach's  $\alpha$ ) was high for the DA group (0.84) and moderate for the MCI (0.61) and Control (0.62) groups. For the total sample internal consistency was high (0.91). ANCOVAs (controlling for educational differences) revealed statistically significant differences between the three groups ( $p < 0.001$ ). Spearman correlations between RBMT and CAMCOG memory subtest scores were significant for the DA group (0.76) and for the MCI group (0.36). For participants with less than eight years of education, ROC curve analyses (scores ranging from 0 to 24) indicated that 16.5 differentiated NC from DA (96% sensitivity, 84% specificity), 20.5 differentiated NC from MCI (84% sensitivity, 73% specificity), and 12 differentiated MCI from DA (80% sensitivity, 89% specificity). Results suggest that the RBMT can be an appropriate neuropsychological instrument to identify memory decline in Brazilian older adults.

**PB8 089 SUDDEN DYSORTHOGRAPHIA AND DYSLEXIA IN A 70 YEARS OLD FEMALE: VASCULAR, ALZHEIMER'S OR POSTERIOR CORTICAL ATROPHY?**

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INTRODUCTION : A 70 years old woman comes to the office complaining of visual problems and difficulties with reading and writing. These symptoms appeared abruptly and are progressing since. She has difficulties in everyday life, such as driving her car or dialing a phone number. Moreover, she has some memory and language difficulties and symptoms suggesting dressing apraxia. METHODS : An exhaustive workup has been done : blood tests, neuroimaging and consultations with different professionals. RESULTS : No deficits of the afferent visual system are demonstrated in neuro-ophthalmology (2006). The cerebral PETscan (2006) shows a hypometabolism in the temporo-occipital region, suggesting an ischemic sequel. Nonetheless, the MRI that was done demonstrated leukoaraiosis but no signs of stroke. With the speech therapist evaluation (2008), we can objectivise that the patient has a mild difficulty with lexical access, a dyslexia related to visual agnosia and a surface dysorthographia. No semantic problems are present. In the neuropsychological evaluation (2008), visual agnosia is the main finding. A simultagnosia is also suspected. A visuoconstructional apraxia, an ideomotor apraxia and acalculia are noted. Moreover, memory problems and mild signs of subcortical-frontal dysfunction are present. The insight is preserved. CONCLUSION : How to explain this atypical case, dominated by a posterior cortical dysfunction? A vascular etiology was suspected since there was leukoaraiosis and subcortical-frontal dysfunction. But the absence of parietal or occipital brain lesions on MRI, in face of so important apraxia and agnosia, makes this diagnosis less likely. Moreover, the perceptual and reading problems are progressive, not typical of vascular etiology. The hypotheses of a posterior cortical atrophy or of an atypical Alzheimer's disease were also evoked. The differential diagnosis between these two diseases will be discussed, since there can be overlap of signs and symptoms, particularly when the disease progresses since a few years.

**PB8 090 IS THE 'DELIRIOUS ABOUT DEMENTIA' COGNITIVE SCREENING ALGORITHM FEASIBLE ON AN ACUTE CARE OF THE ELDERLY WARD? A HOSPITAL-BASED STUDY.**

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Introduction The UK Government's 'National Dementia Strategy' is expected in February 2009 with recommendation 6 being 'Improved quality of care of dementia patients in general hospitals.' Pre-existing and incident cognitive impairment may present during the treatment of an unrelated medical problem and cognitive assessment is key. The Cognitive Screening algorithm was developed as part of a consensus statement by the British Geriatric Society and the Royal College of Psychiatrists – 'Delirious about Dementia', designed for routine use by any medical professional. Our aim is to investigate if the

algorithm is feasible and practical on an acute Care of the Elderly ward. Method 18 bedded ward with average length of stay between 7 and 10 days. 33 non-consecutive patients mean age 84.27 years ( $\pm$ SD6.36). Patients were excluded if too ill medically, palliative or had no next of kin to complete the questionnaire. The assessment, carried out by junior doctors, involved screening with the Mini Mental State Examination (MMSE) and CLOX1 test, followed by the Confusion Assessment Method (CAM) if indicated by the algorithm. Relatives were asked to complete the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE). Results Mean (95% CI) times in minutes to complete the tests were MMSE 13.6(12-15.2),CLOX1 2.6 (1.82-3.8), CAM 1.3 (0.91-1.69). Most practical issues involved the IQCODE,such as generating family anxieties,difficulties distributing to family members or no available next of kin. Conclusion The Cognitive Screening algorithm is feasible and practical but has implications when used on a busy Care of the Elderly ward. The time taken to carry out the algorithm is negligible; however the IQCODE requires significant extra input time. This has resource implications in terms of assessors' time and further studies are required to assess whether this translates into meaningful benefit for patients or the service.

**PB8 091 IS AMNESTIC MILD COGNITIVE IMPAIRMENT A DIFFERENT CLINICAL ENTITY FROM NON-AMNESTIC MILD COGNITIVE IMPAIRMENT?**  
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Background: Mild cognitive impairment (MCI) is a heterogeneous entity encompassing different subtypes that are defined based upon psychometric profile. It is unclear whether these psychometrically-defined subtypes represent clinically meaningful entities. We sought to determine whether there are distinguishing features in clinical data (obtained by history and physical examination) and vascular risk profile between amnestic MCI (aMCI) and non-amnestic MCI (naMCI) subgroups in a memory clinic sample of predominantly Chinese ethnicity. Methods: We classified 41 MCI subjects (mean age: 72.9 $\pm$ 1.1 years; 53.7% females) who fulfilled the 2004 International Working Group criteria into aMCI (n=25) and naMCI (n=16) based upon neuropsychological profile. We compared the following parameters: baseline demographics, cognitive features, functional independence, physical examination findings, vascular risk factors, neuroimaging findings and diagnosis of vascular etiology (v-MCI). Results: Consistent with the psychometric definition, subjects with aMCI performed worse in tests of episodic memory ( $P<.01$ ) but there was no significant difference in non-amnestic domains in neuropsychological test performance. Both groups did not differ in age, gender and educational attainment. Compared to naMCI, aMCI subjects were more likely to display impaired insight; they were also less likely to self-endorse cognitive difficulties despite a higher prevalence of informant-endorsed memory difficulties. aMCI subjects scored lower in instrumental activities of daily living and were more likely to exhibit frontal lobe signs. With regards to vascular risk profile, naMCI subjects showed a higher frequency of hyperlipidemia ( $P=.02$ ) and a trend towards lower frequency of diabetes mellitus ( $P=.15$ ); comparable Hachinski Ischemic Index score; higher frequency of subcortical infarcts ( $P=.01$ ) but not white matter lesions; and higher frequency of v-MCI diagnosis (75% vs 40%,  $P=.03$ ). Conclusion: Our findings suggest the presence of unique clinical characteristics and vascular risk profile between psychometrically-defined aMCI and naMCI subtypes. Longitudinal follow up would be useful to determine if these subtypes predict progression to dementia.

**PB8 092 OVERVIEW OF THE AUSTRALIAN DEMENTIA OUTCOMES MEASUREMENT SUITE (DOMS) PROJECT**  
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Introduction: This paper summarises the findings of the Australian Dementia Outcomes Measurement Suite (DOMS) project. This project commissioned by the Australian Government aimed to develop a tool-kit of instruments for the assessment, screening and outcomes monitoring of dementia conditions in Australia, across acute care, primary and community care, residential care, specialist care and research settings. This paper uses the example of Dementia Staging and Descriptive Instruments but other areas selected for investigation included: Health Related Quality of Life (HRQOL); Cognition; Social Isolation; Associated Behavioural and Mental Symptoms; General Functioning; Economic Utility Measurement; and Patient and Caret Satisfaction with health services. Methods and materials: Following an exhaustive literature review a database of instruments was constructed. We then used a two stage review process using psychometric criteria, academic literature impact measures, clinical feedback and practical considerations (e.g. cost, administrator training and assessment time) to produce a set of 5 or 6 instruments for each outcome area. A detailed psychometric review then evaluated these instruments combined with specialist and clinical consultation to produce a final tool-kit of instruments with practice recommendations. Results: There were 844 potential instruments identified for dementia conditions across the selected health outcomes topics areas. This detailed review led to a number of recommended instruments that clinicians and researchers should consider using in their everyday practice. For instance, for Dementia Staging and Descriptive Instruments we recommended the Global Deterioration Scale / Functional Assessment Staging (GDS / FAST) for its ease of use and the Clinical Dementia Rating Scale (CDRS) for a more detailed assessment and the Dementia Severity Rating Scale

(DSRD) for proxy rating. Conclusions: The findings of this psychometric review project, especially in regard to improved and standardised dementia assessment, have a number of important resource and practice implications for routine outcomes measurement of dementia conditions in Australia.

**PB8 093 NEURAL CORRELATES OF FOCUSED ATTENTION IN COGNITIVELY NORMAL OLDER ADULTS**

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Introduction. Age-related declines occur across a range of cognitive domains. Impaired attention can hinder information processing at multiple levels and may explain some aspects of the functional decline in aging. An inefficiency of the inhibitory system can lead to deficits in focused attention and other cognitive functions. Methods. Twenty-one cognitively normal older adults underwent full cognitive assessment and a verbal Stroop task paradigm using functional MRI. High-resolution structural scans and T2\*-weighted functional scans were acquired. In Series 1, subjects were presented with colour words printed in black ink and asked to read the word aloud. In Series 2 through 4, subjects were presented with colour words printed in an incongruent ink colour and asked to either read the word or say the colour of the ink. Series 2 had four blocks of the congruent condition followed by four blocks of the incongruent condition. Series 3 and 4 had eight blocks of alternating congruent and incongruent conditions. Functional data were analyzed using SPM5. Blocks performed with at least 75% accuracy were analyzed to detect anatomical areas with significant signal intensity differences between the congruent and incongruent conditions. Results. Subjects made an average of 2.90 and 4.86 errors in the congruent and incongruent blocks, respectively. Random effects analyses across all subjects found the left supplementary motor area, bilateral inferior frontal gyrus, bilateral precentral gyrus, left insula and right superior frontal gyrus significantly activated ( $p<0.05$ , uncorrected). Conclusion. Our results are consistent with previous findings in Stroop-fMRI studies of older adults. A greater number of errors in the incongruent than the congruent condition reflect increased interference. The paradigm used in the current study demonstrates that verbal responses elicit similar brain activation patterns to manual responses. Verbal responses may be a more appropriate modality for older adults and in the study of patient populations.

**PB8 094 MEDICATIONS AT RISK FOR MEMORY IMPAIRMENT IN ELDERLY**

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Introduction: In the last 20 years, a growing number of medications frequently prescribed to elderly patients have been identified to have weak but real anticholinergic properties. Those drugs are frequently not recognized as anticholinergic by the clinicians. Few epidemiological studies have been done to evaluate their impact on verbal episodic memory with sensible and specific neuropsychological test. Method: This retrospective, cross-sectional study included 134 consecutive outpatients who attended the day care memory unit of Centre Hospitalier Lyon-Sud (Lyon, France) between January 2005 and January 2008. To evaluate specifically verbal episodic memory, we used the French version of the Free and Cued Selective Reminding Test (FCSR). Furthermore, we performed a research in MEDLINE database (1973-2008) to retrieve studies that identified and/or quantified anticholinergic activities of different drugs. A list of 279 drugs has been built after critical review of the literature. Results: Medications that we identified to have anticholinergic properties selectively impair verbal episodic memory as demonstrated by the FCSR. Total immediate recall score was respectively 36, 35 and 28 in the groups with 0, 1 and 2 or more anticholinergic treatment. Those differences were statistically significant in a multivariate analysis ( $p=0.03$ ). The same results were obtained for total immediate free recall, total delayed recall and free delayed recall. Conclusion: This study could be considered as a warning for clinicians who work with elderly patients with cognitive disorders. A record of all medications should be carefully obtained and attention should be paid to possible anticholinergic compounds. The exhaustive list of anticholinergic drugs created in this study could be a useful clinical tool for clinicians.

**PB8 095 INVESTIGATION OF ACTUAL CONDITIONS OF DEMENTIA SYNDROME SENIOR CITIZEN WHO USES CLOCK DRAWING TEST**

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Introduction: Dementia senior citizens increase with aging of the population rapidly. The repressiveness changes of the brain such as the Alzheimer type dementia increase. We use the clock drawing inspection as a standard to discover dementia early and report it here because I carried it out as for the local health center, the thing of the cooperation of the medical institution. Methods and materials:We called the old man society about enlightenment activity of the dementia. For an applicant, we carried out a screening test of the dementia discovery with the community health nurses of the health center. The

standard to use for screening did clock drawing with inspecting it. The marking method assumed it the method that we proposed of Dr Kono. The result returned each one it while talking on the spot. The community health nurse of the health center visited it for the senior citizen who came to need follow later. Results: 183 participants (male 67 people, woman 116 people), average age 74.36 years old, age standard deviation 6.04 years old As a result of clock drawing inspection, 42 senior citizens who came to need follow equal to or less than 8.5 points were (23.0%). The breakdown of the score was 8.5 points 32 (17.5%), 8 points of 3 (1.6%), 7.5 points 2 (1.1%), seven points of alone (0.5%), 6.5 points alone (0.5%), 5points of alone (0.5%), 3 points of 2 (1.1%). Conclusion: The onset rate of the dementia in Japan is 7~8%. We can carry out the clock drawing inspection in a short time in a group and think that We are useful as a standard to discover the dementia that is hard to have a difference by an enforcer early.

**PB8 096 NEW FRENCH RECOMMENDATIONS OF HAS ON ALZHEIMER'S DISEASE: AN OVERVIEW OF DRUG PRESCRIPTIONS IN A GERIATRIC HOSPITAL.**

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Introduction On March 2008, the French institution "Haute Autorité de Santé" (HAS) published its conclusions about drugs management in Alzheimers disease (AD) treatments. HAS recommended the use of monotherapies, with the greater recommended dose, whatever the age and the Mini Mental Score Evaluation (MMSE) of patients. According to this guidelines, we observed clinical practices in our Hospital. Methods and materials All the patients receiving cholinesterase inhibitor or memantine were collected on one day with our Software Phedra®. Medical records were reviewed using standardized check-lists with 12 items. Results Less of 20% of hospitalized patients (108/600) received an AD treatment (average age 86.3 years). The mean MMSE was 13, unfeasible for 25% and unfound for 7%. 88% of patients received a monotherapy [memantine 45%, donepezil 20%, galantamine 16%, rivastigmine 7%] and 12% received a bitherapy using memantine. About monotherapy, 95% of patients were in maintenance dose. 33% were below the maximum recommended dose. 5% were in initiation phase. For 23% of the patients, the maximal dose was never tried. When drug was prescribed before hospitalization, the maximal dose was reached in 75% of the cases. The dose graduating has been made for 37% of them in our hospital. 63% were already at the maximal dose. When treatment was initiated during hospitalization 56% prescriptions reached it. Conclusion Epidemiological data estimate that the mean rate of AD geriatric patients is near to 50% assuming some patients in our hospital don't receive treatment. HAS guidelines were not followed in 32% (bitherapies and prescriptions whose maximum dose was never tried) justifies amelioration of our practices. Moreover, regular re-assessment of treatment seems useful. When patients are placed in medical institution, an assessment is systematically done. It could explain the greater number of maximum doses reached. Building a prescription tool linked to the monitoring indicators seems necessary to optimize the drug management in Alzheimer's disease treatment.

**PB8 097 ALZHEIMER'S DISEASE: FUNCTIONAL CAPACITIES AS MARKERS OF DISEASE PROGRESSION AND TREATMENT EFFICACY**

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**INTRODUCTION.** Measuring functional status is an important part of assessment in demented patients. It has been demonstrated that patients tend to rate their own function higher than nurses, whereas family members tend to rate it lower. Disadvantages of self-reported or proxy-reported measures might be overcome by using performance-based measures. The Direct Assessment of Functional Status (DAFS) scale is an objective and well-validated measure functional capacities. **METHODS AND MATERIALS.** 331 consecutive patients with Alzheimer's Disease (AD) and 50 consecutive subjects with Mild Cognitive Impairment (MCI) were evaluated. In all patients cognitive functioning was assessed with the Mini-Mental State Examination (MMSE), the DAFS scale and the basic (BADL) and instrumental (IADL) activities of daily living were used to measure functional status. 78 AD patients treated with cholinesterase inhibitors (AchEI) have been revalued after one year. **RESULTS.** A significant correlation between MMSE and DAFS was found in patients treated with AchEI both at the beginning (T0) of the therapy and after one year (T1) of treatment. Also subjects with MCI showed a correlation between DAFS and MMSE; this correlation remained even in subjects with IADL=8 (complete autonomy described by care-giver). Finally the DAFS seemed to better describe the disease progression after one year of therapy than the MMSE, in fact a strong correlation between T0 DAFS score and delta DAFS (T1-T0 score) was found. **CONCLUSIONS.** The DAFS has a great correlation with MMSE after one year of therapy with AchEI and it is more sensitive to intercept possible worsening of the disease. This makes it a good tool to appraise the progression of illness in treated patients. Even patients with MCI might show

subtle changes in functional status and the DAFS could represent a more sensible tool than IADL to identify the presence of disability in an early stage of the disease.

**PB8 098 SHORT TERM MORTALITY ACCORDING TO COGNITIVE STATUS IN ACUTELY ILL ELDERLY PATIENTS**

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**Introduction:** Few data describe the causes of hospitalization and prognosis in patients affected by different type of cognitive impairment. Aim of the study is to evaluate characteristics, causes of admission, and prognosis of acutely ill hospitalized elderly according to the type and severity of cognitive impairment. **Methods:** A prospective study of 2807 patients aged 65 years or above admitted between February 2005 and February 2008 to a Geriatric Unit (Poliambulanza Hospital). Demographics, main diagnosis, comorbidity, APACHE II score, IADLs, BADLs and number of drugs were collected. Diagnosis of Alzheimer dementia (AD) and Vascular dementia (VaD) were carried out according to current guidelines. Presence of Mild Cognitive Impairment (MCI) and Mild Vascular Cognitive Impairment (MCI-V) were also evaluated. For the aim of the study, patients were assigned to five groups: a) 970 patients (34.6%) cognitively normal, b) 569 (20.3 %) patients with MCI, c) 232 (8.3%) with MCI-V, d) 705 (25.1%) with AD and e) 331 (11.8%) with VaD. **Results:** Infectious diseases were more frequent in patients with severe rather than mild cognitive impairment; moreover there were more frequent in those affected by vascular disease. The same figure was observed for APS and serum C reactive protein. The mortality rate progressively increased according to the severity of cognitive impairment; patients with cognitive impairment due to vascular disease have a higher mortality rate (no dementia 5.4%, MCI 6.5%, MCI-V 7.3%, AD 13.6%, VaD 19.3%). **Conclusion:** cognitive impairment confer a higher risk of 3-month mortality in elderly patients hospitalized for an acute disease. Those with cognitive impairment due to vascular disease have a higher probability to be admitted with an infectious disease and with a higher physiologic derangement than those with a degenerative impairment.

**PB8 099 DONEPEZIL, MIRTAZAPINE AND NIGHTMARE**

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**Objective:** Donepezil appears to be a very safe medication when used in selected patients with mild to moderate Alzheimer disease. Nightmares (unpleasant dreams) are reported complication of donepezil therapy and treated easily by administrating the dose in the morning. We experienced 1 case of nightmare which was treated not by administrating schedule change but by reducing the dose, and recurred by co-administration of mirtazapine Case: 84-year-old male patient was presented with 2-year history of cognitive impairment. He had a MMSE score of 22/30. After a complete dementia workup, he was diagnosed with Alzheimer disease using the DSM-IV criteria, and he was prescribed 5mg of donepezil to be given in the morning. After 4 weeks, he felt better, but his cognitive function was not improved. The dose of donepezil was increased to 10mg. 2 weeks later, in routine follow-up he complained of lots of unpleasant dreams. The dose of donepezil was reduced to 5mg. His dreams were reduced, and the contents of dreams were similar to those of his previous healthy state. 4 months later, He complained of dysphoria and insomnia, and 30mg of mirtazapine was started orally every night. After 1 month, he again complained of many unpleasant dreams and the dose of mirtazapine was reduced to 15mg. 1 month later, he continued to complain of unpleasant dreams then mirtazapine was discontinued. After 2 months, although there was no obvious cognitive improvement on the medication, his global function became better, and his son and daughter-in-law were satisfied with his state. **Discussion:** Like other dreams, nightmares almost always occur during REM sleep and usually after a long REM period late in the night. There is a convergent data suggesting the involvement of brain stem cholinergic neurons in the regulation of REM sleep, and acetylcholinesterase inhibitors decrease REM latency and increase REM density. According to these data, the mechanism of nightmare might be cholinergic enhancement in the brain. In this case, nightmares may be related to the plasma level of donepezil. 1) Unpleasant dreams were appeared in the 10mg of donepezil and disappeared when the dose of donepezil was reduced to 5mg. 2) They reappeared with co-administration of mirtazapine and disappeared when mirtazapine was stopped. Donepezil is highly protein-bound and metabolized by the liver via the cytochrome P450 2D6 and 3A4 isoenzyme. Inhibition of cytochrome P450 system may lead to elevated plasma levels of co-administered drugs that metabolized by this enzyme. An elevated plasma level of donepezil may in turn increase the risk for more adverse reactions. However, there emerges one more question that why nightmare occurs even though mirtazapine is reported to suppress REM sleep. Even though this mechanism is unknown, mirtazapine itself cause nightmare. This may be due to REM rebound. Because mirtazapine suppresses REM sleep early at night, it might rebound REM sleep late in night. Because this patient had nightmares with 10mg of donepezil, his acetylcholine receptor is thought to be in supersensitive to acetylcholine. His supersensitive acetylcholine receptor and this rebound may result in synergy to make nightmare. **Conclusion :** In the dementia patients who is

prescribed donepezil, mirtazapine etc., we should consider the side effects and alert the drug-drug interactions by careful evaluation.

**PB8 100 CLINICAL AUDIT OF DEMENTIA CARE: A QUALITY IMPROVEMENT INITIATIVE – PRELIMINARY RESULTS**

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**Introduction:** Clinicians and policy makers are increasingly aware of the need to improve the quality of health care delivery. Quality indicators for dementia care have been developed by the American College of Physicians Assessing Care in Older Vulnerable Adults (ACOVE). The objective of this Quality improvement project was to audit practice and improve the quality of dementia care delivered in geriatric outpatient clinics by the geriatricians affiliated with the RGP and the University of Toronto Methods: A data collection tool was developed and used to extract information regarding the performance of 19 quality indicators. A retrospective audit was performed on a convenience sampling of sequential ambulatory geriatric clinic charts which met eligibility criteria: a new consultation seen between July 2006 and June 2007 in which the main issue identified was dementia. Documentation of the performance of the identified quality indicators was documented through the audit. Indicators with less than 80% documentation were flagged as needing improvement. Each participating received a summary of their own performance and the group mean. Results Ten geriatricians volunteered to participate. One hundred and seven charts were included in the audit. Trends in the aggregate data were analyzed by a steering committee. Enabling tools (reminder sheets, data collection forms and information pamphlets) were developed to address potential barriers to provision of quality care in dementia. The majority of quality indicators (eleven out of nineteen) were documented in more than 80% of cases. There were eight issues with suboptimal documentation (<80%). These were educational level of patient, wandering, fire –water safety, home safety assessment, caregiver stress, driving and POA for finances. The use of the enabling tools was promoted through individualized physician “detailing”. A repeat audit will take place in 3 to 4 months to determine if there was any change in practice. Conclusion: Geriatricians in this audit are presently meeting benchmarks for quality dementia care in 11 out of 19 ACOVE indicators included in the audit. Areas with suboptimal documentation were targeted for a quality improvement intervention.

**PB8 101 THE VALIDITY OF THE KOREAN-MONTREAL COGNITIVE ASSESSMENT (K-MOCA) AS AN INSTRUMENT FOR SCREENING OF VCI**

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**Introduction:** The Montreal Cognitive Assessment (MoCA) was originally developed as a brief cognitive screening tool for mild cognitive impairment. However, the NINDS-CSN Vascular Cognitive Impairment Harmonization Standardization work group (Hachinski et al., 2006) suggested that the MoCA would also be a useful instrument for vascular cognitive impairment (VCI). This study was conducted to examine the validity of the newly developed Korean version of Montreal Cognitive Assessment (K-MoCA) as an instrument for screening of VCI. Methods: Eighty-six stroke patients (mean age=70.44 years, mean education=7.91 years) with confluent white matter lesions were given the K-MoCA and the K-MMSE with a comprehensive neuropsychological test battery. Among the patients, 55 had a CDR score of 0.5 or less (vascular mild cognitive impairment group; VMCI), and 31 had a score of 1.0 or more (vascular dementia group; VD). Eighty-six matched healthy normal controls (mean age=70.07 years, mean education=7.71 years) who met the Christensen's health criteria (Christensen et al., 1991) were recruited from the community and were given the K-MoCA and the K-MMSE. The K-MoCA was re-administered to 29 normal subjects with a 4-week interval for assessing the test-retest reliability. Results: Strong correlations between the K-MoCA and the K-MMSE were found in patients ( $r=.92$ ,  $p<.001$ ) and normal controls ( $r=.86$ ,  $p<.001$ ). Receiver Operating Curve (ROC) analysis showed that the K-MoCA effectively differentiated stroke patients from normal controls ( $AUC=.72$ ,  $p<.001$ ). Moreover, it was found that the K-MoCA could differentiate the VMCI ( $AUC=.60$ ,  $p<.05$ ) as well as the VD ( $AUC=.92$ ,  $p<.001$ ) from normal controls. Test-retest reliability of the K-MoCA was significantly high ( $ICCR=.85$ ,  $p<.001$ ). Conclusions: These results suggest that the K-MOCA can be used reliably for screening of VCI. The K-MoCA might help identify individuals in the early stage of cognitive impairment due to cerebrovascular problems.

**PB8 102 NEUROPSYCHIATRIC SYNDROMES AND PROGRESSION OF COGNITIVE AND FUNCTIONAL DECLINE IN PATIENTS WITH ALZHEIMER DISEASE.**

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**Introduction:** Recently, several studies have been conducted with the purpose of determining neuropsychiatric syndromes in patients with dementia. The aim of this work is to evaluate the impact of neuropsychiatric syndromes on the progression of cognitive and functional decline in subjects with Alzheimer Disease (AD). Methods and materials. We included 106 AD patients who were consecutively seen in a special unit for the diagnosis and treatment of dementias and were followed up for a mean time of 1 year. In all patients, cognitive functioning was assessed with the Mini-Mental State Examination (MMSE); the functional impairment was evaluated by means of basic and instrumental activities of the daily living (BADL and IADL) and Barthel Index (BI). Neuropsychiatric syndromes were identified by a factor analysis based on the symptoms assessed with the Neuropsychiatric inventory (NPI). Results. Five neuropsychiatric syndromes were identified in the factor analyses: 1) psychosis (delusion, hallucinations and aberrant motor behaviour), 2) sleeping and eating changes (night-time behaviour disturbances and appetite and eating abnormalities), 3) mood (depression, anxiety, and irritability), 4) mania (euphoria and disinhibition), 5) apathy (agitation and apathy). After 1 year, patients with the mood syndrome and apathy syndrome had greater cognitive and functional decline than other ones. Conclusions. Our results confirm previous findings that different neuropsychiatric syndromes are present in patients with AD. Syndromes featuring apathy and depression related symptoms are associated with increased cognitive and functional decline in AD patients.

**PB8 103 ASSESSING ALZHEIMER DEMENTIA IN POPULATION OF OLDER INDIVIDUALS IN TUNISIA**

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**Introduction:** With the increase of dementia incidence in developing countries, there is a pressing need to apply simple but reliable tools for dementia screening. Aim: To offer to general practitioners a practice-based strategy, adapted to the Tunisian socio-cultural context for the diagnosis of Alzheimer disease. Methods: A cross-sectional study of 20 Tunisian patients with Alzheimer disease (10 men and 10 women) aged from 62 to 89 years has been conducted by the neurological department of Charles Nicolle Hospital. Alzheimer disease diagnosis was based on clinical and neuropsychological assessments, blood tests and MRI findings according to the latest consensus. A model of cognitive test performance using the Mini Mental State Examination Arabic Version (A-MMS), the 5 Word Test (5WT) and the Clinical Dementia Rating (CDR) were performed for all patients. Results: The median age of patients was 72 years. The median age of onset was 67 years. The most common comorbidities were hypertension (9 patients) and diabetes (3 cases). In all cases, episodic memory and praxis were the predominant revealing symptoms. Brain imaging was done in all cases and showed hippocampal atrophy in 85% of cases. Homocysteine blood level was measured in 19 patients and was high in 32% of cases. The median A-MMS score was 21.5 (5-24) with 60% of patients with mild dementia. The median CDR score was 0.66 (0.33-1.55). The median Total Score concerning the 5WT was 8(7-10). Conclusion: A model of general and specific cognitive tests can simplify the diagnosis and the assessment of normal aging and Alzheimer disease patients.

**PB8 104 SLEEP HYGIENE IN SLEEP DISORDERS OF DEMENTIA ELDERLY**

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Sleep hygiene is recommended, in combination with others, as a method to reduce sleep disorders in elderly. However, there is a lack in literature about the efficiency of sleep hygiene routine in dementia elderly. The objective of this work is to examine the effect of a sleep hygiene protocol in persons with dementia in residential units (nursing homes). The experimental group will receive a sleep hygiene protocol intervention while the control group received usual care. Data will be collected using the "Sleep Disorders Inventory" (SDI) and a sleep log. The SDI is an instrument developed in 2003 by Tractenberg et al., to describe the frequency and severity of sleep disorders for persons with dementia and also for describe the distress of the caregiver. Data analysis will be made through the T-student test, for average comparisons and Linear Regressions to determinate the factors that contribute to sleep pattern. This study is being conducted on behalf of the final thesis for

the Degree in Gerontology, and we expect to contribute for the discussion about non-pharmacological interventions in sleep disorders of elderly dementia.

**PB8 105 DO DIFFERENT COGNITIVE TASKS INTERFERE WITH POSTURAL CONTROL IN ELDERLY AND DEMENTED SS.?**

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**Background:** A bulk of evidence indicates that frontal lobes functions are involved in both cognitive performance and postural control. Few studies showed that in clinical and experimental conditions an interpolated cognitive task remodel postural balance. This issue seems relevant considering the high rate of falls in the elderly and in demented Ss. in particular. Aim: investigate a) the influence of different cognitive tasks on postural control and b) the relationship between frontal functions and postural control. Methods: the sample consists of 39 demented Ss. and 13 controls, aged 60+. Exclusion criteria: disabling visual, hearing and proprioceptive deficits, clinically relevant depression, severe cognitive impairment and high comorbidity. All the subjects underwent the following assessment: IADL/ADL to check disability levels, CAMCOG and MMSE to detect cognitive performance levels. Frontal lobe functions were assayed with both Frontal Assessment Battery and "Frontal Lobes score" derived from Camcog. Postural control was monitored by a force platform, two measures of postural sways were considered: length trace and area. All the Ss. were requested to maintain a standing position on the platform (30 sec trial) in two different conditions: a) at rest with open and closed eyes; b) with closed eyes while performing 3 different interfering cognitive tasks, namely counting back one by one, serial 7 and verbal fluency task Results: Repeated Analyses of Variance showed expected differences between groups respect to number of drugs, cognitive and functional performance. No significant difference was found respect to postural measures at rest conditions, whereas, significant differences were found in two out of the three trials with cognitive task. Namely, controls Ss. performed better than demented Ss. in serial 7 and verbal fluency tasks. Finally, in both groups, none of the Pearson's coefficient of correlation, computed between postural measures and Frontal Lobes score, reached the level of significance

**PB8 106 PREVALENCE AND THERAPEUTIC HANDLING OF DEMENTIA IN NURSING HOMES OF THE PRINCIPADO DE ASTURIAS**

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**Objectives:** Study the prevalence of cognitive decline and dementia in the residential environment, pharmacological and non-pharmacological treatments used and the possible existence of undiagnosed dementia. Material and methods: Cross-sectional epidemic study on a population of 215 elderly persons institutionalized in October 2008 in 3 nursing homes in Asturias. Socio-demographic, clinical, functional and mental variables were collected through a Memorandum of predefined study. Results: 215 elderly were included in the study (81.2 +/- 10.2 years, 70.2% women), scores on the Barthel 50.63 +/- 37.43, on the MMSE 14.71 +/- 9.73 and on the GDS 3.63 +/- 3.74. 34.4% had been diagnosed of dementia, Alzheimer's disease being the most prevalent cause (20.9%). Of those patients diagnosed with dementia 45.9% received specific pharmacological treatment for Alzheimer. Amongst those individuals that had attended school 77.8% had MMSE scores below 24 and 32.9% were diagnosed with dementia; amongst those individuals that did not attend school 75% had MMSE scores below 18 and 39.6% were diagnosed with dementia. Conclusions: For our population study, some 76% of subjects show some degree of cognitive decline, 1 in 3 residents has been diagnosed with dementia and about half are receiving specific pharmacological treatment. The results show about half of elderly people with cognitive problems have no clear diagnosis of the syndrome or the cause of the same.

**PB8 107 RELEVANCE OF THE PRESCRIPTION OF THE ACETHYLCHOLINESTERASE INHIBITORS AND THE MEMANTINE FOR THE AGED PATIENTS**

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**Introduction** The alzheimer's disease and the similar diseases are very frequent in aged population. The efficiency of the anti-alzheimer treatments was proved even if modest on the cognitive, no cognitive symptoms and the autonomy. **Objectives** The goal of this study is to establish the just prescription. **Method** It is about a retrospective study, about a clinical audit targeted . all the patients having had a treatment anti-alzheimer on the estableissement were edited by the pharmacy a given day . The data collection has been established from every patient's file . a multi parameters evaluation has been used . this later has been established according to scientific publications. An evaluation with data analysis was made in 2006. Actions of improvement were been organized with a revaluation in 2007 and 2008. Results 221 patient's file were exploitable on 238 listed. We notice a degradation of

the respect for the label . The effective maximal posology was only used for donepezil (aricept\*). The adaptation of the posology of memantine (ebixa\*) was significantly improved . The electrocardiogram was realized more frequently . the targeted co-morbidity (bronchopneumopathy obstructive (BPCO) , asthma, atrioventricular block and 186 bradycardia , arrhythmia , ulcer gastroduodenal and epilepsy ) were noted. Serious side effects have been appeared more in half of the cases to them at the patients having a targeted comorbidity. The neuroleptics were more often prescribed than atypical antipsychotics . Several prescribed anxiolytics presented anticholinergic properties . **Conclusions** The anti-alzheimer treatments have been showed a clinical benefit . although relatively safe . The cholinesterase inhibitors are prescribed for a frail population and may have clinically significant adverse drug effect on the cardiovascular system or worsening BPCO. Early and accurate recognition of past and present arrhythmia or syncope appears to be essential. Monitoring for pharmacokinetic and pharmacodynamic interactions and a more systematic clinical follow-up are mandatory.

**PB8 108 PREVALENCE OF SLEEP DISORDERS IN A MCI POPULATION AND ASSOCIATION WITH COGNITIVE SUBTYPES**

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**Background:** Patients with mild cognitive impairment (MCI) are at high risk to progress to dementia. Some sleep disorders are associated with cognitive deficit, and have been reported as predictive factors for dementia. **Objective:** To determine the prevalence of sleep disorders in MCI patients attending a memory clinic, and to test the association between sleep features and cognitive profile. **Patients and method:** Consecutive patients with MCI (cognitive complain, normal general cognitive functioning, objective impairment in at least one cognitive domain as evident by scores < 1.5 SD below the age appropriate mean, preserved activities of the daily living, and no dementia) were included. A standardized clinical, neuropsychological and sleep evaluation with a polysomnography during 2 consecutive nights were performed. MCI cognitive profiles were classified as amnestic single or multiple domains and non amnestic single or multiple domains. **Results:** We included 65 MCI patients (mean age  $67.7 \pm 6.7$  years; 50.8% women). Arterial hypertension was present in 47.7% of the patients, dyslipidemia in 55.4%, diabetes in 20%, and cardiopathy in 20%. The mean body mass index was  $25.6 \pm 3.7$ . The mean MMSE was  $28.1 \pm 2.0$  points. The total sleep time was  $404.7 \pm 75.3$  min, mean apopnea/hypopnea index was  $15.8 \pm 12.2$ . The mean Epworth Sleepiness Scale was  $7.2 \pm 4.4$ . An obstructive sleep apnea was diagnosed in 84.6% of the MCI patients, a restless legs syndrome in 30.8%, and periodic limb movements in 36.9%. One patient had rapid eye movement sleep disorders. In a statistical multivariate model, sleep disorders and polysomnographic data were not associated with any MCI cognitive subtypes. **Conclusion:** Sleep disorders are highly prevalent in our cohort of MCI patients, whatever the cognitive subtype. The follow-up of these patients will document the influence of the treatment of sleep disorders on cognition.

**PB8 109 ORAL STATUS OF MEMBERS OF FRANCE-ALZHEIMER-HAUTS-DE-SEINE (FA92) AND THEIR MAIN CAREGIVER.**

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**Introduction** Oral health of patients with AD and their main caregivers are poorly documented. The difficulties of care in last stages of the disease need to prevent oral diseases, particularly by a rigorous hygiene. The caregiver's role is essential. **Methods and materials** 470 double self-questionnaires (patient and caregiver) were sent in May 2008 with three aims: describing the oral status of patient and his caregiver; determining the existence of a link between the two populations and understanding the difficulties to access to dentist consultation. **Results** 82 patients and 76 main caregivers completed the questionnaires. 62.2% of patients were women, with  $82.4 \pm 7.08$  years. They had an Alzheimer's Disease (75.25%), a mixed dementia (7.5%), a dementia with Lewy's bodies (6.45%), an Parkinson's dementia (3.2%). The diagnosis was known for over 5 years (65%). 78% took specific treatment. The caregiver was a woman (58%), with  $74.3 \pm 11.7$  years. She was a spouse (68.8%), a child (25%), a friend (3.75%) 68.1% of patients and 83.3% of caregivers had more than 10 missing teeth. They wore denture (66.1% vs. 62%). Oral hygiene were realized once a day for 51.4% of patients and more than once a day for 58.1% of caregivers. The access to dental care was reduced because of difficulties of transport and care. The frequency of caregiver's consultation to the dentist influences significantly (and positively) the frequency of patients's consultation ( $p < 0.001$ ). The caregiver's perception of his own oral health influences significantly (and positively) the perception of patient's oral health ( $p = 0.03$ ). **Conclusion** This study take part of a better knowledge of the epidemiology of Oral health in Community population with dementia and underline the importance of caregiver's role in a programme of prevention.

**PB8 110** POINTING INTERACTION TECHNIQUES FOR OLDER PEOPLE WITH COGNITIVE IMPAIRMENT AS A DIAGNOSIS TOOL ?

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Introducing Information Communication Technology for aging population raise promises and challenges. One of the key challenges in developing assistive and rehabilitation systems for older people is finding some easy and effective means of interaction. This ongoing study (<http://www.tandem.memosyn.org>) aims to provide an understanding of how the performance of elderly with and without cognitive impairment is affected by three Point-Select-Drag interaction (clicking (CL), dragging (DR), clicking and automatic magnetization (CLM)) techniques to move an item to another item. Study participants (4 Mild Cognitive Impairment and 8 Alzheimer disease subjects; 4 older control persons), recruited at Toulouse geriatric hospital, were asked to select the sugar piece and to put it into the cup of coffee. After pre-tests, we chosen a black background and hand cursor to facilitate respectively the readability and the appropriation. Sessions consisted in training the patient to move the cursor and to select an object, then doing the computer trial and finally answering a semi-structured questionnaire. The duration factor is significantly different for the three interaction techniques. Firstly, the duration increase is correlated to the decrease of the Mini Mental Score (MMS) for (DR). We observe a big variability for MMS between 15 and 20. (CL) duration is also dependant of the MMS (more MMS is low more duration is long). CLM duration, around 20 seconds per action is stable for all patients and twice as shorter than for DR. From the empirical observations, we identify several difficulties with mouse, such as losing the cursor and bad control in moving with DR. We will continue to explore the added click factor to confirm the identification of the most efficient technique. These first experiments postulate that pointing technique could be used as a differential factor of cognitive impairment.

**PB8 111** PROFIT FOR THE USE OF THE GERIATRIC DAY HOSPITAL FOR PATIENTS WITH MILD-MODERATE DEMENTIA.

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AIMS: Analyze the benefits of the use of the Geriatric Day Hospital for patients with mild-moderate dementia. METHODS: Prospective observational study of patients admitted in the last 3 years (1-1-2006 to 1-1-2009) in a day hospital for Geriatric Services from Madrid area V . Excluding those with incomplete data (1), attending <4 (73 (12%). N: 542; 344 women, mean age 83,7 +/- 6,34 years. Two groups in study. A= Patients with mild-moderate dementia (GDS 4-5) and B= rest of patients. Discusses functional gain according Barthel scale ( admission-discharge ) and improvement in gait and balance according Tinetti scale (admission-discharge), attending and 2 , Mean $\bar{x}$ institutionalization at discharge. Statistical analysis with difference by paired T of student (admission-discharge ), T of Student (analysis group ) . Confidence interval and significance level of 95%. RESULTS: A) Dementia: N= 125 (69 women, mean age ( 84,5+ 6,37 years). Mean attending: 15 + 6 days. Show a gain functional mean in Barthel of 15,95 (13,8-18,09, p<0,001 and in Tinetti of 4,58 (3,92-5,23), p<0,001); institutionalization at discharge rate of 0%. B) No dementia: N=417 (275 women, mean age 83,81 + 6,33 years). Mean attending: 15 + 6 days. Show a gain functional mean in Barthel of 13,81 (12,86-14,76), p<0,001 and in Tinetti of 4,58 (4,28-4,88), p<0,001 both p<0,001; institutionalization at discharge rate of 2%. Comparing both groups, no significant differences between the different variables. CONCLUSIONS: Patients with mild-moderate dementia benefit to the same extent as the rest of the patients in the Geriatric Day Hospital showing a significant gain in Barthel and Tinetti scales, with no increase in hospital stay.

**PB8 112** FUNCTIONAL ASSESSMENT, CO-MORBIDITIES AND PROGNOSIS FOR ELDERLY ADMITTED AT A GERIATRIC SERVICE.

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INTRODUCTION Assessment of patients according to their performance at basic activities of daily living (BADL), and comparison between dependent and independent groups in relation to some variables. METHODS AND MATERIALS Some elderly patients were evaluated and ranked, according to Katz's BADL. Average age and gender, main diagnosis, average time of hospital permanence, number of co-morbidities, history of complications, and death were analysed and further compared among the three groups of patients. RESULTS Among the 151 patients, average age of  $79.0 \pm 9.6$  years (60 men and 91 women). Patients were classified as independent for the DLBA (group A, n = 74), partially independent (group B, n = 31) and totally dependent (group C, n = 46). Average ages of groups A, B and C were, respectively, 74.7; 80.5; and 85.0 years ( $p = 0.00$ ). Groups B e C showed more Pneumonia or Urinary Tract Infection when compared to group A (48.4%, 41.3% vs. 13.5%, respectively). The average time of permanence was of 8.4 days for group A; group B: 11.6; and group C: 15.0 days ( $p = 0.02$ ). Group A showed an

average of 2.9; group B: 3.5; and group C showed 4.2 associated diseases ( $p = 0.00$ ). Complications occurred in 10.8% of patients in group A; in 22.6% in group B; and 37.0% in group C ( $p < 0.01$ ). No death was registered in group A during hospital permanence hospital, while in groups B and C, respectively, 2 (6.5%) and 7 (15.2%) were registered. CONCLUSIONS There was a clear correlation between the worst BADLs and the variables evaluated. Those data reinforce the necessity of a deeper geriatric evaluation aiming to a better approach of the elderly, emphasizing care and attention to the greater chances of complications for the more dependent.

**PB8 113** COGNITIVE PERFORMANCE OF PATIENTS WITH PRE-DIABETES AND DIABETES MELLITUS.

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Introduction: Pre-Diabetes(PD) and Diabetes mellitus(DM) are implicated es risk factors not only vascular dementia but also to Alzheimer's disease (AD). We evaluated the cognitive performance of patients with PD and DM compared with health control (HC) using neuropsychological evaluation. Methods and materials: 40 Volunteers, both sexes, 60-75 years old, were divided in three groups: DM(n=19), PD(n=12), HC(n=9). The patients were submitted of a battery of neuropsychological tests evaluating attention and executive functions by Color Trail Test (CTT), Stroop Test (ST) and Wisconsin Card Sorting Test; memory by Logical Memory (LM) and Visual Reproduction (VR) tasks of the Wechsler Memory Scale, Rey Auditory Verbal Learning Test (RAVLT) and Rey Complex Figure; visuospatial skills by Waisz-III (Cube) and RAVLT; language by verbal fluency (VF) and Waisz-III (Vocabulary); and intellectual efficiency by Mattis Dementia Rating Scale (MDRS). The results were compared using Kruskal- Wallis test. Results: we found significant difference ( $p<0,05$ ) in ST.

**PB8 114** CLINICAL PROGRESSION IN MILD COGNITIVE IMPAIRMENT MAY NOT BE REFLECTED IN NEUROPSYCHOLOGICAL DOMAIN DECLINE

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Mild Cognitive Impairment (MCI) is often a stage which precedes dementia such as Alzheimer's Disease (AD), and the decline from MCI to AD generally involves increasing cognitive impairment as well as the onset of functional impairment. In a medical setting, assessment of these impairments is generally accomplished with short global screening tools, but the assumption is that the decline will also be reflected in progressing impairment across multiple cognitive domains, and this progression should separate MCI progressors (MCIP) from MCI non-progressors (MCInp). This assumption was tested in a set of 48 MCI subjects drawn from a clinical patient population followed at the memory clinic of the Jewish General Hospital (JGH), Canada. Twenty-five Normal Controls (NC) were also recruited for comparison from the community in Montreal. All were subjected to an annual neuropsychological battery of tests grouped in four domains: memory, language, executive functions and visual perception. Scores on the four domains and a global score were computed for each subject. Based on clinical follow-up after two years, the MCI individuals were ultimately classified as 35 MCInp and 13 MCIP subjects. The changes in neuropsychological tests over the two years, in MCI subjects compared to normal, was assessed. A group by time interaction ( $p=0.002$ ) showed a decline in the global scores for the MCIP subjects only. In the other cognitive domains, a decline in the performance of MCIP was only noted for visual perception ( $p=0.013$ ). Despite the performance of MCIP subjects being inferior to NC in every domain (all  $p<0.05$ ), they did not show decline in memory, language or executive functions scales. We conclude that a clinically observable decline in MCI individuals after two year follow-up may not be reflected in most individual neuropsychological domain scores. This may reflect possible floor effects of tests, test sensitivity, and patient variability.

**PB8 115** EFFICACY OF SSRI ON COGNITION OF ALZHEIMER'S DISEASE PATIENTS TREATED WITH CHOLINESTERASE INHIBITORS.

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Background: To examine the joint effect on cognition of selective serotonin re-uptake inhibitors (SSRI) and cholinesterase inhibitors (AChEIs) in depressed patients affected by Alzheimer Disease (AD) living at home. Methods. The study was conducted in two different outpatient neurological clinics. 338 patients with probable AD were treated with ChEIs (donepezil, rivastigmine and galantamine) as per the clinician's judgment and were observed for nine months. At study entry, participants underwent a multidimensional assessment evaluating cognitive, functional and psychobehavioral domains. All patients were evaluated at baseline, after one (T1), three (T2) and nine months (T3). Patients were grouped in three different categories (patients not depressed and not treated with SSRI,

patients depressed and treated with SSRI, and patients depressed but not treated with SSRI). Results: At baseline 182 of these were diagnosed as not depressed and not treated with SSRI, 66 as depressed and treated with SSRI, and 90 as depressed but not treated with SSRI. The mean change in MMSE score from baseline to nine months showed that depressed patients not treated worsened in comparison with not depressed and not treated with SSRI (mean change  $-0.8 \pm 2.3$  vs  $0.04 \pm 2.9$ ;  $p=0.02$ ) and patients depressed and treated with SSRI (mean change  $-0.8 \pm 2.3$  vs  $0.1 \pm 2.5$ ;  $p=0.03$ ). Conclusions: SSRI in AD patients treated with AChEIs may exert a protection on the negative effects of depression on cognition.

**PB8 116 UNAWARENESS OF MEMORY IMPAIRMENT AND BEHAVIOURAL ABNORMALITIES IN PATIENTS WITH ALZHEIMER'S DISEASE: RELATION TO PROFESSIONAL HEALTH CARE BURDEN**

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Introduction: unawareness of deficit (anosognosia) is a common phenomena in patients with Alzheimer's disease (AD). The main objective of this study was to examine the impact of anosognosia in patients with AD upon the professional health care burden. Methods and Materials: participants were 65 patients with probable AD, aged from 75 to 94 years old, consecutively admitted at Alzheimer Day Hospital in order to complete a program of cognitive stimulation and psychosocial rehabilitation. Each patient was submitted to a standardized evaluation including clinical investigation, cerebral imagery and neuropsychological assessment. Anosognosia of memory deficit and anosognosia of behavioural disturbances were measured as the "discrepancy scores" between patients' self-reports and family members ratings of patient memory performance and behavioural disturbances. Professional health care burden was assessed with the Professional Health Care Dementia Burden Index (PCDBI; maximal score: 12), designed for this study. Multiple linear regressions were used to examine the correlations between the PCDBI and the severity of anosognosia. Results: our findings showed a significant positive correlation between the PCDBI and both anosognosia of memory impairment and behavioural abnormalities (both  $p$  at least less than 0.05). However, there was no significant correlation between the severity of the burden and the severity of cognitive decline or functional impairment (both  $p$  at least >0.05).

**PB8 117 ANTICHOLINERGIC DRUGS USE AND MEMORY DECLINE IN ELDERLY COMMUNITY RESIDENTS**

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Introduction Dysfunction of the anticholinergic (AC) system has been widely shown to impair cognitive performance, in particular memory. Elderly people take many medications. Drugs with AC activity are frequently prescribed in this population. Recent studies have shown a measurable AC effect of frequently used drugs not usually recognized to have such properties. The present study aimed at assessing the relationship between the use of AC drugs and episodic memory and attention in a large sample of elderly non-demented community residents. Methods and materials The study population was selected from the PROOF study, a population-based cohort study of 1011 community-dwellers aged 65 years. A general interview was conducted to obtain information on demographics, current and past illness, cardiovascular risk factors, mood disorders and medications. A list of 279 drugs with AC effect was obtained by combining various literature studies. Even drugs with minimal effects or in vitro demonstrated effects were included. Subjects also performed an extensive neuropsychological evaluation exploring memory and executive functioning. Means of neuropsychological performances were compared between two groups of subjects, using or not AC drugs, with a multivariate MANOVA analysis. Results Of the 752 people included in the analysis, 102 (13.56 %) were taking at least one drug with anticholinergic properties. A selective effect of AC drug taking was disclosed on Free and Cued Selective Reminding test performances, exploring episodic memory. This effect remained significant after adjustment for age, gender, education, total medications taking, comorbidities and various cardiovascular risk factors ( $F=3.09$ ;  $p<0.01$ ). Conclusion The present study shows, in a large sample of elderly non-demented community dwellers, that taking drugs with "hidden" AC activities induces a selective episodic memory decline compared to non-users. When possible, drugs with AC effects should be avoided in elderly patients.

**PB8 118 IMMUNE SIGNATURE IN ALZHEIMER**

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Introduction: Alzheimer's disease, although phenotypically manifested as cognitive deficits exhibits pathological traits that are suggestive of a systemic disorder. The amyloid  $\beta$  ( $A\beta$ )

is at center stage of the immune reactions leading to the development of a chronic inflammatory process eventually manifesting as AD. However, the peripheral immune alterations accompanying the development of cognitive decline and knowledge on the involvement of the immune system as a mechanism for instigating or exacerbating AD have not been well investigated. Thus, the aim of the present study was to investigate more thoroughly phenotypic changes in T cell subsets in AD patients compared to healthy elderly. Methods and Materials: Most published studies have so far been limited to a rather unsophisticated assessment of different lymphocyte subsets. We have applied the most recent models for T cell subset discrimination using multi-parametric flow-cytometry to describe the immune signature of AD patients compared to healthy controls. Results and Conclusions: Our data provide stronger evidence than hitherto presented for more highly differentiated CD4 T cells in AD patients than age-matched healthy controls, consistent with an adaptive immune system undergoing persistent antigenic challenge and possibly manifesting premature immunosenescence as a result. Several putative sources of persistent chronic stimulating antigen exist, which might result in mild to severe immune exhaustion. The possibility remains that  $A\beta$  itself is the chronic stimulus, although as yet no data are available to support this hypothesis. Clinical trials aimed at reducing the  $A\beta$  load by vaccination should be pursued at very early stages of AD and also considering the underlying specific immune status from the long-term follow-up of the earlier phase I  $A\beta42$  immunisation trial. Further efforts are needed to elucidate whether the observed alterations are differentially occurring in various stages of the disease and whether they are already detectable in MCI.

**PB8 119 IMPORTANCE OF A BLACK BACKGROUND IN IMAGE DISPLAY FOR COGNITIVE REHABILITATION SOFTWARE**

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Introduction A growing number of educative, rehabilitation or playing softwares are proposed for cognitively impaired elderly people. Very few maker are considering specific visual needs and understandability of their visual interfaces. Population and method We proposed the same image of a milk bottle, with milk written on it, (5.5 cm high x 1.8 cm wide) first on a white background then on a black background, displayed on a 29 cm x 22 cm laptop computer screen to 30 cognitively impaired patients. Patients with major sighting problems were excluded. Errors occurred in one third of the patients with a white background and patients felt more comfortable with the black background. Discussion A white background is sending photons to the eye when a black background is absorbing most of the photons. The ratio between information and noise is decreased in case of a white background. If we then consider that vision is based on a prototypic encoding based on the information coming through four channels (shape, color, movement and intensity) and that this prototype is then formally recognized through a process of multi-sensorial integration ; the better the signal on noise ration, the smallest cognitive work is needed. Conclusion We should not have been surprised to find that the requirements made for low vision should then be the same for cognitively impaired patients. If we want to develop efficient multimedia rehabilitation programs for cognitively impaired patients, we have to make sure to limit the cognitive impact of visual information that patients have to use to achieve other specific training tasks.

**PB8 120 NUTRITIONAL SUPPORT AND BED SORES IN PATIENTS WITH ADVANCED ALZHEIMER'S DISEASE**

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INTRODUCTION: In patients with advanced Alzheimer's disease, mental fitness starts to decrease and they eventually develop a vegetative state. Motor activity and gait gradually deteriorates until the patient becomes unable to walk and on the neurological side, swallowing problems start to take place. Nutritional status, as factor related to appearance of pressure sores is taken into account in every risk assessment scale. Patients which present pressure sores are considered at risk to be suffering of malnutrition. AIM: To recognize that nutrition helps with healing of pressure sores in patients with advanced Alzheimer's disease. METHODS AND MATERIALS: We studied 7 cases of patients with advanced Alzheimer's disease (II and III), with limited movements (armchair/bed) and with associated pathologies (Crohn's disease, hypertension, urinary incontinence...). These patients presented with long standing pressure sores in sacrum, heels and ischiatric tuberosities which progressed poorly, and they were treated with enteral nutrition due to deterioration of their clinical situation (progressive cognitive/perceptive deterioration) and swallowing problems; this was delivered via nasogastric tubes and gastrostomy. RESULTS: In spite of the degenerative features of the progressive disease in all the cases we achieved, at least, control of the pressure sores in sacrum (2 of them healing well). One of the patients died after having the heel pressure sores completely healed and the sacral pressure sores following a good course (photographic records of the lesions).

**CONCLUSION:** In patients with advanced Alzheimer's disease, apart from having a protocol for pressure sores that includes general measures, it is important a nutritional support that restores a possible nutritional imbalance (nutritional and laboratory parameters) as to prevent pressure sores. Although healing of pressure sores does not affect directly the progression of the dementia, it does affect the patient's quality of life, as well as the emotional impact on the family.

**PB8 121 IMMUNE STATUS OF CMV AND INFLAMMATORY MARKERS IN PATIENTS WITH ALZHEIMER DISEASE**  
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**Introduction:** Alzheimer disease (AD) is the most common type of dementia. The incidence and prevalence of AD is increasing with age. Aging is also accompanied with an alteration of the immune response called immunosenescence. One hypothesis for this decrease in immunity is the chronic antigenic stimulation by chronic viral stimulation. One of the most well known chronic viral stimulation is cytomegalovirus (CMV). Aging is also accompanied as well as age-related diseases by a low grade inflammation. **Methods:** We studied all subjects referred to our memory clinic and diagnosed AD. As controls we studied all other subjects referred for all other cognitive problems (vascular dementia, MCI, Lewy body disease or healthy). We determined by standard methods the Immune status of CMV (negative or positive), CRP levels and complete blood count. **Results:** We studied altogether 100 subjects. From these 110 subjects 50 presented AD, 25 mixed type of dementia, 10 vascular dementia, 8 MCI and 17 healthy elderly. All were over 65 years. No significant alterations in the CRP levels or in the white blood cell count were found among these groups. The CMV immune status was significantly ( $p<0.05$ ) more frequent in patients presenting AD or mixed dementia. In vascular dementia and in healthy elderly the prevalence was much less. The positivity of the CMV immune status seemed to correlate with the degree of dementia. **Conclusion:** these results seem to suggest that CMV positivity could have a role to play in the immunological alterations found in AD. Future studies are needed to confirm this in a larger population.

**PB8 122 QUANTITATIVE AND QUALITATIVE ANALYSIS OF THE VERBAL LEARNING PROFILE IN PATIENTS WITH MILD COGNITIVE IMPAIRMENT**  
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**Introduction:** Verbal Episodic Memory (VEM) deficit is considered as an Alzheimer disease preclinical marker and a relevant symptom of the amnesic mild cognitive impairment (MCI). Formal test mostly used in a standard exploration are the learning and recall of a lists of words or phrases. **Objectives:** Evaluate the clinical utility of Adas Cog Scale as a tool for studying VEM in a cohort of patients suffering from MCI and describe the Verbal Learning Profile (VLP) in the same group of subjects. **Materials and methods:** A clinical and neuropsychological evaluation was performed in a group of 116 patients (Age:  $73.81\pm0.7$  years old; Level of instruction:  $9.58\pm0.3$  years, MMSE  $28.4\pm1.18$ ) with previously diagnosed amnesic MCI. The Adas Cog was done. Word Recall subitem (memory subitem, MS) was selected as marker of VEM deficit. Cognitive subitem (CS) was also recorded. Percentage of recalled words in each trial was used to study VLP. The results were compared with values from an age and gender matched control group using a t-test. Age subgroup analysis was done (group 1 (n=20): 50-64 years, group 2 (n=68): 65-79 years and group 3 (n=28): 80 or more years). **Results:** Individuals Adas cog MS and CS were higher than reference values in patients with MCI ( $6.51\pm1.51$  ( $p<0.001$ ) and  $2.36\pm1.49$  ( $p<0.001$ )). MS was not abnormal in group 1 while it was higher in group 2 and 3 ( $5.10\pm1.05$  ( $p=0.667$ )),  $6.50\pm1.41$  ( $p<0.001$ ) and  $7.51\pm1.20$  ( $p<0.001$ )). VLP study revealed relevant differences with the controls in each recall trial (trial 1:  $36.72\pm14.31\%$ ,  $p<0.001$ ; trial 2:  $56.12\pm13.50\%$ ,  $p<0.001$  and trial 3:  $60.34\pm14.01\%$ ,  $p<0.001$ ). **Conclusion:** VEM deficit and VLP alteration were found in amnesic patients with MCI. VLP modifications may serve as a potential diagnostic marker in the context of global scales of rapid application.

**PB8 123 FOCUSED ATTENTION DIFFERENCES BETWEEN COGNITIVELY NORMAL OLDER AND YOUNGER ADULTS IN A VERBAL STROOP TASK: A FMRI STUDY**  
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**Introduction** Focused attention (FA), or the ability to focus on relevant stimuli while ignoring distracting ones while performing a task, declines in older adults. The Stroop task is the gold standard for FA investigations. Stroop studies using functional magnetic resonance imaging (fMRI) have focused on younger populations and manual rather than verbal forms of the task. **Methods** In an fMRI study we investigated differences between

16 older (age =  $73.94\pm5.04$ ) and 20 younger (age =  $21.05\pm1.28$ ) cognitively normal participants brain activation during a verbal Stroop task. The participants were shown one stimulus at a time for 1.75 seconds and their verbal responses were recorded. **Results** There were no differences in overt scores between older and younger participants but random effects analysis showed that older participants had much greater activation than younger participants in occipital, parietal and frontal regions including bilateral inferior frontal, left medial frontal and middle frontal gyri but not in the anterior cingulate cortex (ACC), in contrast to previous research. The areas of activation were greater, less localized with more bilateral distribution in older adults. **Conclusion** We found evidence that in verbal Stroop task older and younger adults have similar areas of activation as in the manual Stroop task. Greater and less localized activation in older adults may provide support for the compensatory-recruitment hypothesis, with most compensatory recruitment happening in parietal and frontal areas. This study also provides the baseline for future FA studies of older adults with cognitive deficits.

**PB8 124 OLD NON-WESTERN IMMIGRANTS ARE NOT BEING REFERRED TO HOSPITAL SERVICES. A STUDY FROM CITY DISTRICTS OF OSLO, NORWAY.**  
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**Objective:** Compare frequency of referral to Hospital / clinic for internal medicine and memory clinic for non-western immigrants in the groups 50-75 and 76+ years of age, with the larger population within the same age groups in different city districts of Oslo. **Method:** Retrospective collection of data from Lovisenberg Diaconal Hospital for the year of 2006. Independent variables were age, sex and ethnicity. Diagnoses were collected from the epicrises of the patients. **Results:** For the age group 50-75 years there was no difference of referral to the hospital between the total population and the non-western immigrants. But in the age group 76+ the difference was evident. 18, 4% (257 of 1395) of the total population was referred to hospital and only 7, 9% (5 of 63) of the non-western immigrants. Patients referred to the Memory clinic for cognitive impairments: 4.1% (26 of 4594) of a total population in the age group 76+, but none (0 of 148) of the non-western immigrants. **Conclusion:** The results indicate that old non-western immigrants above 76 years more seldom are being referred to hospital for internal medicine or to a specialized center for cognitive examination than other citizens of the same age. This may have several causes. Cultural and religious traditions play an important role. They may be more difficult to examine due to language difficulties, cultural differences and levels of literacy. The elderly immigrants may be more invisible than others citizens. They may accept reduced physical and psychological disability, have limited social network or are shielded by the family. They may be afraid and not want to get an examination in a specialized medical center. The lack of standardization of screening tools for neuropsychometric assessments is a problem in cognitive testing. Another explanation for reduced use of hospital services maybe those elderly immigrants have left Norway and returned to their native country for a shorter or longer time. Further studies are needed.

**PB8 125 BMI, ALBUMIN, HEMOGLOBIN AND ALZHEIMER'S DISEASE**  
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**Introduction:** Studies had shown a decline in serum albumin levels in patients with Alzheimer's disease. The objective of this study is to show the changes of the albumin and hemoglobin levels in 30 patients diagnosed with Alzheimer's disease, during a one year period. **Methods and materials:** This is an observational, descriptive, prospective study. The sample consisted of 30 outpatients that fulfilled the DSM IV and NINDS-ADRDA diagnosis criteria for Alzheimer's disease. Three visits were performed at 0, 6, and 12 months. Body mass index (BMI), albumin and hemoglobin (Hb) were evaluated using standard methods. Data analysis was performed using SPSS version 13 by means of a Pearson correlation with 0.95 confidence interval, mean study (t student) and Anova variable correlation. **Results:** The descriptive analysis showed: Sample population 30 patients, with means of age 77.90, of educational level 6.30, of Mini Mental State Examination (MMSE) score 12.83 (5-25). Statistical analysis demonstrated that there is no significant change in the levels of serum albumin and it's independent of the cognitive decline, showing the following means: V1: 40.9, V2 41.2 and V3 41.3 (t: 64.5, 78.6, 70.8, .000 significance). The hemoglobin and BMI showed a decline during the disease process with the following means: Hb in V1 134.5, V2 132.1 and V3 127.0 (t: 52.9, 45.7, 33.3, .000 significance) and BMI mean: V1 25.1, V2 25.17 and V3 24.62 (t: 25.2, 23.8, 18.6, .000 significance). During the correlation study (Pearson), statistical differences were found in Alzheimer's disease, BMI and Hb and no correlation could be determined with respect to the albumin level. **Conclusion:** The study showed that the albumin level did not decline during the Alzheimer's disease process. Although a correlation between Alzheimer's disease, BMI and Hemoglobin levels was found. We suggest new studies to develop clinical elements that can predict or participate as biological markers of Alzheimer's disease.

**PB8 126 RISK OF COGNITIVE DECLINE AND MORTALITY IN DIABETIC MEXICAN ELTERS**  
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Introduction Diabetes is one the leading causes of death in Mexican elders. Some studies have demonstrated an association between diabetes and a higher risk of cognitive impairment. We evaluated this in the Mexican Health and Aging Study (MHAS) a prospective community-based study. Methods and materials 6,681 subjects aged 60 or more were classified as having or not having diabetes mellitus based on self reported variables. Using cognitive and functional data, subjects were also classified in three groups: Normal, Cognitive Impairment No Dementia (CIND) and Dementia. After two years, the association of diabetes with cognitive decline and mortality was established. Results Diabetes in the Normal Cognitive group was 14.3%, 15% in the CIND and 23.6% in the Dementia group. After 2 years 12% of diabetic subjects in the Normal group remain normal, 13% decline to CIND, 18.6% decline to dementia and 25% died. After adjusting for age, years of education, sex and other coomorbidities there was an increased risk of getting demented for normal diabetics independently and in addition with hypertension (OR, 1.58; 95%CI, 1.04 – 2.40). Exactly the same pattern was observed in the normal cognitive subjects that died after two years (OR, 2.27; 95%CI, 1.55 – 3.32). In the progression to CIND, diabetes didn't have a significant risk (OR, 1.07; 95%CI, 0.88–1.30). When CIND basal diabetic group was followed, 19.6% decline to Dementia and 26.3% died. Diabetes showed an increased risk in both groups: Dementia (OR, 1.93; 95%CI, 1.11 – 3.34), Mortality: (OR, 2.87; 95%CI, 1.77- 4.64) together with hypertension and age. Finally 30% of the diabetic demented subjects died 2 years later. Diabetes was not a significant risk factor. Conclusions Diabetes is a significant risk factor for cognitive decline in subjects which progress to dementia either from a normal or from a cognitive impairment stage.

**PB8 127 GALANTAMINE IN ALZHEIMER**  
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Introduction: to record in a real life setting the safety and clinical outcome of a once daily prolonged release of galantamine in the treatment of mild to moderate Alzheimers disease as well as caregivers, patients and physicians evaluation of treatment. Patients and methods: prospective, multi-centre, non-interventional, observational study in 13 centres (geriatrics and neurology) in Belgium. Two groups of patients were compared: galantamine treated patients and a group treated with other standard Alzheimer medication. At baseline functional, cognitive and behaviour assessment was performed and comorbidity, concomitant medication, blood pressure, heart rate and weight were noted. After 2 and 6 months dosage of galantamine, adverse effects, concomitant medication, caregivers global evaluation and patients satisfaction with therapy were noted, and at 6 months also a global evaluation of treatment by the physician. Results: 128 patients (mean age 77.9y; SD 6.6y; 42M/86F) were included of whom 110 completed the study. After 6 months of galantamine treatment non-significant improvements were noted for MMSE (21.2 to 21.6) and NPIq (14.7 to 13.5); physicians rated global impression as 50% better, 33% unchanged, 20% worse; caregivers rated global evaluation as 40% better, 40% unchanged, 20% worse; patients reported satisfaction with the therapy as 48% better, 47% unchanged, 4% worse. The incidence of side effects with galantamine was 11.7%, which was not different from the other treatments. Conclusions: galantamine once daily is evaluated as beneficial (improvement or stabilisation) by an important part of physicians, caregivers, and patients; side effects are limited.

**PB8 128 CHOLINESTERASE INHIBITORS AND CARDIOVASCULAR DISTURBANCES IN ALZHEIMER'S DISEASE**  
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Introduction : Cholinesterase inhibitors (CI) have shown to improve attention and memory in patients with Alzheimer's disease. However, some cardiovascular disturbances are susceptible to provide symptoms like syncope or equivalents. It may be sometimes difficult to disentangle benefits and risks in elderly with cardiovascular comorbidities. Material and method : Case report : A 76 year old woman with Alzheimer's disease has been treated with 10 mg a day of donepezil for one year. Then, as she was presenting a stability of memory troubles, she presented a serie of syncopes. A sinus bradycardia and a first grade auriculoventricular block were disclosed by a holter monitoring. These abnormalities were absent one year before. Donepezil was then discontinued. Results : Because of probable benefits from CI, rivastigmine was introduced during an hospitalization allowing holter monitoring. After one year, the patient is stable for memory performance and she does not present syncope any longer. Two other monitoring controls have disclosed correction of ECG abnormalities. Discussion : Four cases of syncopes and four cases of syncope equivalents with identified ECG abnormalities (four AV blocks, three bradycardias, one not described) were reported after CI introduction in literature. A pace-maker (PM)

implantation or cessation of CI were proposed. In these patients, the balance between benefits and risks should be systematically re-evaluated. When CI is effective, a molecule switch should be proposed before PM implantation. This switch should be performed in the context of cardiovascular supervision and ECG monitoring during a hospitalization.

**PB8 129 CAREGIVER BOURNOUT IN ALZHEIMER DISEASE PRESENT IN MEXICAN FOUNDATION**  
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BACKGROUND: Primary caregiver fatigue in alzheimer disease is present and cause irreversible damage at the health system. Sometimes caregiver needs more attention even the dementia patient. Institutions are interested to known which the bournout level is and how can help to the families in order to avoided objective: identify the presence of burnout in caregivers of patients with Alzheimer and the level at which it presented method: assessed 135 caregivers of people with dementia in a cross-sectional study of whom 91 were taken as sample. It applies the scale of caregiver stress Zarit RESULTS: 71% of the total sample showed intense level of overload, of which 67% was found with psychological wear. profile for Alzheimer caregivers in Mexico is mostly women married women over 40 years CONCLUSIONS: attention to caregivers of patients with dementia is known by all but the degree of affection and the characteristics of stress that occurs in this population indicates that most suffer from being overloaded with intense psychological consequences in the area to focus on urgent because they are women who still support his family and children.

**PB8 130 ASSOCIATION BETWEEN MILD COGNITIVE IMPAIRMENT (MCI), NUTRITIONAL STATUS AND BODY COMPOSITION AMONG ELDERLY PEOPLE IN MALAYSIA**  
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This cross-sectional study was conducted to determine the association between mild cognitive impairment, nutritional status and body composition among elderly people in Malaysia. The study aimed to screen 500 individuals aged 60 years and above from a few flat residential area in Klang Valley. Mild Cognitive Impairment were assessed using Mini Mental State Examination (MMSE), Dementia Rating Scale (DRS), Geriatric Depression Scale (GDS), Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL) and memory complaints by participants. Anthropometric measurements taken were height, weight, mid-upper arm circumference, calf circumference, waist and hip circumference. Body composition was measured using Body Impedance Method to obtain data on fat free mass (FFM), fat mass (FM), Resting Skeletal Muscle Index (RSMI). A total of 30 ml fasting venous blood was taken for determination of antioxidant status, plasma homocysteine, folate and iron status, fasting serum lipid, HbA1c and APOE polymorphism. Preliminary analysis of the results among 68 subjects showed that 27 (39.7%) men and 41 (60.3%) women had MCI. Men had a significantly greater value for waist hip ratio, skeletal muscle mass and fat free mass than women ( $p<0.05$  for all parameters). There as also a trend that MCI is more prevalent among subjects with low education and high waist hip ratio. The association between mild cognitive impairment with biomarkers and antioxidant status is also being investigated. In conclusion, MCI was detected in approximately a quarter of samples and related to educational status and poor nutritional status.

**PB8 131 SMALL UNITS AND A DAY CARE CENTER FOR PEOPLE WITH DEMENTIA IN AN INTERGENERATIONAL HOUSING AND SERVICES STRUCTURE IN SAINT APOLLINAIRE "HELLO NEIGHBOUR"**  
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introduction In 2002, FEDOSAD : a non-profit-making association for support at home and in institution had the opportunity of working with both the Town Council of Saint Apollinaire and a public service of social housing. An intergenerational place was founded : besides early childhood services and a small unit of 6 people with dementia, there is also a day care center for 13 persons with dementia. Close by to the institution live people in flats provided by public housing : half young couples having small children and half old people. Method The idea of course is to make all these different-aged people meet regularly and improve cordial relations between them. Intermixing of generations is rules by a Charter "Hello neighbour" which is based on a moral agreement to live together harmoniously and learn how to provide help and ways of communication in order to keep in touch as often as possible. With the help of a coordinating committee including professionals of care and social services, some regular meetings are organized between all people living there (in institution or at home). Numerous activities are offered : lectures, shows, exhibitions, parties, which give to everyone a chance to meet the other and strengthen social relations. Results These meetings let people know each other better and better. We noticed that the relations became actually friendly and pleasant, in an easy way : people recognize each other, talk together, know who the other are ("critical distances")

being abolished). Old people particularly find again appropriate gestures towards small children. People with dementia and their families consider this place as really different from the other health care places, as they feel at home : this appears through the answers to the questionnaires addressed to the families, which are very positive proving that these sorts of structures are in great demand Conclusion: People with dementia are no more stigmatized. During the meetings with their neighbours and particularly with the small children, they are able to find convenient social behaviours. People are highly motivated in planning the meetings as they feel involved and responsible for the projects.

**PB8 132 ARE OLDER PERSONS APPRECIATED IN THE FINNISH SOCIETY?**

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Introduction This study is a part of the Senior Study Project. The aim was to describe the opinions of older Finns about the appreciation of older persons and the quality of care of the aged in Finland. Methods and materials The material consisted of a random sample of Finns aged 65 years or older (N=503). Data were collected by structured telephone interviews in June 2008. Results According to the preliminary results about two-thirds (67%) of participants answered that older persons are appreciated less than middle-aged persons. Only 13% thought that older persons are highly appreciated. Every third (30%) thought that care of the aged is organized poorly and 62% thought that the quality of the care of the aged is not adequately good for older people and it has become worse during the past years. Conclusion According to the opinions of older Finnish citizens, the appreciation of older persons is poor. The quality of the care of the aged is quite poor and its quality has even become worse during the previous few years. Older citizens think that their autonomy and individuality are not respected by younger generations in modern Finland.

**PB8 133 BIOMARKERS OF OXIDATIVE STRESS IN OLDER HEALTHY SPANISH SUBJECTS**

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Introduction Oxidative stress has been reported to increase with ageing. However, the data in healthy humans remains controversial and studies in healthy elderly people are scarce. The objective of the present study was to compare age-related oxidative stress in male and female older healthy subjects. Materials and Methods The effect of ageing on oxidative stress and antioxidant parameters was investigated in seventy-two older subjects (32 male and 40 female), from Murcia (Spain). We performed an ADL test to select older subjects who were independent in all activities of daily living. Blood and urine samples were collected and analyzed to select the male and female older healthy subjects. The urinary concentration of isoprostanes and the concentration of oxidized LDL and autoantibodies against oxidized LDL in plasma by ELISA methods were measured as markers of the degree of lipid oxidation. The oxidation of proteins was analyzed by measuring the protein carbonyls in serum. For quantitative measurement of the oxidative DNA the adducts 8-hydroxy-2'-deoxyguanosine (8-OHdG) in urine using anti-8-OHdG monoclonal antibody were analyzed. Furthermore, it has measured the total antioxidant activity in plasma and the activity of endogenous antioxidant enzymes: glutathione peroxidase (GPx), glutathione reductase (GR) and superoxide dismutase (SOD). The total antioxidant status (TAS) was measured in plasma. 1 years) of this study are healthy for Results The older subjects (69 the values of the parameters biochemical and haematological parameters analyzed. These values are within those considered normal for both men and women, except the values of uric acid and urinary creatinine in the female subjects which are lower ( $p<0.05$ ). The results of biomarkers of oxidative stress showed that the female have lower values of TAS than the males, and higher values for GR ( $p<0.05$ ). No significant differences were found between men and women for the values of GPx, SOD and biomarkers of protein, lipidic and DNA oxidation. Conclusions The results of this study showed that the degree of oxidative stress is similar in male and female older healthy Spanish subjects, but women are a better antioxidant status than men.

**PB8 134 DEBRECEN LONGEVITY STUDY II. HEALTH AND FREE RADICALS IN OLDEST OLD RESIDENTS**

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Introduction: Among the elderly population in Hungary the number and proportion of the oldest old ( defined as age 90 years or older ) residents would increase most significantly in

the near future. We decided to make a systemic analysis of this target group under this title : Debrecen Longevity Study. It is well known that the toxic effects of oxygen free radicals contribute not only to the incidence of age-associated diseases, but also to the aging as a biological phenomenon. To study the damaging effect of oxygen free radicals and the efficiency of antioxidant defence in this special group three parameters were examined: plasma vitamin E and lipidperoxid contents as well as the carbonil contents of plasma proteins. Methods: The laboratory results of 185 persons above 90 years old have been presented. For healthy controls in the evaluation of vitamin E contents 100 persons with an average age of 37,5 +/- 9.9 years have been used. For healthy controls in the evaluation of lipidperoxid and carbonil contents three age groups, 20 – 39 years of age (60 persons), 40 – 59 years of age (40 persons) and 60 – 80 years of age (40 persons) have been used. Results: Significantly higher levels of alfa - tocopherol ( $p < 0.001$ ) and gamma - tocopherol ( $p < 0.05$ ) were observed in the oldest old residents as compared with the values found in healthy controls. The trend of significant ( $p < 0.001$ ) increase was observed in the contents of lipidperoxid and carbonil as a function of age in healthy controls, but the increase was not significant over 80 years of age. Conclusions: It could be concluded that the oldest old residents had a native resistance to the damaging effect of oxygen free radicals.

**PB8 135 PROSTATE CANCER TREATMENT TOLERANCE AND EFFICACY IN THE ELDERLY**

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Introduction: Prostate cancer is the more common cancer in man with half of diagnosis made after 74 years of age. Adjusted death risk seems to be independently increased with age. However, these patients are too often excluded of controlled trials of new treatment strategies. Moreover, most elderly men presented at the first consultation metastasis stage. It seems important to determine if age by itself is sufficient to assess the benefit and risk of chemotherapy, which is the gold standard treatment of metastatic prostate cancer. Methods: We made a retrospective study of medical files of more than 75 years old patients consulting for metastatic prostate cancer between 2000 and 2006 in a reference University Center for prostate cancer treatment. We extracted data related to the disease (Gleason classification, stage, date of diagnosis, symptoms), data related to co-morbidity (Charlson index) and clinical status (performance status and pain), and biological parameters (haemoglobin, albumin, renal and hepatic function). We also extracted treatment details (chemotherapy products used, treatment modality) and outcome related to tolerance of the treatment and clinical status after treatment in order to assess efficacy. Results: We aimed to clarify relationship between 1) clinical data and efficacy and tolerance of treatment 2) biological parameters and efficacy and tolerance of treatment and 3) cancer stage and efficacy and tolerance of treatment. Conclusion: Results will be discussed during the session in order to improve the metastatic prostate cancer management of old and very old patients.

**PB8 136 THE VALUE OF A COMPREHENSIVE GERIATRIC ASSESSMENT (CGA) FOR ELDERLY PATIENTS WITH NON METASTATIC BREAST CANCER.**

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Introduction : The value of a CGA has been well demonstrated in many geriatric settings. Few studies has evaluated the usefulness of such an evaluation in taking care of the global medical condition of elderly patients with cancer and more over, the evolution of the included items over time. Methods and materials : Women aged > 70 years with operable breast cancer pre and post-operatively underwent a CGA procedure conducted by a multidisciplinary team. The CGA incorporated numerous validated instruments (GDS, MMSE, MNA, ADL...) and a comprehensive physical examination and standard paraclinic exams. Comorbidity was measured with the CIRS-G. According to this detailed evaluation, recommendations were formulated by the geriatrician when necessary. Results : 79 women aged 70 or older received a multidisciplinary CGA at baseline and if possible, at 1 year and 2 years. At baseline, most patients (66%) were fully independent for ADL and 46 % for IADL. 19 % were at risk for cognitive impairment, 30% for depression and 33 % for malnutrition. Mean CIRS-G total score was  $10 \pm 4$ . Patients presented on average three new problems identified initially. An average of  $3 \pm 1$  recommendations were implemented based on the CGA. After 2 years of follow-up, 37 patients were dead or lost. Among the remaining, 58% were still independent for ADL and 44 % for IADL. 23 % were then at cognitive risk, 23 % at depression risk and 20 % at nutrition risk. Conclusion : A CGA appears to be a useful way to detect new geriatric problems in those cancer patients and to build recommendations to manage their global condition. In addition, it makes possible to follow the evolution on the physical, psychological and social status of the patient.

**PB8 137 A NOVEL WAY OF ASSESSING HEALTH AND VULNERABILITY IN OLDER NEWLY-DIAGNOSED CANCER PATIENTS: RESULTS OF A PILOT STUDY**

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**Introduction:** Oncologists may have difficulty in determining appropriate treatment and predicting complications in older patients. In this regard, the concept of frailty may be a useful way to characterize their health, functional status and vulnerability. **Methods:** Objectives: 1) To evaluate the recruitment and retention strategy and the feasibility of the selected measurement tools. 2) To describe the health and vulnerability of older cancer patients and the adverse outcomes of treatment. **Study Population:** Cancer patients aged 65 and older referred to the Segal Cancer Center with a new diagnosis of breast, colorectal or lung cancer, lymphoma or myeloma, able to give informed consent, life expectancy >3 months, who have not received cancer treatment in the previous five years. **Results:** 112 patients are included: mean age 74.32, 34 men and 78 women (response 72%). At 6 months follow-up 91 patients completed the interviews (81.3%), 14 died (12.5%) and 7 refused follow-up (6.2%). Most patients had a new diagnosis of breast or lung cancer. The mean number of frailty markers at baseline (range 0-7) was 2.3, at 3 months, 2.4 and at 6 months 2.0. The most common frailty markers were slow gait speed, nutrition deficit and low physical activity. 38 patients had one or more functional limitations, 39 patients had disability in instrumental activities of daily living (IADL) and 13 had disability in activities of daily living (ADL) at baseline. The most common functional limitation was unable to walk a mile, the most common IADL disability was unable to do housekeeping activities and the most common ADL disability was incontinence. **Conclusion:** It was feasible to recruit and retain newly-diagnosed cancer patients but it required considerable time and effort. The majority has vulnerability markers present at baseline. The functional status over time fluctuates but returns to baseline status for most patients.

**PB8 138 PRACTICAL FUNCTIONING OF AN ONCO-GERIATRIC READAPTATION UNIT (OGRU)**

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**Introduction** Elderly cancer is a public health problem. More than half cancers occur after the age of 70. The french cancer plan (Plan Cancer) recognizes the need to develop an active policy of special care for elderly people with cancer. An onco-geriatric mission was given to the french national institute for cancer (INCA). Pilot units of coordination in onco-geriatrics (UPCOG) and OGRU were created in this context. Their major task was to optimize the care of elderly people with cancer, taking into account their common comorbidities and their sensitivity to adverse effects of treatment. We review retrospectively the first year of functioning of one OGRU. Results The OGRU contains actually 10 beds (gradually open) within a geriatric MCU of 35 beds. There was 31 patients (and 49 stays), including 52% of women and 48% of men, with an average age of 79.4 years. The most frequent cancer were digestive cancers (39%) and hematologic cancers (26%). The most common hospitalization reasons were chemotherapy intercourse (41%) and care support (39%). Most of patients had an advanced stage disease as they entered the unit, 52% had metastatic cancer. Autonomy and cognitive functions were often less damaged than in geriatric RU. Comorbidities (assessed by the CIRS-G) were higher. The acute episodes and evolution to palliative care were more frequent. 35% of patients went back home, 16% of patients died in the unit, 8% were transferred in palliative care unit. **Conclusion** Because of burden of care, frequency of acute failures and complications, the activity of OGRU is more similar to short-stay units, though without benefiting the same resources. The frailty of patients often leads to an exclusive palliative care, needing a necessary close collaboration with palliative care units. OGRU is adapted to the needs of a growing number of patients.

**PB8 139 OVERALL SURVIVAL IN ELDERLY WOMEN WITH EARLY BREAST CANCER**

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**Background and purpose:** Life expectancy and mortality rates for breast cancer are improving in most countries. Age is the major risk factor for the development of breast

cancer. The current work assessed the independent contributions of age, comorbidities and tumor features, to the outcome of elderly women with early breast cancer in University General Hospital in Elche. **Material and methods:** Records of consecutive women aged > or = 65 years with a histologic diagnosis of invasive and no metastatic breast cancer between 1st January 2003 and 31st December 2006 and available medical information were reviewed. Overall survival (OS) of patients was compared between tumoral and patient characteristics. **Results:** There were 164 patients with a median diagnosis age of 73,66 years (range: 65,0-93,56 y). Of 8 patients who died during the study period, and all of them died from their tumors. The 5-year OS rate was 88,3%. Mean of time to death was 27,34 months (range: 8,57-35,35 months). On univariate analysis, ECOG 2-4 vs ECOG 0-1 was associated with poor 5-year OS (57,9% vs 92,4%; p=0,002), so HER2 amplification vs non amplification (77,4% vs 96,2%; p=0,011). No group of age (>70 vs <70 years), Charlson index (3-7 vs 1-2), medication intake (5-10 vs 0-4), tumoral stage (III vs I-II), St Gallen guidelines (high-intermediate risk vs low risk) or hormonal receptors (negative vs positive) were associated to differences in OS. On multivariate analysis, none of all factors were associated with a worse outcome. **Conclusion:** This study confirms that age was not a predictive factor of poor overall survival in women older than 65 years with early breast cancer. Just ECOG and HER2 overexpression were related to poor overall survival (just in univariate analysis). Decision on treatment should not be taken just because of age.

**PB8 140 CYTOREDUCTIVE SURGERY COMBINED WITH PERITONEAL INTRAOPERATIVE HEATED CHEMOTHERAPY FOR MANAGEMENT OF PERITONEAL CARCINOMATOSIS IN 59 OLDER ADULTS OVER 65 YEARS.**

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**Background:** peritoneal carcinomatosis (PC) has long been regarded as a terminal disease with short median survival. Recent success of new approach, combining surgery and intraperitoneal heated chemotherapy (HIPEC) are reported. But in the most studies patients over 65 years are excluded. We report our experience in this selected group of patients. **Methods:** a retrospective study was performed to evaluate toxicity and to identify the principal prognostic indicators with this combined treatment. All patients had cytoreductive surgery and HIPEC. This population of patients was compared with younger over the same period. We have excluded patient with frailty by comprehensive onco-geriatric assessment based upon cognitive, nutritional assessment and comorbidities. **Results:** the study included 291 procedures in 249 patients between 2000 and 2008. 64 procedures were performed in 59 older patients (group1) and 227 procedures in 190 younger patients (group2). The principal etiologies of PC in group1 were recurrent ovarian cancer (N=33), colorectal cancer (N=9), peritoneal mesothelioma (N=6), pseudomyxoma (N=9) and sarcomatosis (N=2). No death occurred in post operative course and the procedure related morbidity rate was 10%. 5 years overall and free survival rate were respectively 33% and 15%. Median overall survival was 44 months and median disease free survival was 13 months. There were no difference between group1 and 2 for survival. Independent prognostic factors for survival by multivariate analysis were extent of carcinomatosis, completeness of cytoreductive surgery and performance status. **Conclusions:** therapeutic approach combining cytoreductive surgery with HIPEC may achieve long-term survival in a selected group of patients with PC with acceptable mortality and morbidity. For elderly patients, this treatment could be performed in selected cases without frailty.

**PB8 141 IMPACT OF A GERIATRIC ASSESSMENT IN ONCOLOGY.A RETROSPECTIVE STUDY ABOUT 59 OLDER PATIENTS WITH CANCERS.**

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**Introduction:** The comprehensive geriatric assessment (CGA) is a useful tool to determinate different groups of patients with different frailty levels (classification of Balducci). The goal of this study is to determinate if a CGA help in making therapeutic decision in oncology. **Material and methods:** Data of 59 patients with cancer are analysed retrospectively including a CGA by a unique operator between June 2005 and November 2008. The patients selected didn't have a therapeutic's decision when the CGA was done. **Results:** the populaion have a mean age of 81 years ,66% of them have a digestive cancer and 20% a breast cancer.The decision of treatment is according with the conclusion of the CGA for 92% of the patients. After 6 months of follow up in the one, second and third group according to the Balducci classification ,the global survey was respectively 86,84% and 54%.For 80% of the patients the staff use the CGA or the grade of Balducci classification to justified the decision for the treatment.This classification is correlated significantly with the treatment of chemotherapy. (p=1,59 10-09\*\*).**Conclusion:** Our data

suggest that the CGA is a useful tool in clinical practice for helping the decision of cancer treatment in elderly patients

**PB8 142 THE CONSTRUCTION OF ILLNESS RELATED KNOWLEDGE VARIED AMONG PROSTATE CANCER PATIENTS AT THE BEGINNING OF RADIOTHERAPY**

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Introduction Prostate cancer is one of the most frequent cancers in men and its prevalence increases among older population. The cancer diagnosis can be a traumatic experience to the patients because it has been traditionally considered as an illness which leads to the death. We should know better patients' thoughts about their illness, the learning strategies they use during their illness, their knowledge expectations and motivation to care themselves. The aim of the study was to find out how prostate cancer patients construct their illness related knowledge. Methods and material The data were collected by an interview and with two structured questionnaires, i.e. "Prostate Cancer Knowledge Test" developed by the researchers in our study group, and previously developed and validated "Learning Style Diagnostic" instrument (Romero-Simpson 1996). The patients (n=50, 26 of whom received hormonal therapy) were interviewed at the beginning of radiotherapy between August and December 2007. The structured questionnaires were analysed statistically. The interviews are analysed with the phenomenological psychological method. The analysis of the interviews is going on and results are available in April, 2009. Results The mean knowledge score was 13.10, standard deviation 3.36, range 3-21. Most of the patients knew that the doctor makes a decision on the patient's care together with a patient (92 %) and that prostate gland is men's sexual gland (88 %). Most of the patients did not know that hormonal therapy causes permanent impotence (72 %). Patients used different strategies in order to construct their knowledge. Some patients wanted to see the results of their actions, some patients wanted to watch what is going on, and some patients just wanted to understand things. Conclusion The nursing staff should have a possibility to evaluate prostate cancer patients' knowledge construction. This could help them to support patients more individually.

**PB8 143 TREATMENT DECISION-MAKING BY OLDER INDIVIDUALS WITH CANCER: ANALYSIS OF THE CONCEPT OF 'PATIENT DECISION-MAKING'**

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Introduction: Treatment-related decision-making is often a concern for older individuals with cancer. Variations in health and functional status among the elderly and physiologic aspects of aging affecting cancer treatment present unique challenges. Treatment decisions represent a difficult balance between quality and quantity of life. A better understanding of older individuals' decision-making processes and of factors influencing decision-making is necessary to optimally support this group of patients and their families. This is an emergent area of research and it is often lacking theoretical foundations to guide inquiry and intervention. Purpose: This paper offers an in-depth analysis of 'patient decision-making' in the context of treatment-related decision-making among elderly individuals with cancer, according to the criteria established by Morse and her colleagues. Methods: A computer-generated search of scholarly works published in peer-reviewed journals was done to find conceptual or theoretical papers whose specific focus was 'patient decision-making'. A second search was performed for treatment-related decision-making from the perspective of elderly cancer patients and their families. Results: Elements of the concept of 'patient decision-making' found to be central to the experience of older individuals with cancer include: role of the family, interaction between patient, family and health care provider, changes in decision-making over time, and post decisional appraisal. Certain assumptions inherent in the concept may not be consistent with the experience of elderly individuals with cancer. An individual's decision may not be 'rational' in the way assumed by health care professionals and patients may not perceive a choice where health care professionals assume a choice has been presented. Factors influencing decision-making related to patient, family, health care practitioners, health care interaction, system, environment, and decision problem itself are identified. Conclusion: With attention to inherent assumptions, the concept of 'patient decision-making' can provide a useful foundation for understanding and investigating decision-making by elderly cancer patients.

**PB8 144 AN UNEXPLAINED FEVER**

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Fever is observed at approximately 60% of the patients having a cancer. The difficulty is to differentiate the secondary fever with the syndrome paraneoplastic, other causes of fever, the infection and the side effects with the treatments. Test with non sterooidal anti-inflammatory drugs described by authors would allow making this difference. 86 year old man hospitalized for falls in a context of deterioration of the state general, associated a recent hyperthermia 38, 5°C. Its antecedents include sideroblastic anemia, a narrow lumbar channel not operated, cholecystectomy. Its treatment includes Oxazepam, Pantoprazole, Citalopram, Aceprometazine, Diclofenac. For a few months have appeared an asthenia, a dyspnea of effort and a weakness of the lower limbs explaining the recent falls. The examination: paler, hyperthermia 39°C, without point of infectious call private clinic. Results: Biology finds an inflammatory syndrome with CRP 113mg/l, hyperleucocytosis 12300 Giga/L polymuclear neutrophils thus that one weakens normochrome macrocytic for which a myelogramme eliminates a transformation from the myelodysplasia. Bacteriological taking away: blood culture, ECBU, search for BAAR, lumbar puncture are negative. Radiological examinations: do not find a pulmonary infectious hearth, abdominal ultrasonography is without characteristics and cardiac echography eliminates an endocarditis.TDM thoraco-abdomino-pelvic which will reveal a suspect heterogeneous lesion on the level of segments VII and VIII of the liver. The hepatic biopsy will conclude with one hepatic metastasis little differentiated from an adenocarcinoma, digestive origin to the exclusion of the colonist and rectum. The primitive neoplasia will remain unknown. This clinical case evokes the difficulty among old patients polypharmacologic with symptomatology varied to make the diagnosis of neoplasia. It is important to seek among these patients with a persistent inflammatory syndrome associated a degradation of the state general and the appearance of a dependence for the basal and instrumental activities of the everyday life to seek one neoplasia.

**PB8 145 IMPACT OF AN ONCOGERIATRIC PROGRAM IN A MEDICAL ONCOLOGY UNIT**

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Introduction: Oncogeriatric practice tends to get more structured. In 2005, International Society of Geriatric Oncology (SIOG) "strongly recommended" a "Comprehensive Geriatric Assessment-based approach"..."in elderly patients...". In the same time, the french national cancer institute (INCA) financed 15 pilot units to coordinate and implement oncogeriatrics (UPCOG) on the french territory. We investigated, on a registry basis, the local impact of this implementation on everyday practice in our medical oncology unit. Patients and methods: three distinct and successive cohorts of elderly patients (>70), identified respectively as "2005", "2006" and "2007" were defined on a registry basis using the date of the first medical visit in the unit. Patient characteristics, extent of geriatric evaluation were analyzed and compared to international guidelines. Results : Respectively 25, 44 and 62 patients were evaluated during 2005, 2006 and 2007. Mean and median ages were respectively 77 and 76 in the whole group (extremes 70-95), with a trend towards an increase from 2005 (mean:75, median:75, p=0,007) to 2007 (respectively 79, 78,5, p=0,11). In 2007, a comprehensive geriatric assessment was recommended at an institutional level and effectively done in respectively 16%, 27% and 67% for 2005, 2006 and 2007 cohorts. Multidimensional geriatric assessment was realized in respectively 28%, 19% and 21% of the patients. Vulnerable (Balducci 2) and frail (Balducci 3) patients represented respectively 41% and 8% of the patients treated between 2005 and 2007. During this time, patients with a poor performance status (PS=3, total 13%) tended to increase, from respectively 0% in 2005 to 23% in 2007 (p=0,0018). Conclusions : Short term consequences of oncogeriatrics structuration in clinical practice in our institution are the followings : (1) increase in total number of new visits (2) compliance for international recommandations in more than two thirds of the patients (3) Trends towards recruitment of older people, whose geriatric covariates are more frequently deteriorated.

**PB8 146 EFFECTS OF DIETARY CONJUGATED LINOLEIC ACID ISOMER ON HEPATIC ANTIOXIDANT ENZYME SYSTEM IN 1,2-DIMETHYLHYDRAZINE-TREATED RATS**

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The study was designed to observe the effect of conjugated linoleic acid(CLA) on hepatic level of malondialdehyde(MDA) and tocopherol, and antioxidant enzyme(superoxide dismutase, glutathione peroxidase, glutathione-S- transferase, catalase) in rats. Male Sprague Dawley rats aged 7 week were divided into 4 groups. Control group was beef tallow(BT) and experimental groups were subdivided into 3 groups depending on CLA isomer supplement, i.e. BT, CLA(M), CLA(C), CLA(T). All rats were fed experimental diet containing total dietary fat at 14.5%(w/w) including CLA at 0.8% level for 14weeks. Tocopherol level was significantly lower in rats fed CLA than BT. CLA had shown significant decrease in hepatic level of glutathione-S-transferase activities in rats fed BT. In microsomal lipid in rat fed CLA(C), the level of c9,t11 fatty acid was significantly increased than rat fed BT. In microsomal lipid in rat fed CLA, the level of other CLA isomers fatty acid was significantly increased than rat fed BT. MDA were negatively correlated with tocopherol, other cla fatty acid and n3 fatty acid. Activities of GST in

hepatic cytosolic fraction were positively correlated with tocopherol and c9,t11 cla fatty acid. In conclusion, CLA isomer supplementation could be reduced the level of total tocopherol for the reason of increased MDA. In CLA isomer supplementation, tocopherol was used for eliminated MDA and GST was suppressed. These results might suggested that CLA isomer supplementation could act as pro-oxidant rather than antioxidant. And in hepatic microsomal membrane, c9,t11 CLA isomer fatty acid was incorporated with high level. However, t10,c12 CLA isomer fatty acid was incorporated with a trace of level.

**PB8 147 THE NURSING ROLES IN ENHANCING THE CERVICAL CANCER SCREENING PARTICIPATION AMONG THE ELDERLY WOMEN IN HONG KONG.**  
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Introduction: Cervical cancer was the fifth most common cancer in females in Hong Kong in 2006. According to the Hong Kong Cancer Registry, there were 459 new cases of cervical cancer, accounting for 4.2% of all new cancer cases in females. Both incidence rate and mortality rate generally increase with age with a peak at the age group of 65-69 and the group of 85 and above, respectively. Although screening for cervical cancer reduces the risk of developing the disease, the coverage of screening in women aged 65 years or above is less than 10% in Hong Kong. Most of them did not adhere to regular screening and many of them had never had the opportunity to have it done before. Methods and materials: Literature review shows that local public elderly health centres where health assessment is conducted for elderly women aged 65 and above, about 30% eligible for Pap smear screening declined. Acceptance of Pap smear examination is affected by the level of knowledge about cervical cancer and Pap smear screening, perceived pain or fear of pain during the test and the gender of health care professionals. Results: Female nurses who are trained as the accredited smear takers in Hong Kong play an important role in enhancing the screening uptake rates of the elderly. Researches reveal that the related counseling component in the training and screening program was found deficient. A study is now being carried out to investigate whether positive attitudes towards cervical cancer screening could be nurtured among elderly women with increased counseling by nurses. Conclusion: Nurses play the roles of educator, facilitator, advocate, carer and smear takers in the cervical cancer screening program. It is reasonable to hope that with a better educated elderly population and increased health awareness, the screening uptake rate will be improved and the prevalence of cervical cancer among them will be minimized.

**PB8 148 THE 6-MIN WALK TEST AND BODY COMPOSITION IN ELDERLY COPD PATIENTS WITH DEPRESSIVE SYMPTOMS**

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Depressive symptoms compromise the functional capacity of patients with chronic obstructive pulmonary disease possibly due to alterations in body composition. It is not known if encouragement during walk tests influences this performance. We assessed the level of obstruction, body mass index, fat-free mass, fat mass and fat-free and fat mass indices, 6-minute walk test, number of comorbidities and the presence of depressive symptoms in 40 patients with stable chronic obstructive pulmonary disease. Depressive symptoms occurred in 22.5% of the men. Muscle depletion began to occur at the mild obstruction level in the asymptomatic individuals, and at the moderate level in those with depression. The distance walked was lower than expected and walk time with encouragement was longer in the asymptomatic group. Body mass index was correlated with walk time in the asymptomatic group, which walked with verbal encouragement. Encouragement did not seem to be decisive for performance on the test. Depletion occurred at the onset of the disease and none of the patients were medicated for depressive symptoms.

**PB8 149 SERUM LEVELS OF LOW DENSITY LIPOPROTEIN CHOLESTEROL IN PATIENTS ADMITTED TO MID STAY GERIATRIC HOSPITAL**

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Introduction: The AFSSAPS recommended as target a low-density lipoprotein cholesterol (LDL-C) level of <1 gr/l (2.6 m mol/l) for patients with high risk for cardiovascular events. Reducing LDL-C levels lowers the risk of consequences of cardiovascular disease. Objective: The goal of this study was to evaluate the profile of LDL-C in patients with high risk for cardiovascular events. Methods: During 18 months serum levels of LDL-C were measured in fasting samples of patients admitted to mid stay geriatric hospital and with risk for cardiovascular events. Patients with thyroid, renal deficiency and digestive cancer were excluded. In our study we did not differentiate patients receiving lipid lowering therapy. Results: 220 patients were measured for serum LDL-C (140 women, 80 men) aged 70 years and older. 90 patients had very high risk factors, or were admitted after

acute events (myocardial infarction, acute heart failure, cerebral stroke). 44% (44/90) of these patients had higher levels of LDL-C than recommended. 50% of them (22/44) or 24% of patients with very high risk factors and high levels of LDL-C were hospitalized for acute events (myocardial infarction, stroke) compared to 0.06% patients with lower levels. 27% of patients with two risk factors had high LDL-C (>1.6 gr/l). Conclusion: Results from this study showed high incidence of acute cardio -cerebral events in elderly with high risk factors and LDL-C levels. It is important for health care professionals to address the lipid lowering therapy in the elderly at hospital discharge and attempt to achieve the recommended LDL-C targets during follow-up. AFSSAPS : agence Française de sécurité sanitaire des produits de santé.

**PB8 150 ANTIANGINAL EFFICACY OF THE SELECTIVE IF CURRENT INHIBITOR IVABRADINE IN ELDERLY PATIENTS WITH STABLE ANGINA**

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Background: Ivabradine, a selective inhibitor of the pacemaker If current, is a novel heart rate-reducing agent with proven anti-ischemic and antianginal efficacy in stable angina. Since the prevalence of stable angina increases sharply with age, it was of interest to confirm the efficacy and tolerability of ivabradine in elderly patients. Method: Data on frequency of angina attacks, short-acting nitrate (SAN) consumption, and heart rate (HR) were pooled from five randomized trials in patients with stable angina receiving ivabradine 5, 7.5, or 10 mg bid for 3 or 4 months. The whole population of 2425 patients was subdivided for analysis into elderly (aged 65 and over; n=838) and very elderly (aged 75 and over; n=91) subpopulations. Results: Ivabradine reduced HR similarly in elderly (-11.6±11.3 bpm) and very elderly (-12.0±11.1 bpm) patients. Angina attack frequency and SAN consumption decreased substantially by almost 60% (change in number of angina attacks from baseline was -1.7±3.6 in elderly, and -1.5±4.1 in very elderly population). These values are similar to those for the whole population. Only 1.4% of patients withdrew due to sinus bradycardia in the whole ivabradine group. This percentage was even smaller in the elderly (1.2%) and 0% in very elderly. There were no withdrawal of treatment due to AV blockade in both elderly subpopulations. Conclusion: Antianginal efficacy and tolerability of ivabradine in stable angina are maintained in elderly, even in those aged 75 and over. Since coronary artery disease increases in prevalence with age and is becoming a major public health concern in the elderly, these results may have important clinical implications.

**PB8 151 HEAD ROTATION INDUCED HYPOTENSION IS COMMON IN OLDER PERSONS WHO FALL.**

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INTRODUCTION: Carotid sinus hypersensitivity (CSH) is frequently found in older fallers. It is generally accepted that triggers such as head rotation cause hypotensive episodes in patients with CSH, and patients are advised to avoid such triggers. However, the actual influence of these triggers on blood pressure (BP) and heart rate in patients with CSH has never been published. We examined whether head rotation induces hypotension (HRIH) and if it is related to the presence of CSH. METHODS AND MATERIALS: Cross-sectional study in older persons visiting the fall and syncope clinic of the university hospital Nijmegen. All patients underwent carotid sinus massage (CSM) and head rotation test (HRT). Beat-to-beat BP was measured with the photoplethysmographic method (Finometer). CSH was defined as an asystole of at least 3 seconds and/or a drop in systolic BP (SBP) of at least 50 mmHg, in response to CSM. A positive HRT was defined as a drop in SBP of at least 20 mmHg in response to head rotation to the right or left side or hyperextension. RESULTS: In n=105 patients (mean age 79 years) HRIH was found in 41 patients (39%). Patient with HRIH were 3 times more likely to have CSH ( $p = 0.004$ ). In 58% of all patients with CSH (n=61) head rotation induced hypotensive episodes. The mean decrease in SBP during HRIH was 32.9 mmHg ( $SD \pm 12.7$ ); this was similar for the different types of rotation and was similar for patients who did and did not fulfill criteria for CSH. Both CSH and HRIH did not cause subjective symptoms in 83%. CONCLUSION: Head rotation is an important cause of hypotension in older persons who fall. In 50 % of patients with CSH, head rotation induced hypotension, supporting the instruction to avoid such triggers.

**PB8 152 OLDER PATIENTS WITH ST-ELEVATION MYOCARDIAL INFARCTION BENEFIT FROM PRIMARY PCI WITHIN A MYOCARDIAL INFARCTION NETWORK**

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**Introduction:** Primary PCI (PPCI) is first-line therapy for patients with acute ST-elevation myocardial infarction (STEMI). Aim of this prospective study is to investigate incidence of acute complications in older patients with STEMI after PPCI. Patients and methods: All patients with acute ST-elevation myocardial infarction transferred to our institution for PPCI (n=400) between 1/2005 and 10/2007. Patients aged ≥ 70 years (group 1), n=125, 6; mean age 77.5±4.9 years are compared to younger patients aged<70y (group 2). Results: Older patients less frequently showed hyperlipoproteinemia (group 1 vs. group 2: 43.2% vs. 55.6, p=0.021) and smoking habits (15.2% vs. 48.4%, p<0.001). However, arterial hypertension (72.8% vs 52.7, p<0.001), diabetes mellitus (26.4% vs 16.1%, p=0.015), coronary artery disease (20% vs 10.2%, p=0.007), previous myocardial infarction (15.2% vs 7.6%, p=0.019), and left main stem involvement or 3-vessel-disease (40.8% vs 21.8%, p<0.001) was more frequent in older patients. In 96% (n=120) of older patients PPCI was successful. Between groups the success-rate of PPCI and TIMI-flows did not differ significantly as well as major- (4% vs 1.8%, p=0.195) or minor- bleedings (8% vs 5.1%, p=0.256). However, older patients received stent implantation (91.2% vs 96.7%, p=0.019), drug eluting stents (38.4% vs 71.3%, p<0.001), and abciximab (69.6% vs 92%, p<0.001) less frequently. In-hospital mortality of older patients was low (10.4%). Door-to-balloon-time did not differ (32.5±1.3 min vs. 29.9±0.9 min, p=0.1). However, in the older group pain-to-balloon (257.8±13.6 min vs 211.6±7.45 min), pain-to-first-medical-contact (147.5±13.7 min vs 117.4±7.5 min, p=0.038) and first-medical-contact-to-balloon (104.9±3.7 min vs 95.4±2.2 min, p=0.021) times were longer. Summary: In this infarction network primary PCI is an effective and save treatment strategy for eligible older patients with acute ST-elevation myocardial infarction.

**PB8 153 STROKES AND PRESSURE SORE IN A GERIATRIC SUB ACUTE CARE UNIT**  
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**Introduction :** In France, strokes represent the 3rd cause of mortality, after cardiovascular pathology and cancers, with an annual incidence of 125.000 new cases. Loss of mobility constitutes a risk factor of pressure sore and stroke represents the first cause of dependence. Our objective was to analyze the presence of pressure sore of patients hospitalized in a geriatric sub acute care unit after a stroke. Materials and methods: From January 2006 to June 2008 we retrospectively collected the presence of pressure sore for all the patients with stroke in our geriatric sub acute care unit . Results: 169 patients were included (47 women and 122 men) with a mean age of 84.5±6.9 years, a mean hospitalization duration of 52 ± 26days and a early death rate of 15.4%. After rehabilitation, 31.4% of the subjects were autonomous for walking, 20.7% needs help for walking and 47.9% had lost totally their autonomy. 38 patients had a wound with a mean number of wound of 2 ± 2.1 per patient. 17.7% of the population had one or more pressure sore. 9 elderly subjects developed their pressure sore in the unit. 9 pressures sores were on the heel and 16 on the sacrum. 13.3% of stage I, 43.3% of stage II, 26.7% of stage III and 16.7% of stage IV. The patients with total hemiplegia (41.4%) had significantly more often a pressure sore (p=0.03), at those who lost totally their autonomy (p<0.0001). The elderly subjects with pressure sore had an albuminemia significantly lower than those without pressure sore (p=0.0001). Conclusion: We find more pressure sore among patients presenting a major loss of autonomy or severe hemiplegia. This study confirm that the loss of autonomy after a stroke constitutes one of the well-known supporting factors of pressure sore.

**PB8 154 ACEBUTOLOL, A DELAYED-ACTION BOMBER**  
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Iatrogenic diseases should be more often suspected despite the difficulty to diagnose : this case report is an example. A 75-year-old woman was hospitalized for a persistent pneumopathy of the left upper lobe despite amoxicilline-clavulanic acid treatment. Her medical history consisted of breast cancer, cardiac arrhythmia treated by acebutolol for ten years, primary tuberculosis of the lungs, iodine allergy. clinical exam showed an asthenia, a dry cough, a left basithoracic pain and a well- endured dyspnea and crepitations of the left upper pulmonary lobar., 3Initial biological screening showed hyperleucocytosis (13000/mm<sup>3</sup> ), and inflammatory syndrome [C-reactive3thrombocytosis (742000/mm protein (CRP) 129 mg/l, erythrocyte sedimentation rate 91 mm/h]. The NT-proBNP rate was 134 pg/ml (normal < 300). The spit bacteriological analysis was normal and did not found pneumococcus or BK. Blood culture did not found any bacteria. Mycoplasma and chlamydiae serologies, BK skin test were negative. The x-ray showed an alveolar condensation in the left upper lobe. Despite different antibiotics, there was no clinical or biological improvement. Moreover, a new site of right pulmonary crepitations appeared. A CT scan showed a left alveolar condensation. Pulmonary embolism was dismissed. The bronchoscopy and broncho-alveolar washing did not found any abnormality. In front of no etiological diagnosis and because of the patient's treatment, an iatrogenic pneumopathy due to acebutolol was suspected. Acebutolol was substituted by verapamil and a corticotherapy (60mg per day) was started. A rapid clinical and biological improvement was noted with decrease of dyspnea and C reactive protein rate (19 mg/l) in three day. The

iatrogenic pneumopathy is often an exclusion diagnosis after large investigations. Regarding acebutolol, interstitial pneumopathy and Bronchiolitis Obliterans Organizing Pneumonia (BOOP) are reported. This case and his good evolution with corticotherapy speak in favour of a delayed acebutolol iatrogenic pulmonary effect .

**PB8 155 VITAMIN K ANTAGONISTS OVERDOSE PREDICTIVE FACTORS IN ELDERLY PATIENTS**

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**Introduction:** Vitamin K Antagonists (VKA) are widely used anticoagulant drugs, but show low therapeutic index and significant interindividual variability. As many interactions are observed with these drugs and with the high prevalence of polypharmacy in geriatric patients, elderly are particularly at risk. Our objective was to identify, in hospitalized elderly patients, the predictive factors of VKA overdoses. Methods and materials: A retrospective analysis was undertaken in Pierre Garraud Hospital (Hôpices Civils de Lyon), including all patients treated with a VKA during one year. Anthropometric, biological, clinical information and drug-drug interactions were collected. Moderate overdose (INR>5) or high severity overdose (INR>7) occurrence was recorded. Therefore, a multivariate analysis was conducted using SPSS software in order to identify links between supra-therapeutic INR (variable to explain) occurrence and information recorded for each patient. A logistic model was chosen, and explanatory variables were integrated using a step-wise methodology. Results: 221 patients were included in the study. The total number of supra-therapeutic INR was 52 (with 20 patients with INR > 7) representing 23.5% of considered patients. The final model retains 26 variables and has 75% of sensitivity and 91% of specificity. Model R-Squared is calculated at 0.43 and Area Under ROC Curve is 0.9. Liver and renal function markers, and amiodarone or valproic acid concomitant administration also seems to be significantly linked with VKA overdose occurrence. Conclusion: The model shows good predictive capabilities. The key variables selection has led to a precise identification of patients subgroups subject to considerable overdose risk. A complementary analysis by a Bayesian neural network enables us to assess the consequences of changes in the characteristics of our population about the overdose risk.

**PB8 156 STROKE AND NUTRITIONAL STATUS IN A GERIATRIC SUB ACUTE CARE UNIT**

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**Introduction:** In France, strokes represent the 3rd cause of mortality, after cardiovascular pathology and cancers, with an annual incidence of 125.000 new cases. Because dysphasia and swallowing disorders are frequent after a stroke, it constitute a risk factor of malnutrition. Our objective was to analyze the nutritional status of patients hospitalized in a geriatric sub acute care unit after a stroke. Materials and methods: From January 2006 to June 2008 we collected the serum albumin dosage for all the patients with stroke in our geriatric sub acute care unit . Results: 169 patients were included (47 women and 122 men) with a mean age of 84.5±6.9 years, a mean hospitalization duration of 52 ± 26days and a early death rate of 15.4%. 43.8% of the elderly subjects had swallowing disorders at the commencement of the hospitalization, and 24.8% at the end. 3% of the patients had gastrostomy and 13.6% had naso-gastric probe at the commencement of the hospitalization, and respectively 4.7% and 3.5% at the end of the hospitalization. Gastrostomy (p=0.03) and naso-gastric probe (p=0.01) were significantly more often found for patients with swallowing disorders. The average albuminemia at the commencement of the hospitalization was 32.8±4.0 g/l and 33.2±4.3 g/l at the end of the hospitalization. Albuminemia was significantly lower for patients with swallowing disorders (p<0.001), with gastrostomy (p=0.02), or with naso-gastric probe (p=0.02). The patients with a total loss autonomy (p<0.0001) and those with complete hemiplegia (p=0.03) presented more often a malnutrition. It was also found that subjects with pressure sore had a significantly lower albuminemia level than those without (p=0.0001). Conclusion: The stroke patients presented a risk of malnutrition and this more especially as the loss of autonomy was marked.

**PB8 157 CENTRAL ANGIOTENSIN II-MEDIATED HYPERTENSIVE RESPONSES TO RESTRAINT STRESS ARE DIMINISHED WITH AGE**

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Introduction Central angiotensin II (Ang II) and NADPH-oxidase-dependent superoxide production play a key role in the regulation of stress-induced BP elevations. However, the effect of age on cardiovascular stress responses and central AngII signaling are not fully understood. Therefore, we tested the effects of centrally infused losartan, an Ang II type-1 receptor (AT1) inhibitor on resting BP, heart rate (HR) and spontaneous baroreflex sensitivity (sBRS), as well as on restraint stress-induced BP and HR responses in young and old rats. Methods and Materials BP and HR were measured using radiotelemetry in 5 month-old (n=7) and 27 month-old (n=6) male F344BN rats. Losartan (15 µg/µL/hour) or vehicle was infused intracerebroventricularly for 3 days with osmotic minipumps. Restraint stress was induced using acrylic cylinder restrainers for 20 min. Results Old rats had significantly higher resting BP (104.1±1.0 mmHg), lower HR (311±4 min<sup>-1</sup>) and lower sBRS (-0.062±0.048 ms/mmHg) compared with young (95.9±1.2 mmHg; 335±4 min<sup>-1</sup>; 0.141±0.028 ms/mmHg, p<0.05). Losartan had no effect on resting BP and HR in either the young or old rats; however, it significantly reduced sBRS in young animals, while it had no effect on sBRS in old rats. Restraint stress induced rapid BP and HR increases in both young and old; however, changes were significantly reduced in the old rats. Losartan significantly inhibited stress-induced BP increases in young rats, while it had no effect on HR responses. In contrast, in the old rats, both BP and HR responses remained unaffected by losartan. In addition, hypothalamic protein expressions of AT1 receptor, NADPH-oxidase p47phox subunit, CuZn-superoxide dismutase and catalase decreased significantly with age, while oxidative stress, as indicated by ascorbate radical levels, increased. Conclusion Resting BP increases with age, but hypertensive responses to stress diminish with age due to a decline in AngII-mediated central mechanisms.

**PB8 158 PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) MORTALITY IN STROKE PATIENTS.**

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INTRODUCTION: Percutaneous endoscopic gastrostomy is (PEG) is a well recognised mode of feeding in patients with swallowing difficulties. Limited evidence is known on long term mortality in stroke patients feeding via PEG. In this study we looked into the long term survival of stroke patients following PEG insertion and indicators which may predict outcome. METHODS AND MATERIALS: Patient data was collected on all PEG insertions from 2004, 2007 and 2008 in a District General Hospital. 3 and 6 month mortality data were obtained from General practitioners record, care homes and family. Risk stratification tool and awareness of poor prognostic factors were made aware amongst physicians in 2004, while SPH set-up a stroke unit in 2007. RESULTS: A total of 90 patients (26, 42, and 22 in 2004, 2007 and 2008 respectively) in three years were included. Three and six month's mortality for patients who had PEG following stroke were 44% and 47.5% respectively. Of the stroke patients cumulative 3 and 6 month mortalities were calculated in 2004, 2007 and 2008. Long term mortality decreased from 44% to 35.7%. The factors which contributed towards decrease in mortality were lower age and a multidisciplinary team decision for PEG in a stroke unit. CONCLUSION: In our study we found – 1. 52.5% of patients who had a PEG following a stroke were alive after six months. 2. Lower age and PEG decision by a multidisciplinary team in a stroke unit were main contributory factors for better outcome. 3. Further studies are needed to assess other contributing factors influencing long term survival in stroke patients with PEG feeding.

**PB8 159 CARDIAC REMOTE TELEMETRY IN A GERIATRIC ACUTE CARE UNIT: A DIAGNOSTIC TOOL.**

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INTRODUCTION : Cardiac Remote Telemetry (CRT) is a continuous cardiac rhythm recording system transmitted by radio waves to a PC. Such a system was installed in a geriatric acute care unit. METHODS AND MATERIALS : 277 patients were admitted under CRT from January 2007 to December 2008. Indications and cardiac rhythm and conduction troubles diagnosed by the CRT were analysed. RESULTS : The mean age +/- standard deviation was 84.2 +/- 5.9 years. Most frequent indications were falls with presumption of faintness (58.5%), arrhythmias (19.1%), cerebral infarction (14.1%), dizziness (4%). Rhythm or conduction troubles were found in 151 patients (54.5%). In 134 cases (48.4%), it led to cardiologist consultation, and in 120 cases (43.3%) to changes in therapeutics. 5 patients (1.8%) were transferred to an intensive care unit, and in 11 other cases (4%) pace-makers were implanted. CONCLUSION: In accordance with the good practice in French geriatric acute care units, CRT has to be restricted to being a diagnostic or treatment management tool. Patients considered to be at high risk of life threatening dysrhythmia mustn't undergo CRT in such a unit. Patients were admitted to CRT on four conditions: 1 indication to cardiac rhythm recording, 2 necessity to be hospitalized, 3 no early indication to intensive care unit, and 4 intention to take abnormalities into account. In our experience CRT is non invasive and is easily tolerated. It appears to be a useful tool in

elderly, which often associates polyopathy, atypical clinical presentation, social loneliness and dependence, and therefore requires a single place for care and second line complementary examinations. This survey shows that CRT is efficient in the management of number of patients in geriatric acute care units.

**PB8 160 LATE ONSET MYASTHENIA GRAVIS. A DISEASE TO TAKE INTO ACCOUNT. A CASE REPORT.**

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INTRODUCTION Myasthenia gravis (MG) is an autoimmune disorder of the neuromuscular junction that causes muscle weakness and fatigue. MG mainly affects young adults and is uncommon after the age of 50 years. The disease occurs, for the most part, in the third decade, and is rare before the age of 15, or after 70. In approximately 60 per cent of the patients the disease develops between the ages of 20 and 40. The prevalence of myasthenia gravis (MG) among middle-aged and older patients has increased. It is often misdiagnosed. METHODS AND MATERIALS We report a case of an 87-year-old white female at the Acute Geriatric Unit in Ciudad Real General Hospital. Past history reveals hypertension, multinodular goiter, hip fracture and ischemic stroke three months earlier. As consequence of the stroke the patient experienced dysphagia. RESULTS The patient referred weakness and fatigue, palpebral ptosis present since two months ago and she continued with dysphagia. MRI showed small periventricular lacunar infarcts. Thoracic CT revealed no thymoma. Acetylcholine receptor antibody test was positive: 94.44nmol/L. Electromyogram detected abnormal and severe postsynaptic neuromuscular transmission. This case portrays the misdiagnosis of an ischemic stroke that was made at the initial presentation three months earlier. Treatment with corticosteroids and anticholinesterase drugs (piridostigmine) was initiated with a significant and maintained improvement. CONCLUSION Bulbar signs as dysphagia might be misdiagnosis as ischemic stroke. Myasthenia gravis mimicking stroke in elderly patients. The prevalence of MG among older patients is increasing and we have to take into account in the diagnosis.

**PB8 161 MECHANISMS OF AGE-RELATED CHANGES OF OXYGEN-TRANSPORTATION FUNCTION OF BLOOD**

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Introduction. The morphological and functional changes, developing with ageing, lead to the development of hypoxia, which nowadays is considered now not only characteristic feature of ageing, but also as a factor, that accelerates its development. Therefore, the question of the mechanisms of developing hypoxia, its role and its correspondence to the factors defining it, is of a considerable theoretical and practical interest. And it hasn't been studied sufficiently. In particular, we are not sure of the role of blood system in the development of hypoxic shifts with elderly and old people. The purpose of the present research is to study the mechanisms of age-related changes of oxygen-transportation blood function. Methods and materials. Blood gases and oxyhemoglobin dissociation curve of 62 elderly and aged practically healthy people of 60-92 and of 18 healthy young people of 19-30 have been analyzed, with the device DCA-1 (produced by "Radiometer", Denmark). The concentration of ATP in erythrocytes was defined by the method of a thin-layer chromatography, and the 2,3-DPG – was defined enzymatically with the reagent produced by "Sigma" (USA), and the concentration of K<sup>+</sup> and Na<sup>+</sup> in erythrocytes was defined by the method of flame photometry. Results. Elderly and old people showed the decrease of pO<sub>2</sub> in the arterial blood as a result of poor coordination of ventilation and blood flow in the lungs. In response to arterial hypoxemia, elderly persons show a shift of oxyhemoglobin dissociation curve to the right that facilitates the rebound of oxygen to tissues. At the same time, they do not show an increase of concentration of 2,3-DPG in erythrocytes which is a basic modulator of affinity of haemoglobin to oxygen. The research has shown, that with ageing there is a slow down of glycolysis in erythrocytes, the decrease of concentration of ATP, and of the activity of Na<sup>+</sup>, K<sup>+</sup> -ATPase, the decrease of [K<sup>+</sup>], growth of [Na<sup>+</sup>] and the decrease of intraerythrocytes pH. Conclusion. The shift of the oxyhemoglobin dissociation curve to the right with ageing improves rebound of oxygen to tissues that has adaptive value with arterial hypoxemia. The reason of this shift is the decrease of intraerythrocytes pH (Borb effect) as a result of the distortion of the energy metabolism of erythrocytes. The facilitated rebound of oxygen by oxyhemoglobin with elderly and old people does not compensate the influence of the factors, causing deterioration of the oxygen supply of tissues with ageing.

**PB8 162 CARDIOVASCULAR DISEASE AND NUTRITION RISK AMONG THOSE LIVING TO ADVANCED AGE**

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**Introduction** In New Zealand an increase of 507% is expected in the oldest old population between 2006 and 2051. More than 45% of older New Zealanders are affected by cardiovascular disease (CVD). Physical measures of height, weight and body composition possibly influenced by dietary factors and can modify cardiovascular risk. The aim of this study was to examine associations between CVD, physical parameters and nutrition risk in those of advanced age. **Methods and materials** A cross-sectional study of 112 participants aged 85 years (75-79 for Maori) from three locations (urban and rural) in New Zealand measured comprehensive health and physical assessments including height, weight and body composition. Face-to-face interviews were conducted using the 14-item validated questionnaire SCREEN II (Seniors in the Community: Risk evaluation for eating and nutrition, Version II). Fasting blood samples were collected. Results A total of 107 (96%) of the participants completed the study (43% men). Sixty six participants (62%) reported to have clinically manifest CVD (52% men). The mean SCREEN II score was 48.3+/-6.0 (range 29-58 out of a maximum score of 64). Those with CVD had no greater nutrition risk versus those with no CVD as evidence by SCREEN II score (47.9+/-6.1 vs 49.2+/-5.9; p>0.05). Physical measures were higher in those with CVD compared to those with no CVD: BMI (28.8+/-7.8 vs. 25.4+/-3.9; p=0.018), waist circumference (98.9+/-16.1cm vs. 88.8+/-11.6cm; p=0.001) and waist-hip ratio (0.91+/-0.08 vs. 0.87+/-0.08; p=0.031). Using a regression model controlling for gender, lipids and blood pressure only WC remain significantly associated with CVD. Conclusion In this sample of older people, nutrition risk and BMI were not associated with CVD but WC rather than WHR was related to CVD. This is unexpected compared to associations established in the younger population. Further investigations related to CVD risk will be undertaken in a longitudinal cohort study.

**PB8 163 IMPACT OF ALDOSTERONE RECEPTOR BLOCKADE VERSUS THIAZIDE THERAPY ON SYMPATHETIC NERVOUS SYSTEM FUNCTION IN GERIATRIC HYPERTENSION**  
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**INTRODUCTION:** Both aldosterone receptor blockade and thiazide therapy have demonstrated beneficial effects in geriatric hypertension. The impact of these therapeutic agents on sympathetic nervous system (SNS) function has not been evaluated. **METHODS AND MATERIALS:** In a double-blind, randomized study, 36 patients ( $69 \pm 1$  yrs) with Stage 1 hypertension underwent six months of therapy with either aldosterone receptor blockade (spironolactone [SPIRO], 25-100mg q.d., n = 19) or thiazide therapy (hydrochlorothiazide [HCTZ], 12.5-50mg q.d., n = 17). Arterial blood pressure (BP), [3H] norepinephrine (NE) kinetics (extravascular NE release rate), and alpha-adrenergic sensitivity (forearm blood flow vasoconstriction to graded intra-arterial NE infusions) were evaluated at baseline, following a 4-week antihypertensive medication withdrawal, and after SPIRO or HCTZ treatment. **RESULTS:** Arterial BP decreased significantly with both SPIRO ( $160 \pm 3$  to  $134 \pm 2$  mmHg;  $77 \pm 2$  to  $68 \pm 2$  mmHg) and HCTZ ( $161 \pm 4$  to  $145 \pm 4$  mmHg;  $78 \pm 2$  to  $73 \pm 2$  mmHg) treatment. SNS activity was significantly reduced following SPIRO (plasma NE =  $378 \pm 40$  to  $335 \pm 20$  pg/ml, P=0.04; 3H NE =  $2.74 \pm 0.3$  to  $1.97 \pm 0.2$   $\mu$ g/min/m<sup>2</sup>, P=0.04) but not HCTZ (plasma NE =  $368 \pm 25$  to  $349 \pm 23$  pg/ml, P=0.47; 3H NE =  $2.63 \pm 0.4$  to  $2.11 \pm 0.2$   $\mu$ g/min/m<sup>2</sup>, P=0.21). Despite the fall in SNS activity, alpha adrenergic sensitivity was unchanged with either drug treatment. **CONCLUSIONS:** These findings demonstrate a beneficial effect of aldosterone receptor blockade on reducing SNS activity in hypertensive older patients. While both drugs effectively lowered BP, a greater inhibition in SNS activity was observed with SPIRO versus HCTZ treatment, identifying a potential advantage for this drug class compared with traditional diuretic therapy.

**PB8 164 CORRELATION AMONG CARDIOVASCULAR TESTS IN PATIENTS WITH CHAGAS DISEASE OVER 50 YEARS OF AGE**  
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**Introduction:** Chagas still remains as an endemic disease in the American continent, with prevalence estimated at 16 -18 million cases. About 30% of people infected with the Trypanosoma cruzi will develop chronic Chagas heart disease (CCHD), the most important consequence of the pathology concerning morbidity and mortality (World Health Organization). Among the characteristics of CCHD are the frequent and complex episodes of cardiac arrhythmia in combination with conduction disorders, and the remarkably high incidence of sudden death and systemic thromboembolism due to severe heart failure. A few studies have looked at patients over 50 years of age with Chagas disease in spite of the strong aging process population all around the world is going through. **Methods and materials:** In order to assess and correlate the findings of non-invasive cardiovascular tests, 97 chagasic patients over 50 years of age were closely examined and underwent such tests (Electrocardiogram - ECG, Holter monitoring, Doppler echocardiogram, and ergometric testing). A descriptive methodology was adopted in this study of patients evaluated at UFMG University Hospital between 1997 and 2005. **Results:** There were included 97 patients with average age of 57.6 years, mostly females (56,7%). No patient with normal ECG had altered Doppler echocardiogram. Electrical conduction disorder was the most prevalent ECG finding. Lown's classification for arrhythmia complexity made the correlation between Holter monitoring and ergometric testing evident (Spearman: 0,704; p

= 0,000). The agreement between Holter monitoring and Doppler echocardiogram results was significant, however weak (Fisher: p=0,019; Kappa: 0,193; p=0,011). Poor agreement (Kappa: 0,236) was found between ergometric testing and ECG. Conclusion: There was correlation – although weak – between ECG and ergometric testing, Holter monitoring and Doppler echocardiogram, and Holter monitoring and ergometric testing. No patient with normal ECG had altered Doppler echocardiogram, confirming the value of a normal ECG to exclude Chagas heart disease.

**PB8 165 HYPERTENSION IN A SPANISH POPULATION AGED 85 OR OLDER. NON-DIPPING PATTERN AND PHARMACOLOGICAL CONTROL.**

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**INTRODUCTION** Hypertension is highly prevalent in older persons. Risks for morbid events resulting from hypertension increase with age. The optimal pharmacological control of hypertension substantially reduce cardiac and cerebrovascular events. **MATERIAL AND METHODS** To assess the control of blood pressure levels in a Spanish population aged 85 or older through 24-hour blood pressure measurement, in inpatients Acute Geriatric Care Unit and outpatient geriatric clinic at the Toledo Geriatric Hospital in the term of 18 months. We studied 153 hospital charts that fulfilled the inclusion criteria, between March 2004 and September 2005. **RESULTS** Mean age was 87 (73.6% women). 26.5% were diabetics, 18.9% had obesity (body mass index (BMI)> 30, 01). Average number of drugs used was of  $1, 8 \pm 0, 8$ . 41.5% had high cholesterol levels. 18.87% had previous ischemic cardiopathy, 22.7% presented heart failure and 30.2% had presented cerebrovascular disease. Ambulatory Blood Pressure Monitoring (ABPM) showed 84.9% of nonreducing (No Dipper) blood pressure pattern. 73.6% presented suboptimal control of blood pressure levels. **CONCLUSION** Non-dipping pattern in hypertensive patients has been shown to be associated with an excess of target organ damage and with an adverse outcome. In our area patients aged 85 or older present a high prevalence of nonreducing blood pressure pattern and inadequate blood pressure control. The accomplishment of ABPM directed to the strict adjustment of blood pressure levels is basic to these patients in order to diminish the incidence of cardiac, renal or cerebrovascular disease.

**PB8 166 ADVERSE DRUG EVENTS AND ASSOCIATED FACTORS IN CONGESTIVE HEART FAILURE THERAPY AMONG THE VERY ELDERLY.**

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**Introduction:** Congestive heart failure (CHF) is common in older adults and standard therapy involves the use of multiple medications (beta blocker, ACE inhibitor, spironolactone, digoxin). We assessed the nature, frequency and factors associated with adverse drug events (ADE) associated with standard CHF therapy among older adults greater than 75 years of age. **Methods:** Systematic review using standardized databases including Medline, AgeLine, CINAHL from 1 January 1988 to 31 December 2008, and references from published literature. Randomized trials and studies with observational, cohort, and cross sectional design were included. Two investigators independently selected the studies and extracted the data (kappa =0.86). **Results:** 23 studies were identified, which included 2 randomized trials, 1 non-randomized trial, 6 observational studies, 10 cohort studies and 4 cross sectional studies. ADE were reported in 13/23 (57%) studies, and most commonly related to beta blocker use: dyspnea (66/343 subjects, 20%), fatigue (75/384 subjects, 19%), dizziness (52/343 subjects, 19%) hypotension (128/1181 subjects, 11%) and bradycardia (55/1273 subjects, 4%). ADE related to ACE inhibitor, spironolactone, or digoxin use was not reported in sufficient numbers to be included. Factors associated with ADE included advanced age, poor left ventricular function, and increasing New York Heart Association Class. Very few studies reported associations between ADE and patients' comorbidities (4/13 studies, 31%) or cognitive/functional status (3/13 studies, 23%). **Conclusion:** ADE in CHF therapy among the very elderly were poorly characterized in the literature despite their relatively common occurrence, with insufficient data to establish a risk prediction rule. Further studies are warranted.

**PB8 167 AMBULATORY BLOOD PRESSURE MONITORING (ABPM) PATTERN IN HYPERTENSIVE ELDERLY WITH POSTPRANDIAL HYPOTENSION (PPH).**

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**INTRODUCTION:** PPH is a decrease in systolic blood pressure (SBP) of 20 mmHg or more within 2 hours of the meal and may be a clinical problem in treated hypertensive elderly. **DESIGN AND METHOD:** In 334 elderly hypertensive patients (EHP) with normal activities of daily living we performed 24-hour ABPM recording daytime (09:00-21:00) and nighttime (01:00-06:00) ambulatory blood pressure (BP) with SpaceLabs 90207

recorder. Daytime-nighttime ambulatory arterial stiffness index (AASI) was evaluated as 1– regression slope of diastolic on SBP; dipper status indicates night:day ratio of systolic BP <0.9. The variables with a significant P at the univariate analysis were included as covariates in a binary logistic regression model to identify drugs and ABPM variables associated with PPH. RESULTS: The EHP (49.1% men and age  $73.17 \pm 11.35$  yr) received  $1.69 \pm 1.31$  antihypertensive drugs (AHD); the mean SBP night:day ratio was  $0.95 \pm 0.10$  with dipper's prevalence of 28.7%. PPH prevalence (57%) increases with age, lower mean SBP and diastolic BP (DBP), higher SBP and DBP variability, non dipping status and lower AASI (low arterial stiffness); the prevalence increases when ACE-inhibitors or a b-blockers-calcium channel blockers association are given. The multivariate analysis shows that the major determinants of PPH are non-dipping status ( $\beta=0.834$ ,  $P=0.001$ ), daytime AASI <0.37 ( $\beta=0.808$ ,  $P=0.003$ ), mean DBP <75 mmHg ( $\beta=0.928$ ,  $P=0.002$ ), daytime standard deviation of SBP >11 mmHg ( $\beta=0.863$ ,  $P=0.003$ ), and of DBP >9 mmHg ( $\beta=0.756$ ,  $P=0.009$ ). CONCLUSIONS: PPH occurs in 56.8% of EHP. Its prevalence is higher in those taking 2 or more AHD; non dipping status, highest daytime SBP and DBP variability favors PPH; daytime highest values of DBP and a stiffened arterial tree (daytime AASI >0.37) are protective factors. The identification of PPH by ABPM may be helpful to optimize the choice of AHD and their dosing time in EHP.

#### **PB8 168 STANDARDIZED GERIATRIC ASSESSMENT IN THE MANAGEMENT OF ELDERLY PATIENTS WITH AORTIC STENOSIS.**

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Introduction. The development of percutaneous aortic valve implantation techniques is likely to increase the referral of elderly patients with aortic stenosis, often presenting with a high surgical risk profile. A specialised geriatric evaluation could help in the decision making process for these patients. Material and Methods. In 2008, thirty-nine patients aged  $84.8 \pm 5$  [70 to 94] hospitalised in the cardiology department for treatment of symptomatic aortic stenosis were submitted to a geriatric evaluation and management protocol. First, initial opinion for treatment (surgical or transcatheter) of the multidisciplinary team (cardiologists, thoracic surgeons, anesthesiologist) was collected. Then the geriatrician assessed patient's history, treatments, comorbidities, functional, cognitive, mood and nutritional status. There was a physical examination. An opinion regarding the initial treatment hypothesis was given and specific problems addressed. Statistical analysis was achieved using Mann-Whitney U test and Fischer's exact score. Results. Amongst the 39 patients, 15 were malnourished and 22 had inadequate non cardiologic treatments, Mini Geriatric Depression Scale was positive for 20 patients, and 5 had important cognitive disorders: these factors were diagnosed and addressed by the geriatrician. Initial therapeutic orientation was changed in 11 patients after geriatric evaluation, 9 of which received medical treatment. These patients compared to the rest of the population had significantly lower functional scores : ADL ( $p<0.01$ ) and IADL ( $p<0.01$ ), more caregivers. Cognitive status was lower regarding to the MMS ( $p<0.05$ ) and more frequently unachievable, as was the clock-drawing test ( $p=NS$ ). Conclusions. Comprehensive geriatric assessment brings specific information that may influence the decision making process in the treatment of symptomatic aortic stenosis in the elderly patient. The use of geriatric standardized tools could be evaluated in prediction of operative risk and further outcome in this population.

#### **PB8 169 EVALUATION OF PULSE WAVE VELOCITY [PWV] AND ARTERIAL STIFFNESS INDEX [ASI] IN ELDERLY PATIENTS WITH CORONARY ARTERY DISEASE**

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Objectives: - Ageing is associated with vascular changes like arterial wall thickening (dilatation of large elastic arteries), endothelial dysfunction, arterial stiffening, arterial pulse pressure widening, and increased IM thickness leading to increased cardiovascular morbidity and mortality. Measuring pulse wave velocity and arterial stiffness index with non-invasive techniques provide a convenient opportunity to evaluate these changes. The present study was conducted to evaluate significance of changes in pulse wave velocity (PWV) and arterial stiffness index (ASI) in elderly patients of coronary artery disease (CAD) proven with angiography. Material and Methods: The study included 100 elderly individuals among them fifty had angiography proven coronary artery disease and fifty were age matched healthy controls. Pulse wave velocity (PWV) and arterial stiffness index (ASI) were determined by an 8-channel real-time PC-based simultaneous acquisition and analysis system. The data obtained was statistically analyzed Results: In CAD patients average heart rate was  $78 \pm 30.4$  per minute, average blood pressure SBP= $139 \pm 19.6$ , DBP= $74 \pm 7.8$  and average pulse pressure was  $64 \pm 16.7$  mm of Hg. Whereas in control group average heart rate was  $70 \pm 15.5$  per minute, average blood pressure SBP= $133 \pm 13.9$ , DBP= $77 \pm 8.7$  and pulse pressure was  $52 \pm 12.7$  mm of Hg. Central arteries pulse wave velocity and arterial stiffness index were higher in the patient group. There was a good correlation between pulse wave velocity [PWV], arterial stiffness index [ASI] and pulse

pressure in patient group and healthy controls. Conclusion: Our study findings emphasize the importance of the PWV and ASI in identifying the vascular damage in elderly patients with high cardiovascular risk. Increased pulse wave velocity and arterial stiffness index were found to be good independent predictors of cardiovascular morbidity.

#### **PB8 170 NEW TECHNIQUE OF SURGICAL MYOCARDIAL REVASCULARIZATION – BETTER SURVIVAL OF OCTOGERIANS**

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INTRODUCTION: Standard methods of myocardial revascularization using cardiopulmonary bypass showed higher risk of mortality and morbidity for elderly patients. The „Aortic No-touch Technique“ is an up-to-date method avoiding cardiac arrest, cardiopulmonary bypass and aortic manipulation. The aim of this study was to prove the usefulness of this technique during coronary artery bypass surgery in elderly population.

METHODS: The total of 271 patients (mean age 81 years [78-93]) undergoing CABG between 2003 and 2008 were enrolled in a prospective non randomized study. The „Aortic No-touch Technique“ group (A, 96 patients) was compared with other two groups of elderly done on-pump (B, 129 patients) using cardiopulmonary bypass and cardiac arrest and off-pump (C, 46 patients) with aortic manipulation (saphenous vein graft central anastomoses). Postoperative data included in-hospital mortality and frequency of major postoperative complications in all groups. RESULTS: The results demonstrate higher early (30-day) mortality in patients whose ascending aorta was touched during surgery (2 [2%] in group A versus 18 [9.7%] in groups B+C). Significant difference was observed in frequency of neuropsychological events (15 [15.6%] in group A versus 62 [35.4%] in groups B+C,  $p < 0.01$ ), perioperative myocardial infarction (0 [0%] in group A versus 12 [6.9%] in groups B+C,  $p < 0.05$ ) and poor wound healing (11 [11.5%] in group A versus 38 [21.7%] in groups B+C,  $p < 0.05$ ). CONCLUSION: Lower mortality and less postoperative complications were documented in the „Aortic No-touch Technique“ group. This technique seems to be effective and useful particularly in octogenarians. The favorable effect of off-pump surgery, when a saphenous vein was harvested and used as a graft and ascending aorta was manipulated during central anastomoses accomplishment, was not proven in patients of an age > 78.

#### **PB8 171 IMPACT OF GAMMA-GLUTAMYLTRANSFERASE ON FUNCTIONAL OUTCOME IN ELDERLY PATIENTS AFTER ISCHEMIC STROKE**

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Introduction: The catalytic activity of gamma-glutamyltransferase (GGT), which is present on the surface of cell membranes and in serum, is responsible for the extracellular catabolism of the antioxidant glutathione. GGT may have a role in the pathogenesis of atherosclerosis: his activity has been detected in atheromatous plaques of carotid and coronary arteries. Several studies showed that GGT is associated with morbidity and mortality from cardiovascular disease as well as stroke. However, this latter association was significant in men aged >60 years. Our aim was to evaluate the impact of GGT on functional outcome in elderly patients after ischemic stroke. Methods and materials: We retrospectively reviewed the medical charts of elderly patients (> or equal to 65 years; n=223) with diagnosis of ischemic stroke. Serum GGT levels were classified as normal (0-17U/L for women and 0-27U/L for men; n=89), moderate (18 to 35, 28 to 55U/L; n=94), and high (>35, >55U/L; n=40). Stroke severity was assessed by the National Institutes of Health Stroke Scale (NIHSS) and disability by modified Rankin scale (mRs) at baseline. Results: Chi-square tests for crosstab data showed that NIHSS decreased from 85.7 to 35.7% in normal GGT while it increased from 14.3 to 21.4% in moderate and from 0.0 to 42.9% in high GGT, respectively ( $p<0.02$ ); similarly, mRs decreased from 69.2 to 30.4% in normal GGT while it increased from 23.1 to 34.8% in moderate and from 7.7 to 34.8% in high GGT, respectively ( $p<0.002$ ). Logistic regression analysis adjusted for age and sex showed that GGT was significantly associated with NIHSS (Odds ratio: 7.70; 95%-CI: 1.04-58.46) and mRs (Odds ratio: 2.60; 95%-CI: 1.01-6.90). Conclusion: These results suggest that higher levels of serum GGT are associated with a poor functional outcome after ischemic stroke in the aging population and may account in part for the higher mortality in elderly stroke patients.

**PB8 172 QUALITY OF LIFE IN LOW INCOME PATIENTS WITH COPD**

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Chronic obstructive pulmonary disease(COPD) can have profound effects on a patients quality of life and functioning. A cross-sectional, observational study of 34 patients(27 male, 7 female, mean age was 65.79+/-8.81, mean income 150+/- 77.94 Euros) with diagnosis of COPD according to the GOLD criteria by a pulmonary specialist was performed. All patients completed 6-Minute Walk Test(6MWT), the 10-Item Respiratory Illness Questionnaire-Monitoring 10 (RIQ-MON 10).The RIQ-MON 10 consists of 10 items, producing a "complaints" and "limitations" scores. Twenty two patients (64.7%) walked <400m or 400m during a period of 6 minute. Relationships between parameters on the 6MWT, the RIQ-MON 10 and patients characteristics were assessed with Spearman rank correlation coefficients &rho;. The correlation coefficient between the 6MWT (mean 357.26, SD 92.66) and age (&rho;= -0.340 correlation is significant at the 0.05 level), the 6MWT and the subscale "complaints"(&rho;=-0.351 correlation is significant at the 0.05 level), the 6MWT and the RIQ-MON 10 (&rho;=-0.346 correlation is significant at the 0.05 level), the subscale "complaints"( mean 9.21, SD 2.98) and the subscale "limitations" (&rho;=0.525 correlation is significant at the 0.01 level), the RIQ-MON 10 (mean 17.82, SD 5.15)and the subscale "complaints"(&rho;=0.830 correlation is significant at the 0.01 level), the subscale "limitations" (mean 8.62, SD 3.01) and income (&rho;=0.396 correlation is significant at the 0.05 level) were determined. The two most frequent types of activity limitations in the subscale "limitations" were "going out for a day" and "going upstairs". Effective strategies to prevent or limit disabling impact of COPD are important to improving the quality of life of the elderly patients.

**PB8 173 PERIPHERAL BLOOD MONONUCLEAR CELL TRANSPLANTATION FOR PATIENTS WITH PERIPHERAL ARTERIAL DISEASE**

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Introduction: Critical limb ischemia (CLI) due to peripheral arterial disease (PAD) not only impairs QOL but also causes life threatening ischemic gangrene. Although bone marrow transplantation has been used for CLI patients, bone marrow harvest is so invasive that peripheral blood mononuclear cell transplantation (PBMCT) may be more suitable for elderly patients. Methods and Materials: Nineteen patients suffering from rest pain, ischemic ulcer or gangrene without indication for endovascular or surgical treatment underwent PBMCT in combination with (n=10) or without (n=9) G-CSF pretreatment. Informed consent was obtained before the procedure. Results: One month after the procedure, pain score improved in 15 patients. Transtaneous oxygen pressure was measured in 16 patients and improved in 10 patients. Serial angiography was performed in 17 patients and improvements were observed in 10 patients. One year after the procedure, remission of the lesion was observed in 10 patients (53%). Among 11 elderly patients, 6 showed remission of the lesion (55%). Below knee amputation was performed in 3 patients and 3 elderly patients died from heart failure (16%). Transplanted cell counts for WBC and CD34(+) cells increased after G-CSF treatment and the clinical outcome was better in G-CSF treated group. Conclusions: Compared to TASC II results where both remission rate and death rate were 25%, our data showed a better 1 year outcome for CLI after PBMCT. Although 3 patients who died were over the age of 65, remission rate was slightly better for elderly patients. Therefore it seemed to be safe and effective treatment for elderly patients. Since we did not have a control group for this study, efficacy of PBMCT was not established. Japan Study Group of Peripheral Vascular Regeneration Cell Therapy is now planning a randomized study (IMPACT-Study) to test the efficacy and safety of G-CSF mobilized PBMCT.

**PB8 174 CLINICAL RELEVANCE OF AN INCREASED PLASMA NT-PROBNP LEVEL IN NONAGENARIANS FROM THE GENERAL POPULATION**

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Introduction We investigated whether plasma NT-proBNP remains a specific marker of cardiac illness in very old age and is able to identify very elderly at high risk for death independent from the presence of known cardiac diagnoses. Methods Prospective, observational, population-based follow-up study within the Leiden 85-Plus Study of a 2-year birth cohort (1912-1914). A total of 274 participants were followed up from age 90 onwards (median follow-up 42.3 months, interquartile range 20.2 to 50.2 months). Plasma NT-proBNP level, indicators of general health and functioning, and specific cardiac diagnoses at age 90 and mortality from age 90 onwards were measured. Results Plasma levels of NT-proBNP were not correlated to indicators of poor health or poor functioning. However, the level of NT-proBNP increased significantly with increasing numbers of cardiac diagnoses ( $p < 0.001$ ). High NT-proBNP was associated with overall mortality, both in participants with specific cardiac diagnoses (HR 2.8, 95% CI 1.5-5.2) and without

(HR 3.5, 95% CI 1.6-7.5). This was also found for cardiovascular mortality risks (with specific cardiac diagnoses HR 4.1 (95% CI 1.5-11) versus without HR 5.6 (95% CI 1.0-30)) and noncardiovascular mortality risks (with specific cardiac diagnoses HR 1.9 (95% CI 0.84-4.5) versus without HR 3.4 (95% CI 1.3-8.6)). Conclusions Plasma NT-proBNP is still a disease specific marker of cardiac illness in nonagenarians and can possibly be used as a predictor of mortality, both in elderly with and without specific cardiac diagnoses.

**PB8 175 BEFORE A STROKE AND AFTER – WHAT HAPPENS?**

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Introduction The knowledge, of the course of events for elderly stroke victims, is limited, by the time before and after the stroke onset. Methods and materials A prospective study was performed in central Sweden. In total, 390 stroke subjects >65 years, living in their own homes and having no dementia diagnosis prior to hospital admission, constituted the study population. Interviews with the survivors were performed with validated instruments for example the MMSE, HAD, NHP. Health care records and local and national registers were scrutinized. Results The mortality risk and risk for recurrent stroke was highest in the very early post-morbid phase and then fell considerably. The utilization of hospital inpatient care was higher during the years following index than preceding years. The use of outpatient care increased slowly during the year preceding index and fell slowly during the following year, but to a somewhat higher level. The utilization of community support was substantially higher than the health care utilization, increased slowly during the year preceding index, and with a marked increase during the year following index. In total women received more municipality support than men, but relief services were more common in men. Conclusion The risk for stroke recurrence or mortality is high during the first period after a stroke incident but the risk decreases the first six months. The utilization of care, both in hospital and primary health care, and community support was considerably higher the year following the index admission, but with an increasing trend the year preceding index. With an increasing number of elderly stroke survivors, and increasing needs, this will be a challenge for the municipality and for the relatives.

**PB8 176 CHANGES IN AUTONOMIC REGULATION IS CORRELATED WITH THE SEVERITY OF BRAIN LESIONS IN PATIENTS WITH STROKE**

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It is known the cardiovascular autonomic regulation is impaired in patients with stroke. The non-linear analysis of heart rate variability (HRV) is an useful tool to assess the autonomic imbalance in patients with cardiovascular disease. Aim of this study is to evaluate the relation between the brain lesions severity and the changes in Poincaré plots (PPlots)of HRV. We studied 20 subjects with a previous first-ever stroke divided in two groups of 10 patients in according to a CT finding of medium cerebral artery single (SL, meanage 69+/-9 y) or multiple (ML,meanage 69+/-8 y) lesion. The control group (N) consisted of 10 healthy subjects (meanage 42+/-6 y). All subjects underwent to a 24-hour Holter ECG recording. PPlots maps were automatically quantified by nine novel computer-generated quantitative descriptors: length (L), wideness (W) and area (A) of the 2D plot and the number of peaks (Np) and the length of the three radii of the semi-ellipse of inertia Px, Py, Pz of the 3D plot. The main time-domain parameters (SDNN, PNN50, MSSD) were also evaluated. Statistical analyses were performed for all parameters by Kruskal-Wallis test and the Dunns post test. We observed a direct relationship between the increasing brain lesion's severity and the related impairment in the autonomic cardiac control of these patients showed by the progressive collapsing both in 2D and 3D PPlots. L, A and Np, showed the mainly significant differences between the three study groups, while lower significant differences were found in spectral parameters and none in time-domain indexes. These results clearly indicate that the changes in Poincaré plots (PPlots) of HRV are correlated with the severity of brain lesions in patients with stroke.

**PB8 177 ADIPONECTIN AND HOMOCYSTEINE IN CARDIOVASCULAR DISEASE ASSOCIATED WITH AGING; CORRELATION STUDY**

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INTRODUCTION Antiatherogen, anti-inflammatory, antioxidant and antidiabetic actions of adiponectin are opposite to the homocysteine proatherogenic and prooxidant actions. This study has aimed to investigate in old subjects with cardiovascular disease: a) circulating levels of adiponectin, total homocysteine; b)the relationships of adiponectin and total homocysteine with others clinical metabolic indicators, anthropometric and

**physiologic parameters.** METHODS Women and men, ages 40 to over 85 years were enrolled in two major groups: healthy (control group) and subjects with cardiovascular disease. Adiponectin and homocysteine were assayed by ELLISA. Pearson's correlation coefficient was calculated in order to find out any relation of serum adiponectin and plasma homocysteine with the clinical chemistry panel tests, BMI, systolic and diastolic BP. RESULTS Serum adiponectin and plasma homocysteine were significantly higher in healthy subjects of 65-86 year compared with those of 40-65 year. In the control group there were positive correlations of adiponectin with age ( $r=0.355$ ;  $p<0.05$ ) and HDLc ( $r=0.408$ ;  $p<0.05$ ), a negative correlation with triglycerides ( $-r =0.4448$ ;  $p<0.05$ ), and no correlation with total homocysteine. Also, there was a significant positive correlation of plasma homocysteine with age( $r=0.0384$ ;  $p <0.05$ ). In the cardiovascular disease group we found out significantly high BMI, SBP DBP, glucose ( $p=0.012$ ), uric acid( $p=0.0028$ ), creatinine( $p=0.0481$ ), triglyceride( $p=0.039$ ), homocysteine ( $p=0.035$ ) concentrations, and a significantly low adiponectin( $p=0.0011$ ) level. We showed significant negative correlations of adiponectin with uric acid(-  $r =0.288$ ;  $p=0.05$ ) and triglycerides(-  $r =0.342$ ;  $p<0.05$ ) in subjects with cardiovascular disease. On the contrary, plasma homocysteine pointed out significant positive correlations with uric acid( $r=0.315$ ;  $p<0.02$ ), total cholesterol( $r=0.311$ ;  $p<0.02$ ) and creatinine( $r=0.408$ ;  $p<0.01$ ). CONCLUSIONS: This study has pointed to an alteration of the glucidic and energy metabolism associated with the hipoadiponectinemia and hiperhomocysteinemia in the old patients with cardiovascular disease. Modulation of the adiponectin and homocysteine levels by pharmacologic and nonpharmacologic factors could improve the metabolic modifications in cardiovascular pathology.

**PB8 178 THE BOLOGNA OUTCOME ALGORITHM FOR ISCHAEMIC STROKE (BOAS)**

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**Introduction –** Although age and neurological impairment are the main determinants of stroke prognosis, other variables may help to predict more precisely the medium term dependence (D) and mortality (M) of patients (pts) with ischaemic stroke (IS). Methods and materials – By an electronic duplicate of our medical record, 415 variables were collected concerning the 333 pts admitted to our Stroke Unit in 2007. After a median interval of 9 months a telephone interview was performed to establish the degree of disability attained (modified Rankin Scale, mRS) and M. Among the 221 IS pts, 40 with D and 40 without D were matched by age and National Institutes of Health Stroke Scale (NIHSS). The 2 groups were then compared, and 27 of the 415 variables were found to be univariately associated with D. Finally, these variables were studied by multivariate analysis in all pts with IS in whom they were available (N=211). Results – Seven variables were independently associated with D. The model was then simplified and reduced to only 4 clinical variables: age>80 years (OLD), persistent paralysis of upper limb (ARM), NIHSS>10, and use of oxygen or urinary catheter or preadmission mRS>0 (OCR) (overall  $R^2=0.38$ ,  $P<0.0001$ , accuracy=83.4%). The algorithm derived from these results identifies 8 categories of pts, 5 of which with unfavorable outcome (>60% with D, 53% of population: NIHSS>=19 [D100%, M83%], NIHSS 11-18 [D87%, M32%], OLD+ARM [D100%, M29%], YOUNG+ARM+OCR [D88%, M13%], OLD+OCR [D64%, M9%]), and 3 with favorable outcome (<35% with D, 47% of population: OLD [D33%, M0%], YOUNG+ARM [D32%, M3%], YOUNG [D18%, M4%]). Conclusions – A persistent paralysis in the upper limb and other simple clinical findings, in addition to stroke severity and age, may help to accurately predict the medium term outcome of pts with IS. Further studies are in progress for validation of the proposed algorithm.

**PB8 179 CHARACTERISTICS OF OLDER PATIENTS ADMITTED TO A GERIATRIC DAY HOSPITAL: A NEW EXPERIENCE IN BRAZIL.**

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**Introduction:** Geriatric Day Hospital is an environment where a multidisciplinary therapeutic approach to an older outpatient is possible while still being served by resources usually available only to inpatients. Possible interventions include rehabilitation, compensation of chronic diseases and incompliance assessment. In Brazil, there are virtually no reports on this kind of approach to the older patient. The objective of this study was to identify the epidemiologic characteristics of the individuals admitted to a Brazilian Geriatric Day Hospital. Methods and Materials: All patients admitted to the Geriatric Day Hospital from February 2008 to January 2009 were evaluated for possible inclusion. Participant's data were collected by the medical team using pre-defined questionnaires which included: identification, reason for admission, geriatric syndromes, functionality appraisal, occurrence of delirium, comorbidities, number of prescribed medications, recent hospitalizations. Results and conclusion: A group of 103 older patients was analyzed. Age average was of 77 years and 66% were women. Most were initially treated either in the Geriatrics Department (48%) or in the Emergency Room (17%). Infections (38%) and decompensation of chronic diseases (48%) were the main reasons for admission. An average of 1.17 geriatric syndromes per patient was observed, urinary incontinence being

the most prevalent (47%). Patients were inflicted by an average of 5 comorbidities. Polypharmacy was verified in 79% of the cases. Most of the patients were independent for their basic daily live activities (57%); 51% of them had been to an emergency room at some point during the 6 previous months. Patient incompliance was suspected in 22% of the cases and in 48% a poor outcome was at risk. Among older patients admitted to a Geriatric Day Hospital there was a predominance of functionally independent elderly women diagnosed with multiple comorbidities and polypharmacy, with clinical decompensation and infections, and at risk for unfavorable prognosis.

**PB8 180 CARDIAC SURGERY AT THE UNIVERSITY HOSPITAL OF DIJON: MORTALITY, MORBIDITIES AND MEAN LENGTH OF STAY IN OLD AND OLD-OLD POPULATIONS**

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**Introduction:** Cardiac surgery is required more frequently in an increasingly elderly population today due to the increase in life expectancy, aging and the high prevalence of coronaropathies and valvulopathies, which require valve replacements, coronary artery bypass grafts or both surgeries. Methods and materials: This retrospective study was done using figures from the medical computer database of the Dijon University Hospital. The 482 elderly subjects included in the study were divided into 2 groups : the old group, composed of subjects aged 65 to 79 (mean age: 72.6) and the old-old group, with subjects aged 80 and over (mean age: 81.9). All subjects had had cardiac surgery between 1st July 2005 and 31st December 2006. The 2 groups were compared according to the type of surgery, selected comorbidities (32), complications (15), therapeutics (3), mean lengths of stay in hospital and in the acute care unit, as well as mortality. Results: The old-old suffered less often from diabetes (22.8% vs 35.7%) and obesity (7.6% vs 34%). They more often required valve replacement (40.5% vs 24.8%) whereas the old had coronary artery bypass grafts (64% vs 41.8%). There were no significant differences between the two groups for the complications and the lengths of stay. The old-old had more transfusions (34.2% vs 20.1%) and dialyses (8.9% vs 3%). The rate of mortality was 8.9% for the old-old and 1.73% for the old ( $p=0.002$ ). Conclusions: This study tends to favour cardiac surgery even for the old-old. Although, in comparison to the mortality rate of the old, the old-old group's rate is higher, it does not appear to be much higher than the general mortality rate for this group (6.7%). Prospective studies with geriatric parameters are required to improve preoperative selection and the management of the old-old.

**PB8 181 SPONTANEOUS CONVERSION OF CHRONIC ATRIAL FIBRILLATION TO SINUS RHYTHM**

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Permanent atrial fibrillation (AF), a frequent arrhythmia in old people, has a great impact on morbidity and mortality. If AF has persisted some years, spontaneous conversion to sinus rhythm is very rare. We present two patients, whose long-lasting chronic AF converted spontaneously to sinus rhythm. The patients. Case 1. A man, with a long history of coronary heart disease had AF from the age of 60 years. A three-vessel by-pass surgery was performed two years later. At the age of 75 years angioplasty with stenting was performed due to the occluded grafts. Eighteen months after angioplasty he had ventricular fibrillation. Resuscitation was successful. Amiodarone 100 mg was added to earlier medication; beta-blocker, ACE-inhibitor, diuretic, statin and warfarin. Fifteen months later, at the age of 78 years, he found his pulse regular and bradycardic, 40-48 bpm. ECG confirmed sinus rhythm with a first-degree A-V block, a low amplitude P wave, the component of the left atrium in V1 was absent. Atrial contractions were not seen in echocardiography in spite of a small A wave. The diameter of the left atrium was 4.8 cm, the diameter of the left ventricle was 5.6 cm and the ejection fracture 48 %. The patient felt, that his quality of life was essentially better during sinus rhythm. After three weeks of sinus rhythm, paroxysmal AF periods appeared again. Eight months later sinus rhythm and AF vary sinus rhythm being dominant. Case 2. A man with a history of rheumatic mitral valve disease had several attacks of atrial fibrillation. At the age of 49 years the mitral valve was replaced with a Björk-Shiley prosthesis. Three years after heart operation AF became permanent. Fifteen years after heart operation bradycardic regular pulse was found at blood pressure measurement. ECG confirmed sinus rhythm with a first-degree AV block. The left atrium was dilated due to valve disease. There were no changes in the patients medication. Sinus rhythm maintained over six months, then permanent AF returned. The subjective quality of life was equal during AF and sinus rhythm. Conclusion Permanent atrial fibrillation of many years duration, even in patients with large left atria, can occasionally revert to sinus rhythm. Despite electrical sinus rhythm the atria may not be mechanically active. Even sinus rhythm of several months' duration is not a guarantee of

stability. Accordingly, the continuation of anticoagulant therapy is essential, if there are no contraindications.

**PB8 182 USE OF FLUINDIONE IN GERIATRIC POPULATION: CLINICAL AUDIT SIX MONTHS AFTER IMPLEMENTATION OF LOCAL PROTOCOL.**

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Introduction Managing vitamin K antagonists (VKA), an oral anticoagulant therapy, is complex, especially among elderly inpatients for whom there are not any accurate guidelines. A local fluindione induction regimen adapted to geriatric population and management protocol for cases of VKA's overmedication was implemented in November 2006 in Charpennes' Hospital, a geriatric institution in a large teaching hospital (Hospices Civils de Lyon). Methods and materials Six months after local protocol's implementation, we surveyed a clinical audit to evaluate compliance of prescribing practices, of biological monitoring, and of over-anticoagulation management with the recommended protocol. We conducted a prospective observational study, during five months, blinded from the prescriber's knowledge. We defined fourteen conformity criteria like initial fluindione dose or frequency of biological monitoring and we calculated conformity rate between prescriptions and recommendations. Results We analysed thirty cases of fluindione's instauration and forty one cases of VKA's overmedication. We noticed differences between delivered care and local guidelines, especially in regards to biological monitoring: the average conformity rate for prescribing and monitoring fluindione treatment was 53% and 64% for over-anticoagulation management. We noticed that 17% of VKA's overmedication appeared between one and five days after starting a concomitant drug known for having interactions with VKA. That's why we suggested improving the protocols by including additional information, like recommendations for biological monitoring after concomitant drugs' introduction. Moreover we proposed to distribute local protocol more widely. Conclusion In conclusion, this protocol is a useful tool for doctors, but it was necessary to find a better way to diffuse it because it was underused in our study. Finally we started to consider the choice of fluindione and we proposed to adapt the protocol for warfarine: more studies have been conducted with this anticoagulant which appears to present a certain number of advantages like a better galenic form.

**PB8 183 FACTORS LEADING TO UNPLANNED HOSPITAL ADMISSIONS AND UNPLANNED OUTPATIENT CLINIC VISITS IN ELDERLY PATIENTS WITH HEART FAILURE.**

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INTRODUCTION Although the progress in diagnosis and treatment of heart failure (HF) is being observed, episodes of the disease's exacerbation leading to unplanned outpatient clinic visits (UOCV) and unplanned hospitalizations (UH) remain an important challenge for health care. Aim of the study was to determine factors connected with UH and UOCV in elderly patients with HF. METHODS AND MATERIALS The survey was performed in Poland between March and December 2005 in 3980 HF patients from the randomly chosen 400 primary care and 396 cardiologic outpatient clinics in whom questionnaire-based assessment of diagnostic procedures and pharmacotherapy during the last 365 days was performed by trained nurses. RESULTS The patients' mean age was 67,1±11,8 years, 58,4% were male. 42,5% patients experienced at least one UH with mean rate of 3,3±1,99. Significantly more often general practitioners' than cardiologists' patients were hospitalized (46,5% vs 38,4%). The most often causes of hospitalizations were respiratory tract diseases, coronary artery disease, atrial fibrillation, non compliance with recommended therapy. Higher rate of UH was observed among men, younger subjects, those living in rural area, with lower EF, more advanced NYHA class, treated with diuretics, spironolactone or digitalis and patients with more co-morbidities. 34,7% patients had UOCV with mean number of visits 3,1±3,0. Significantly more often general practitioners' than cardiologists' patients had UOCV (49,0% vs 21,6%). Older subjects, living in rural area, with lower EF, more advanced NYHA class, treated with diuretics, spironolactone, or digitalis, not receiving beta-blockers, with co-morbidities experienced UOCV significantly more frequently. CONCLUSIONS Presented study shows that the number of UOCV and UH in elderly patients with HF is related to advanced HF, co-morbidities and managed in general practice. Improvement in availability of cardiologic care in those patients especially living in rural areas should be considered to reduce the number of UH and UOCV.

**PB8 184 THE ATTITUDES AND APPROACHES TO DECISION MAKING ABOUT ANTIHYPERTENSIVE TREATMENT IN ELDERLY PATIENTS.**

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Introduction/aim: Despite proven efficacy, treatment for hypertension meets with high non-compliance rates in elderly people. Patients' perception of disease and benefits of treatment are important determinants of compliance. We tested the acceptance of anti-hypertensive treatment and its determinants in a population of elderly patients. Methods: After illustrated explanations of the consequences of hypertension in older people and hypothetic benefits/risks of treatment, 120 patients > 65 years old were asked for their willingness to take treatment in 15 scenarios proposing different absolute risks of cardio-vascular events, risk reductions by treatment and incidences of side effects. Patients also answered the Autonomy Preference Index (API), assessing their preferences for medical information and participation in decision-making. Results: 96 women and 24 men (mean age 83,8, range 65-97) completed the interview. 82% presented with hypertension, 65% were aware of it, but only 22-34% were aware of their antihypertensive treatment. Only 6% of patients refused treatment under any circumstances, 20-30% couldn't make up their mind after detailed explanations, 10% were willing to accept treatment only with zero side-effects. A majority (50-60%) accepted treatment irrespective of absolute risk, risk reduction or incidence of side effects. Treatment acceptance rates were significantly higher in patients aware of their hypertension. The API indicates that most patients want to receive extensive information but that they usually prefer to leave important or complex medical decisions to their physician. Conclusions: A majority of elderly patients accept antihypertensive treatment whatever the risks, risk reductions and adverse drug effects. However, they are uncomfortable with this decision and would rather leave it to their physician, even though a majority wants to receive extensive information. Promoting better awareness and understanding of anti-hypertensive treatments by repeated explanations at follow-up visits could improve both safety and patient compliance in elderly hypertensive patients.

**PB8 185 ACUTE FULMINANT MILIARY TUBERCULOSIS WITH ADULT RESPIRATORY DISTRESS SYNDROME IN AN OCTOGENARIAN**

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INTRODUCTION: Miliary tuberculosis is a life-threatening disease resulting from the haematogenous spread of *Mycobacterium tuberculosis*. It also features as an unusual cause of acute respiratory distress syndrome (ARDS). When ARDS develops after miliary TB the prognosis is worse. According to the limited number of articles reporting the outcome of ARDS caused by miliary tuberculosis, the fatality rate ranges from 33% to as high as 100%, which is far higher than for ARDS from other causes. METHODS: We report the case of an 82 years old woman with a previous history of primary middle lobe pulmonary tuberculosis, hypertension, depression and disability after hip fracture, who was admitted to the acute geriatric ward with a short history of progressive anorexia, nausea, constitutional symptoms and severe functional decline. On examination she was confused and dysphonic. Temperature was 38,1 °C, pulse 101 beats/min, blood pressure 140/80 mmHg and respiratory rate 26/min with basal oxygen saturation of 74% and 82% while on 3 L/m oxygen by face mask. She appeared dyspneic with labored breathing. Lung examination revealed crackles in both lung fields. She had tachycardia with regular rhythm. Laboratory investigations revealed a L (92% neutrophils, 6% lymphocytes, white blood cell count of 7800/ 2% monocytes) with platelet count of 152000/  $\mu$ L; aspartate transaminase of 58 U/L with normal rest liver function test and elevated reactants acute phase. Chest radiograph showed diffuse bilateral interstitial infiltrates and right lung consolidation areas. The patient was started on empirical antibiotics, supplemental oxygen and systemics corticosteroid. Because of aspiration episode, she had a rapid progression of her clinical state, dying 5 days after admission. RESULTS: Autopsy reported middle lobe cavitary lesion and disseminated tuberculosis involving the lungs, liver, bone-marrow and spleen. CONCLUSION: This case confirms the difficulties in identifying patients with miliary tuberculosis and its ominous prognosis when ARDS is developed.

**PB8 186 DYSFUNCTION OF MICROCIRCULATION AND LEFT VENTRICLE FUNCTION IN THE ELDERLY WITH HEART FAILURE.**

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Introduction Periphery circulation dysfunction is an element of hemodynamic irregularities in patients with heart failure (HF). The aim of this study was to assess skin microcirculatory and to establish relation between microcirculatory parameters and indices describing left ventricular function. Methods: 100 patients were involved in study. Each patient was interviewed to obtain anthropometric data, information concerning medication, NYHA classification. Blood pressure, echocardiographic examination and assessment of skin microcirculatory were performed with respect to all patients. Forearm skin microcirculatory blood flow was measured using Laser Doppler Flowmetry. First, three minute flow in basal conditions was measured, then three minute ischemic reaction was performed, followed by three minute reactive hyperemia and eight minute vasodilatatory reaction with temperature of 44 degrees Centigrade. Measurements were taken of mean flow in basal conditions (MFb), peak flow in hyperemic reaction (PF), mean flow in 44 degrees Centigrade (MF44). Patients were divided into a group with normal left ventricle end-diastolic diameter (LVEDd) and with left ventricle enlargement ( $\geq$ 5,6 cm),

and group with normal and impaired ejection fraction (EF<45%). Relations between parameters of microcirculation and echocardiography were measured using correlation, followed by multi-variable analysis. Results: Average age of patients was 68,2±11,5; 57% were male. Patients with systolic dysfunction had significantly lower values of flow in basal conditions and in higher temperature. Comparison of patients with and without left ventricle enlargement also showed differences in microcirculatory indices. Patients with left ventricular enlargement had significantly lower values of PF and MF44. Moreover, significant negative correlation between LVEDD and microcirculation was found for MF44 ( $p=0.02$ ). Both relations remained significant after adjustment for sex, age and medication. Conclusions: In HF, both left ventricle dilatation and reduced EF are accompanied by impaired skin microcirculatory function. Key words: heart failure, microcirculatory, ejection fraction, left ventricle diastolic diameter, Laser Doppler Flowmetry.

**PB8 187 EFFICACY OF CYCLOPHOSPHAMIDE FOR CORTICODEPENDENT GIANT CELL ARTERITIS**  
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Glucocorticoids (GC) are considered as the best therapies for Giant Cell Arteritis (GCA). However relapses affect near 50% of the patients and may lead in some cases to GC-dependency. In addition, because of their advanced age (mean age : 75 years), GCA patients are particularly sensitive to consequences of a long-term GC treatment. The use of Cyclophosphamide (CYC) have already been studied in an elderly population in oncology, haematology and currently for necrotizing vasculitis (CORTAGE Study). CYC is well tolerated, as long as dosage is adapted to the renal function, and as monitoring is carefully conducted. In this study, we assessed the effects of monthly intravenous CYC pulses in the GCA treatment. In a same hospital unit, CYC was administrated to GC-dependent patients (defined as a daily uptake of prednisone  $\geq 20$  mg at 6 months or  $\geq 10$  mg at 1 year) or those suffering from side-effects of GC. Our objective was to determine if CYC could reduce or not cumulative GC requirement (daily dose of prednisone  $\leq 10$  mg at 6 months after CYC initiation) and GCA relapses. Ten patients with GCA diagnosis (according to ACR 1990 criteria) were included in this study. Our objective was reached for 8 patients (daily dose of prednisone  $\leq 10$  mg at 6 months, without relapse). CYC was associated with a significant decrease in daily average intake of prednisone ( $p=0.0051$  - Wilcoxon signed-rank test). Tolerance of the treatment was good in 8 patients (side effects grade  $\leq 2$  on the WHO scale). In the remaining two patients, neutropenia - including fever in one case - were observed. Both were resolved favourably. CYC treatment for patients suffering from GC-dependent GCA (or from severe side-effects) seems efficient and should allow thus the use of GC in a lesser extent. Toxicity levels are acceptable, as long as CYC intakes are tailored to each patient.

**PB8 188 AORTIC STIFFNESS PREDICTS HYPOTENSION DURING ANAESTHETIC INDUCTION IN ELDERLY**  
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**BACKGROUND:** In aging general population, clinically significant hypotension during induction of anesthesia and cardiovascular postoperative complications are of 0.5% and 2% respectively. The aim of this study was to establish, in a population aged 60-80 years having a non-cardiovascular surgery, if an elevated arterial stiffness, assessed before surgery is correlated with a more pronounced hypotension during anesthesia induction. **PATIENTS AND METHOD:** Carotid-femoral pulse wave velocity (c-f PWV) an indicator of aortic stiffness was measured with the PulsePen® during the pre-surgical anesthetic evaluation. During anesthesia induction (30 minutes) with propofol and remifentanil, monitoring included electrocardiography, pulse oxymetry, non invasive blood pressure, bispectral index (BIS) and oxygen concentration. Anesthesia was induced so as to maintain BIS values between 40 and 50. Heart rate and blood pressure were recorded every 150 seconds. **RESULTS:** 45 patients aged 71.1±5.8 years were included in the study, (62% women). The mean value of c-f PWV was 12.1±3.9 m/s. During anesthesia, BP diminished with a maximum decrease of 64.9±23.5 mmHg for SBP. There was no correlation between hypotension during anesthesia induction and the quantity and rhythm of propofol or remifentanil. In bivariate analysis, hypotension was correlated with age and c-f PWV. In stepwise regression including PWV, history of cardiovascular events, age and ASA score, only c-f PWV influenced significantly SBP variation during anesthetic induction ( $R^2=12.7\%$ ). **CONCLUSION:** Increased aortic stiffness assessed with PWV measured at the pre-operative anesthetic evaluation is associated with a more pronounced hypotension during induction of anesthesia. This, measurements of aortic stiffness could be a good indicator of the risk of hypotension during anesthesia induction.

**PB8 189 THE IMPORTANCE OF RISK FACTORS IN EVALUATION OF CARDIOVASCULAR DISEASES IN THE LONGEVIVES**

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It is welknown the risk factors are these individual peculiarities which could produce an ailment. The incrimination of risk factors in determining of cardiovascular diseases need no comments, this just was provide. On the other hand, it is well known that aging produces age-related changes, which interfere with pathological processes. It is normal to ask about the wheight of risk factors in the very old patients with cardiovascular diseases. The goal: The study aim was the assessment of the risk factors' value in the longevives patients with different cardiovascular diseases. Method: We evaluated 136 patients( 42 males and 94 females) aged over 85, with different cardiovascular diseases, in whom were followed : living area ( town/ country ), smoking, dislipidemia, obesity, diabetes mellitus, hypertension. Results: We observed a directly relationship between the number of risk factors and the cumulation of cardiovascular diseases , between the number of risk factors and the degree of cardiovascular diseases; it was discovered an cotrarily relationship between number of diseases, their vdegree and the very old age. No significant relationship was discovered between number of risk factors and gender or living area of patients. Conclusion: In the longevives the role of the risk factors incriminated in cardiovascular diseases determining is decreased comparative with degenerative age-related changes.

**PB8 190 PROGNOSTIC VALUE OF THE N-TERMINAL PRO-BRAIN Natriuretic Peptide IN GERIATRIC PATIENTS WITH ACUTE MYOCARDIAL INFARCTION**

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Aim : to evaluate prognosis of patients over 75 years old with Acute Myocardial Infarction, based on NT-proBNP levels measured in the acute phase of myocardial infarction. Methods : the study included all patients hospitalized between january 2008 and 2009 with acute myocardial infarction, either with or without ST segment elevation. The NT proBNP in serum was measured in all patients upon admission to hospital. Results : The NT proBNP was measured in 18 patients with acute myocardial infarction, median age of 89.5 (range 82-97 years) and sex ratio (F/M) of 3.5. 12 patients (66.7%) were malnourished. The average troponin level measured in all patients was 0.915. The average NT proBNP level in the studied patients was 11797 and increased with the age of patients. Two patients died during the hospitalization, their NT pro BNP levels were higher than in patients who were alive (41166.5 compared with 10322.5). However, their troponin levels were not higher than the other patients in the group. There was not a significant correlation between these two parameters. The NT pro BNP level is a predictor factor of death. Conclusions : the NT proBNP measured in the acute phase of myocardial infarction, is a likely short-term prognostic factor in patients aged over 75. This study needs to be completed to be able to confirm the results .

**PB8 191 "J-CURVE" PHENOMENON BETWEEN COGNITIVE FUNCTIONS AND BLOOD PRESSURE IN OLD PATIENTS DURING TREATMENT OF HYPERTENSION**

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In order to explore the cognitive function of aged people and blood pressure, we examined 125 patient over 80 years of age. There were 72 women among them. All of the patients examined completed higher education and worked as engineers before retiring. People who had myocardium infarction,insult or suffered from Alzheimer disease were not included. For scaling cognitive function parameters MMSE and "10 words" were used. For normal blood pressure determining JNC7 and ZhGS criteria were used. When patients were examined for the first time, they were not given therapy of Hypertension. The next time they were examined after 6 months. The results have shown that all the patients evaluated their cognitive function satisfactory both first and second times they were examined. The psychological test proved these result. There was heterogeneity in results of cognitive tests in some patients. When cognitive function characteristics were compared there was a correlation ( $r=0.43, p<0.05$ ) between cognitive functions and blood pressure disturbance in cases when BP was above 170 and 100. In cases with lower BP correlation turned out to be nonlinear. The best results of cognitive function were in patients with BP 145 and 95 mm.Hg. According to the results, 73 of patients were prescribed to take hypertension therapy, according also to ESC recommendation. They took therapy that lasted 6 months. The next examination showed that 12% of patients felt disorders during the therapy. The average cognitive function rate increased after therapy. Maximum results of cognitive function were in cases when BP was 146 and 94 mm.Hg. Judging from this, we could make a conclusion that hypertension therapy in aged patients may improve their cognitive function. Besides, in that case the phenomenon of "J-curve" connection between BP and

cognitive function is evident. These results are matching HYVET trial results and ZhGS formulas.

**PB8 192 OPERATIONALIZING MULTIMORBIDITY AND AUTONOMY FOR HEALTH SERVICES RESEARCH IN AGING POPULATIONS (OMAHA) - STUDY DESIGN AND PRELIMINARY RESULTS FROM WAVE ONE DATA-COLLECTION**

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The primary objective of the OMAHA project is to develop a conceptual framework and standardised measurement instruments for the multidimensional assessment of multimorbidity, autonomy and quality of life in old age. Ways of reaching target groups that are difficult to access, such as older immigrants, are also being tested. The overarching aims of the OMAHA project are to provide a defined set of survey instruments that can be used in health and social reporting, and to identify empirically sound means of accessing samples representative of the elderly population. The study consists of two longitudinal arms: one for three-wave telephone interview (CATI; N = 1200), and a second for a two-wave face-to-face assessment including functional tests and basic physical examination (CAPI; N = 300). Assessments consisted of various objective and subjective measures of functionality, physical health, emotional well-being, cognitive ability, depression, eating behaviour, social contacts, and economics. Concerning range of measures, CAPI is considered an extension of CATI. Samples were drawn representatively from the population of Berlin aged 65 years and older. Waves one for CAPI and CATI ran from January and February, respectively. A brief overview over study design and assessment procedures is given. Preliminary results from waves one concerning patterns of physical morbidity and level of functioning are presented.

**PB8 193 ROUTINE IN-HOSPITAL CARE AND PROGNOSIS OF ELDERLY PATIENTS WITH HEART FAILURE**

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Introduction: Most of the studies performed in heart failure (HF) patients have been conducted in middle-aged adults. However, patients with HF are mainly elderly patients in whom management is complicated by comorbid conditions. Little is known about the quality of care among this population. Methods: The aim of this prospective and multicenter study was to describe the in-hospital management in routine clinical settings of elderly patients over 75 years presenting to the emergency department with pulmonary oedema. Results: During the 12-month study period, 398 patients were enrolled in 5 French emergency departments. 96% of them had at least one major comorbid condition and the prevalence of cognitive impairment was high (63% of patients with a Mini Mental State Examination <20). Admission in cardiology departments (33.7%) was associated with previous cardiologic assessment (OR: 2.32 [1.33-4.07]), prior coronary artery disease (OR: 2.39 [1.47-3.87]) and elevated troponin (OR: 1.67 [1.03-2.70]). By contrast, cognitive impairment (OR: 0.39 [0.24-0.62]) was associated with non-cardiology department admission (66.3%). 64.1% of patients admitted to cardiology department underwent echocardiographic assessment versus 23.7% of the others ( $p<0.01$ ). A preserved left ventricular ejection fraction ( $\geq 45\%$ ) was found in 70.5% of patients. Recommended treatments were under-prescribed at admission (48.1%) and were more likely to be delivered at discharge to patients admitted to cardiology departments (OR: 1.51 [1.01-2.23]). In-hospital mortality (11.0 %) was not associated with department speciality. However, the two years survival of patients treated with recommended medications at discharge was significantly improved compared with patients treated by symptomatic drugs. Conclusion: Routine care of HF was dependant on non-cardiologic factors in this elderly population. Our findings suggest that the institution of protocols to standardize care could improve compliance with guidelines and long-term outcomes.

**PB8 194 MORTALITY OF ELDERLY PATIENTS WITH HEART FAILURE ADMITTED TO AN ACUTE GERIATRIC UNIT: THE IMPORTANCE OF FUNCTIONALITY AND COMORBIDITY**

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INTRODUCTION.- HF is the most frequent cause of hospital admission in elderly patients and has a general 2-year mortality of 50%. There is no studies on particular aspects of

older-old patients with HF. There is no information about the influence of physical function, comorbidity and cognitive function on the mortality of these geriatric HF subpopulation. METHODS.- Prospective study of patients admitted to our AGU since 1 October 2006 until 30 April 2008 with diagnosis of HF. The patients should fulfil de European Society of Cardiology and the Framingham diagnostic criteria for HF. At discharge the patients was followed during 1 year. Chi square and Student t test was used to investigate variable relations with .05 significance cutpoint. For adjusting with variables known related with mortality in univariate analysis and literature, a logistic regression analysis was used with progressive elimination of variables from the model. RESULTS.- 310 patients, age 86 years and 69% women. Mortality during index hospitalization was 18% and one-year mortality 40%. Mean Charlson comorbidity index was 4.2, 25% were independent in al ADLs, cognoscitive exam showed that 45% of patients scored with cognitive decline and the Yessavage questionnaire indicated that 50% of patients fulfilled criteria for depressive symptoms. On univariate analysis factors related with in-hospital mortality was dependence in ADL, mobility problems, literacy, chronic renal failure, Charlson index, NYHA class, mean arterial pressure, creatinin, white blood cells al glucose on admission. One year mortality was related on univariate analysis with dependence on ADL, mobility problems, cognitive decline, Charlson comorbidity index. On multivariate analysis dependence o ADL, Charlson index, NYHA, diabetes mellitus, age and left ventricular ejection fraction was factors that entered on the model predicting one-year mortality. CONCLUSIONS: functionality is one of the main factors determining in-hospital and one-year mortality in geriatric patients admitted due to heart failure.

**PB8 195 AGE RELATED MODIFICATION OF THE TOTAL ANTIOXIDANT CAPACITY AFFECTS AN ATHEROSCLEROTIC RISK FACTOR IN ELDERLY PEOPLE**

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Introduction: The oxidative conversion of low density lipoproteins (LDL) to oxidized LDL (oxLDL) is considered to be a key event in the process that initiates and accelerates the development of atherosclerotic lesions. oxLDL is more atherogenic than native LDL and elevated levels are associated with a remarkably increased risk of atherosclerosis. However, the formation of oxLDL might be impaired by a high antioxidant capacity in the body. The objective of this study was to characterize the lipid profile and the impact of the total antioxidant capacity (TAC) on oxLDL as an atherosclerotic risk factor in elderly people. Methods and Materials: A total of 102 subjects (45 men, 57 women, normo- and mild hypercholesterolemic) were recruited for this investigation. The participants were divided into three groups: A ( $70>75y$ ; n=48), B ( $75>80y$ ; n=35), and C ( $>80y$ ; n=19). Plasma concentrations of total cholesterol (TC), HDL-cholesterol and triglycerides were determined by enzymatic methods, LDL-cholesterol (according to the Friedewald equation), the TC/HDL, LDL/HDL, and oxLDL/LDL ratios were calculated. TAC was analyzed by a photometrical method, oxLDL using an ELISA kit. Results: In this study no significant differences in plasma TC, HDL-, LDL-cholesterol, and triglycerides could be found between the investigated groups. The indices of atherogenicity, TC/HDL, and LDL/HDL were comparable in all age groups and indicated a rather positive lipid profile (up to 95% within the reference values). Further analyses exhibited an age related significant decrease of TAC values ( $A>C>B$ ) accompanied by a significant increase of oxLDL levels ( $A<0.001$ ;  $B<0.05$ ), resulting in a significantly enhanced age associated oxLDL/LDL ratio ( $A<0.001$ ;  $B<0.05$ ). Conclusion: The findings of this investigation indicate no age associated modulation of plasma lipid profile components and the indices of atherogenicity, but a significant age related decrease of TAC accompanied by an increased level of the atherosclerotic risk factor oxLDL in elderly people.

**PB8 196 INTEREST OF ANTIDEPRESSANT ON ELDERLY WHO SUFFER FROM CORONARY FAILURE AFTER 75 YEARS OLD**

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Introduction :According to litterature depression is related to coronary failure.We observed more coronary heart disease among patients who suffer from depression and coronary failure in a rehabilitation geriatric unit. Method:The aim of the study is to evaluate the impact of antidepressant (ISRS) on hospitalized elderly who suffer from heart disease and depression during 6 months.15 patients have been included: all were more than 75 years old, have a coronary heart disease treated and a depression untreated. All have been included evaluated by the GDS ( Geriatric Depression Score), the MNA ( Mini nutritional Assesment ). Coronary accidents have been noticed at the entrance, 3 months and 6 months. Results:The GDS diminishes ( 48 % less at 6 months, p=0.005), less coronary heart disease and none at 6 months, no impact on the MNA No undesirable side effects with the antidepressant have been related. Conclusion:Has antidepressant an effect on the

incidence of coronary heart disease? A prospective study could help us to answer to this question.

**PB8 197 ETHNIC DIFFERENCE IN PREDICTED VALUES OF PULMONARY FUNCTION BY AGE GROUPS**

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Introduction: Predicted values of pulmonary function are used to define the range of expected values for a normal population. Knudson's equation derived from Caucasians is the current standard to estimate pulmonary normal predicted values, used not only in Caucasians but also in Asians. This study is conducted to assess the discrepancy in different age groups resulting from potential ethnic difference involved in pulmonary function equation. Methods and materials: Pulmonary function tests were performed in 509 Korean subjects (217 men; 292 women) aged 47 or older, within the KLoSA Biomarker Pilot study. Chronic lung disease patients were excluded. FVC and FEV1 tests using Micro Plus Spirometer(Micro Medical Ltd., Kent, UK) were conducted 3 times per person, and the maximum value was used. A new pulmonary function equation (KLoSA equation) was derived from our study population by regression analysis. Predicted values were compared between those based on KLoSA and Knudson equations. T-test was used to evaluate the difference for each group. Results: Predicted FEV1 was significantly lower by KLoSA equation than by Knudson's equation in all age and gender groups(overall mean: 2.15 vs. 2.89; p<0.01). In contrast, predicted FVC was significantly higher by KLoSA equation than by Knudson's equation in men aged 65-74 (mean: 3.16 vs. 2.96; p<0.01) and 75+ (mean: 2.87 vs. 2.60; p<0.01), and women aged 75+ (mean: 2.03 vs. 1.98; p<0.01). No significant difference were observed in other groups. Conclusion: This study suggests that the ethnic difference involved in the equations for predicted normal values of FVC may increase with aging. Utility of common and ethnicity-specific pulmonary predicted normal values should be balanced for the particular purpose of study.

**PB8 198 COGNITIVE FUNCTION AND FUNCTIONAL CAPACITY OF OLD PATIENTS WITH HIGH RISK FOR ATHEROSCLEROTIC DISEASE**

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Introduction: recent studies demonstrate the association of cognitive decline and the presence of risk factors for atherosclerotic cardiovascular disease. The objective of this study is to evaluate the evolution of cognition and functional capacity of old patients with high risk for cardiovascular atherosclerotic disease who attend to a public ambulatory. Methods and materials: in 99 elderly patients who attend to the Cardiovascular Risk Group of the Ambulatory of the Geriatric Discipline of Internal Medicine Department of Clinics Hospital of Medical School of São Paulo University the presence of risk factors (primary prevention) or clinical signs of atherosclerotic complications (secondary prevention) were evaluated. Cognitive function was assessed by Mini Mental State Test (MMST), and Hachinsky isquemic score, depressive mood by Geriatric Depression Scale (GDS) or DSM-IV criteria and functional capacity by Lawton and Katz scales (basic activities of daily living, ADL and instrumental activities of daily living, IADL). This evaluation was repeated every year. Results were compared by frequency tabulation or comparison of means by analysis of variance. Results: mean age was 74 years. Most patients were females (75,7%) and were in the secondary prevention group (53,53%). About educational level, only 12,12% were illiterate. Concerning risk factors, means body mass index (BMI) was 29,2 Kg/m<sup>2</sup>, 92,2% were hypertensives, 55,55% diabetic and 40,4% had inadequate lipid levels. Most elderly were submitted to two evaluations. Mean Hachinsky score was 2,9 for primary prevention group and 2,8 for secondary prevention group. Mean values of MMST did not vary on time (p=0,766) as did mean ADL (p=0,236). Mean IADL decreased with time (p=0,020, mean decrease was 0,20 by year). Conclusion: cognition and basic functions of daily living did not vary with time in this group, maybe because it's clinical control is focused on their particular needs. Patients lost functionality for more complex activities.

**PB8 199 DIFFERENCES IN SURVIVAL AND CLINICAL FEATURES OF PATIENTS DIAGNOSED WITH SYSTEMIC SCLEROSIS BEFORE AND AFTER THE AGE OF 65.**

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Objective: To analyze the differences in SSc clinical features and survival in patients aged 65 years or more compared with young SSc patients. Patients and methods: Of a total of

319 SSc patients, we identified 67 (21%) patients older than 65. Demographic data such as were SSc subsets, the cutaneous complaint, internal organ involvement and the causes of morbidity and mortality were collected. Results of the elderly and young patients were compared. Results: There were 61 (91%) women and 6 (9%) men aged 65 years or more. The limited SSc subset was more frequent in elderly than in young patients (74.6% vs. 54%, p=0.002). Pulmonary disease (86.6% in elderly vs. 73.8% in young, p=0.034), and cardiac involvement (70.1% in elderly vs. 49.6% in young, p= 0.004) were significantly more frequent in elderly patients. In contrast, esophageal affection (43.3% in elderly vs. 57.5% in young, p=0.040) was less frequent in aged patients. In addition, pulmonary and heart disease appeared significantly earlier after the diagnosis in patients aged 65 years or more. Mortality was significantly higher in elderly than in young patients (35.8% vs. 19%, p=0.005). The most frequent cause of death related to the disease in elderly patients was heart failure. Conclusion: In elderly patients the limited SSc subset is more frequent than the diffuse. Pulmonary and cardiac involvement are more frequent in aged patients and appears sooner after the disease diagnosis. SSc in advanced age is clearly related to a worse prognosis.

**PB8 200 PLASMA BNP HELPS RECOGNIZE CARDIAC FROM NON-CARDIAC ORIGIN OF LOWER LIMB EDEMA IN OLD PATIENTS**

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Background : Lower limb edema is a common condition in old patients. Diagnosing the causes of edema is sometimes difficult. Plasma BNP was found to recognize heart failure in old patients with acute dyspnoea. Objective : To improve the detection of heart failure in old patients with lower limb oedema. Methods : Sixty consecutive hospitalized patients with bilateral lower limb edema were included. Standard demographics, clinical and biological data were collected. The etiological diagnosis of lower limb oedema has been determined one of us using medical record analysis, patient examination and additional investigations (echocardiography, lower limb veins ultrasonography, plasma albumin determination) if not available in the medical record. At the same time, plasma BNP value has been measured. Final diagnosis were classified in three categories: edema from cardiac etiology (CE), venous etiology (VE), and other (OE). Patients with edema both venous and cardiac origin were considered as CE. Results : The patients comprised 9 men and 51 women aged 85.3 +/- 7.1 years. Systolic blood pressure was 126+20 mmHg/ and diastolic 71.7+/- 11.3 mmHg. Origin of edema was CE in 20 cases (33.3%), VE in 30 (50%) and OE in 10 (16.7%). BNP values expressed in pg/ml were: CE : 797 +/- 883; VE: 152 +/- 84; OE: 172 +/- 196, p=0.0002. Receiver operating curve showed that the BNP cutoff value of 306 pg/ml had a sensitivity of 0.71 and a specificity of 0.97 to determine cardiac origin of edema. Conclusion: BNP helps recognize the cardiac origin of lower limb edema in old patients, with a BNP cutoff value similar to that used to for the diagnosis of acute dyspnea in old patients.

**PB8 201 ORTHOSTATIC HYPOTENSION AND ELASTIC COMPRESSION STOCKINGS: CLINICAL DESCRIPTIVE AND COMPARATIVE STUDY.**

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Introduction. Orthostatic hypotension, its functional symptoms and its consequences are a frequent cause of consultation in general hospitals. Methods and materials. Prospective study to determine the prevalence of orthostatic hypotension (OH) in a cohort of 64 elderly patients hospitalized in an acute geriatric ward, to describe and compare a group with OH and a second one without OH, and to assess the interest of preventive or therapeutic of elastic compression stockings. Results. Prevalence of OH in our cohort was 48%. Our study revealed the involvement of antidepressants (p=.013), alpha-blockers (p=6.10-5), IEC (p=.016) in OH and to a lesser extent of diuretics (p=.095) and calcium channel blockers (p=.055). History of arrhythmia (p=.012), ischemic cardiopathy (p=.037), lung oedema (p=.044), diabetes (p=.031) and depressive syndrome (p=.025) predisposed to this pathology. Logistic regression analysis showed that the presence of anti-depressive therapy and history of heart failure appeared to be potential factors for the occurrence of OH (p=.063 and p=.082 respectively). Compression stocking allowed an improvement in functional symptoms of OH (p=.045) and a significant improvement in postprandial pressure loss (p=.001). But patients wearing compression stocking still matched OH criteria. It seems interesting to conduct a prospective study in the longer term to assess the interest of compression stocking on the prognosis for survival of patients with OH. Conclusion. A multidisciplinary approach should prevail in the elderly, often carrying multiple pathologies and risk factors, as well as awareness of the team testing of OH and his subjective symptoms.

**PB8 202 ELEVATED PLASMA FIBRIN D-DIMER AS A RISK FACTOR FOR VASCULAR DEMENTIA: THE THREE-CITY COHORT STUDY**

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Introduction: High plasma levels of haemostatic variables have been associated with the incidence of coronary heart disease and stroke. However, few studies have investigated these associations in elderly. Moreover, vascular factors might be involved in the pathogenesis of dementia. Data on the relationship between biomarkers of thrombotic process and the incidence of dementia remain scarce. Methods and materials: Using a case-cohort design within the Three-City Study, a French population-based prospective cohort of subjects aged 65 and more, we investigated the association of baseline levels of fibrinogen, D-dimers and von Willebrand Factor with the 4-year incidence of clinical manifestations of arterial disease (coronary heart disease (CHD, n=199), stroke (n=111) and of dementia (n=167 and 51, for Alzheimer's disease and vascular dementia, respectively). Measurements were performed for all subjects with incident events and for a stratified random sample of the entire cohort (n=1254). Tests for linear trend across quintiles of the parameters distribution were performed. Hazards ratios (HR) compared the last quintile with the first and were adjusted for traditional risk factors. Results: High levels of fibrinogen were significantly associated with increased risks of CHD and myocardial infarction (HR=2.16 and 2.44, respectively). We also found a positive association between high levels of D-dimer and prevalent strokes (n=53, age-adjusted p=0.01). Moreover, increased levels of D-dimer were significantly associated with CHD among younger subjects (aged under 75, HR=3.64) but not among older (p for interaction 0.01). Finally, the risk of vascular dementia increased significantly with D-dimer levels (HR=3.05). No significant association was found between von Willebrand Factor and any of the outcomes. Conclusion: In the elderly, elevated levels of fibrinogen and D-dimer were associated with incident arterial disease. In addition, this study suggests that high D-dimer levels, as a witness of coagulation activation, could represent a new risk factor for vascular dementia.

**PB8 203 PREDICTORS OF SURVIVAL AFTER CORONARY ARTERY BYPASS GRAFT IN YOUNG AND ELDERLY PATIENTS AFTER CARDIAC REHABILITATION**

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Introduction: We investigated the prognostic value on survival of distance walked in 6 min (6MWT), ejection fraction (EF) and change in distance walked between admission and discharge in 6 min ( $\Delta$  6MWT) in coronary artery bypass graft (CABG) patients admitted to cardiovascular rehabilitation (CR) and evaluate differences between young and elderly patients (< 65 and  $\geq$  65 years). Methods: We studied 882 patients consecutively enrolled from October 2000 to April 2004, who referred to our institution soon after CABG. A standardized echocardiography and 6MWT was performed at baseline and at discharge. All patients were followed up since April 2006. Results: Mean age of the 882 patients was  $63.8 \pm 8.9$  years, 48.9% with age  $\geq$  65 years. Mean EF was  $52.1 \pm 8.9$ , mean distance at 6MWT was  $303.7 \pm 103.4$  meters and mean  $\Delta$  6MWT was  $90.7 \pm 68.5$  meters. 83 patients (9.4%) died after a mean follow-up of 42.7 months. Cox regression analysis demonstrate that EF (HR= 0.952; 95% CI = 0.920-0.985; p=0.005) and 6MWT (HR = 0.997; 95% CI = 0.993-0.999; p=0.046) were predictive of mortality independently by the effect of age and  $\Delta$  6MWT. When patients were divided into two subgroups according to age (< 65 and  $\geq$  65 years), EF is predictive in the group of patients with age < 65 years (HR = 0.911; 95% CI = 0.864-0.960; p=0.001), while distance walked at baseline was predictive of mortality in patients with age  $\geq$  65 years (HR = 0.994; 95% CI = 0.988-0.999; p=0.040). Conclusion: EF and 6MWT provides independent prognostic information in CABG patients. Different results are observed between young and elderly patients. Different results are observed between young and elderly patients where 6MWT and no EF predicts survival.

**PB8 204 COLLABORATION BETWEEN A NURSING HOME AND A PSYCHO-GÉRIATRICS UNIT.**

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Background : Behavioral and Psychological Symptoms of Dementia are a reality in Nursing Home. Aim : Determine situations involving a transfer from Nursing Home to Psycho-Gériatrics Unit. Material and methodology : A retrospective study was conducted on patients transferred from Nursing Home to Psycho-Gériatrics during the year 2007. Gathered data were : age, sex, behavioral and psychological symptoms involving a transfer and its plausible etiology, underlying pathology, therapy changes and stay period. Results :

Nine patients were hospitalized during the year 2007, four women and five men. Their average year was 78 years old ( from 68 to 83). The average stay period is 16.4 days. The behavioral and psychological symptom responsible for hospitalization is physical and / or oral aggressiveness in all cases, the etiology most likely involved being an anxiety-depressive syndrome. Seven patients on the nine were presenting a severe dementia, the other two being psychotic. The psychoactive drugs administered are changed in all cases : six patients benefited a change in their anti-depressive treatment, five patients form a change in their neuroleptic drug treatment and three patients had a modification in their benzodiazepine drugs. Conclusion : In most cases, the nursing home are adapted for taking care of the behavioral and psychological symptoms. The aggressiveness, physical one particularly, remains hard to handle and often involves a transfer to specialized unit.

**PB8 205 UNDERTREATMENT OF DEPRESSION SYMPTOMS AMONG THE OLDEST OLD PATIENTS IN ONTARIO, CANADA**

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Introduction: Prevalence of depression decreases with age among elderly people. However, early recognition and appropriate treatment of depression remain a problem among the oldest of the elderly. Our study questions concerned: prevalence of symptoms of depression among older persons admitted to home care (HC) and Complex Continuing Care (CCC) hospitals, risk factors for depression related to those two types of services, rate of antidepressants use by elderly patients with depression. Methods and materials: 191,987 patients aged 65 and older were assessed: 114,497 enrolled to HC and 77,490 to CCC in Ontario province of Canada. Data was collected using RAI 2.0 (1996-2004) in CCC and RAI-HC (2003-2004) in HC. Model of risk factors for depression among elders was tested in logistic regression analysis to assess influence of those factors on depression occurrence. Afterwards, frequency of antidepressants use depending on patient's age and type of care was assessed. Results: Prevalence of depression symptoms among older HC-enrollees was lower (12.0%) than in CCC (23.6%). It decreased significantly with age in HC (to 6% in centenarians) and did not in CCC. Common risk factors for depression in both types of care were: moderate to severe dementia, instability of health, daily pain, ADL disability, high numbers of medicines and diseases, but advanced age lost its protective meaning in front of illness and disability of patients in CCC. Less than half of elderly enrollees in HC and CCC reporting symptoms of depression were treated with antidepressants. Moreover, use of antidepressants by those patients decreased with age in both types of care (from about 40% in persons aged 65-70 to 18% in centenarians). Conclusions: Undertreatment of depression in elderly persons remains a serious problem. Learning more about risk factors for depression among the oldest elderly might improve detection of its symptoms and accuracy of recognition.

**PB8 206 IS AGING JUST A DISEASE? COGNITION, FUNCTIONALITY AND SOCIO CULTURAL CONSIDERATIONS IN THE VERY OLD ELDERLY AND CENTENARIANS**

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Introduction: An increase in the elderly population does not necessarily widen our knowledge in the very old (older than 85 years old) and centenarians, when regional, social and cultural ageing matters, define their normal and pathological boundaries. This study aims to identify an integral functional and cognitive assessment of the very old and centenarians with and w/o Alzheimer's disease in a Colombian sample. Methods: A total of 95 subjects were included: 23 Young-Old (YO) and 14 Old-Old (OO) patients with Alzheimer's disease; 8 centenarians(C) and 50 normal subjects. Subjects were evaluated at the Memory Clinic of Hospital San Ignacio in Bogotá, Colombia, between 2000-2008. National Institute of Neurological Disorders and DSM-IV criteria were used to diagnose AD in case of cognitive impairment. Socio cultural dimension of patients and families were evaluated by examining daily and basic activities where normal and pathological functioning will be discussed through a qualitative analysis. A range of neuropsychological measures was compared among groups of patients diagnosed with Alzheimer's Disease (AD). Patients were classified as Young-Old (YO,  $\leq$  70 years), Old-Old (OO,  $\geq$  80 years) according to the NINCDS-ADRDA criteria for Probable Alzheimer's Disease, and were not depressed. Patients were matched for age with a group of normal controls, also without evidence of depression (Yesavage Geriatric Depression Scale  $\leq$  5) and MMSE  $\geq$  24. All groups were matched for gender and education. Results: A statistically significant ( $p<0.01$ ) difference was observed in all measures, where different profiles emerged: through a description of Mild Cognitive Impairment as well as mild Alzheimer's disease in young old, very old and centenarians subjects, deep analysis will support adaptations based on

critical analysis of the traditional instruments, the paradigms that endorse them, as well as a proposal of other alternatives when interpreting ageing in the very old.

**PB8 207 IMPROVING PSYCHIATRIC CARE OF OLDER MEDICAL INPATIENTS: TWO-YEAR EXPERIENCE WITH A SPECIAL INTEGRATED MEDICAL-PSYCHIATRIC UNIT**

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**Objectives:** Psychiatric co-morbidity is common in geriatric patients hospitalized for somatic conditions, and is associated with an increase in adverse outcomes and a longer length of stay. In order to address this issue, we developed a special 8-bed medical-psychiatric unit in our Geriatrics Hospital. **Methods:** Admission criteria include the presence of a somatic disorder associated with an acute psychiatric disorder. Individuals with significant cognitive impairment or who require involuntary admission to a psychiatric institution are excluded. The geriatric multidisciplinary team is reinforced by two full-time nurses specialized in psychiatric care and a part-time senior psychiatrist. Geriatric and psychiatric multidisciplinary care is provided. This descriptive study evaluates the first two-year experience with this unit. **Results:** 180 patients were admitted in 2007 and 2008. Mean (32) and median (27) length of stay in days were similar to that of other units. Sixty-four percent of patients returned home and 4.5% were admitted in a nursing home, 14.5% were transferred to a psychiatric unit and 14% to a long-term care unit. Five patients (3%) died. Most frequent psychiatric diagnoses included depressive disorders, substance-related disorders, anxiety disorders, bipolar disorders, and personality disorders. **Conclusions:** This first two-year evaluation indicates that this new unit is well integrated in our geriatric hospital setting. Early positive outcomes including the fact that the length of stay is comparable to other units are encouraging. However, further evaluation of this model of care is warranted before this approach can be generalised to multiple acute care settings.

**PB8 208 THE HOSPITALIZED OLDER PERSON EDUCATION CURRICULUM H.O.P.E SUPPORTED BY THE EDUCATION DEVELOPMENT FUND**

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**Background** The Hospitalized Older Person Education curriculum (H.O.P.E.) engaged five trainees in the Hospitalist Training Program to develop improved knowledge, skills and attitudes in caring for hospitalized older adults. These trainees include four International Medical Graduate students and one University of Toronto Family Medicine resident. The core competencies of the Society of Hospital Medicine are included in this curriculum, as they are incorporated in the H.O.P.E. curriculum within the different teaching sessions and curriculum content objectives. This evidence-based geriatric curriculum for hospitalists was designed, developed, implemented and evaluated with the goal of enhancing practice and patient safety within the current hospitalist curriculum. **Methodology** An assessment of educational needs was obtained from multiple choice pre-test questions as well as attitude surveys. Each trainee was assigned a presentation and covered the following topics: Dementia/Depression, Falls and Least Restraints, Incontinence, Polypharmacy and Pharmacokinetic Changes with Aging and End of Life Care. Two Sunnybrook Health Sciences' Centre staff geriatricians taught the following topics: Comprehensive Geriatric assessment, Delirium and Hazards of Hospitalization and Patient Safety and End of Life Care. Wound care was taught by a staff family physician. Peer and instructor evaluations from each teaching sessions were collected. Two quality improvement projects have been initiated to assist in improving care of hospitalized older adults. A post test knowledge, attitude, and skills survey along with a focus group survey will be implemented. **Results** The trainee's specialization included; Family Medicine, Geriatric medicine, Cardiology and General Internal Medicine. The result of the pre-test illustrates significant knowledge deficits in the area of care of the hospitalized older adults. The average score on the pre-test was a score of 17/29 (57%) with the highest score being 22/29 (76%) and the lowest score being 11/29 (38%). Conclusion International Medical Graduates and recent Family Medicine residents can successfully engage in an evidence-based hospitalist geriatric curriculum that is highly relevant to their work and effectively teach each other.

**PB8 209 GALANTAMINE IN THE TREATMENT OF MINOR DEPRESSION WITH MILD TO MODERATE ALZHEIMER**

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**Introduction:** This is a case report where minor depression features in an Alzheimer's dementia patient, responded very well to Galantamine therapy alone. **Case Report:** A 80 year old female presented with a two year history of cognitive decline and eight months history of minor depression. Depression features include decreased interest in social activities, less energetic, psychomotor slowing and was more withdrawn and lonely. Sleep and appetite was good. Met only three out of the nine features of the DSMIV criteria for

major depression. GDS score was 11/30. Cornell Scale score for depression in dementia was 13. MMSE score was 22/30 and met the DSM IV criteria for Alzheimer's Dementia. CT scan of the brain revealed generalized atrophy. Patient was started on Galantamine 8 mg orally twice a day and subsequently increased to 16 mg orally twice a day after four weeks. Patient's minor depression features responded very well to Galantamine therapy alone in two months. **Discussion:** Depression is seen in 15- 20% of Alzheimer's dementia patients. In Alzheimer's Dementia , mild to moderate depression may manifest as new onset of agitation, apathy, insomnia or change in functional status. Depressive symptoms in dementia should be viewed as a cause of significant and excess disability. Depression is associated with multiple neurotransmitter defects like serotonin, dopamine and acetylcholine. Galantamine is an acetylcholinesterase inhibitor, and an allosteric modulator of nicotinic acetylcholine receptor and is mainly used in the treatment of dementia. Studies suggest Galantamine in addition to mediating cholinergic neurotransmission also by nicotinic acetylcholine receptors may influence several other neurotransmitter systems, possibly modulating the activity of serotonin, dopamine, glutamate and gammaaminobutyric acid in certain nerve tracts. So it is possible that Galantamine, a cholinesterase inhibitor used in the treatment of dementia may also have some anti-depressant effect.

**PB8 210 COGNITIVE IMPROVEMENT IN PATIENT WITH INCIPENT DEMENTIA AND NEW SERTRALIN TREATMENT**

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In this case study we describe 82 years old patient with dementia of combined origine (vascular and Alzhaimer type). She was admitted in nursing home for behavioral changes and disability which resulted in impossibility to stay home alone. In admission, MMSE was 25, ADL test was 65%. GDS was normal, but the patient felt anxiety for live in nursing home. That was the reason for sertraline treatment, the daily dose added to 100mg daily in one month. After two months the patient felt better, started rehabilitation and ergotherapy, but there was no difference in ADL-related vitality. MMSE after 3 months was 27, after 6 months 30. In this time, there was no behavioral changes seemd. Patient was dismissed home. After two years, she still lives home. Her daughter refers occasionally night fuzziness. MMSE is now 25. CT prooved Alzhaimer type changes in combination with postischemical changes. We started donepezil treatment in dose 50mg per day, sertraline therapy continues. Conclusion: Depresiv syndrom can significantly lower life quality in geriatric patients. Relation between depresion and ADL and MMSE tests results is not yet clear. In case of coincidency of depresion, behavioral changes, cognitive and self-sufficiency impairment, the successfull treatment of depresion can lead to overall improvement. In consequence, MMSE normalization should be seemd.

**PB8 211 DEPRESSION, SELF-RATED HEALTH STATUS AND DISABILITY: THE EUROPEAN STUDY ON ADULT WELL-BEING (ESAW)**

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**Introduction:** Depression was the leading cause of disability, as measured by years lived with a disability in 2000, and will be ranked second worldwide for all ages and both sexes by 2020, according to WHO projections. This complex condition is particularly frequent in older persons, although it is not a necessarily part of usual aging with many seniors being satisfied with their lives despite the challenge of growing old. The self-rated health status (SRHS) is a key determinant of quality of life and it may be a consequence and/or a source of depression. We aimed to examine the relationship of SRHS and depression symptoms according to age, sex and area of residency (urban vs. rural) among participants of the ESAW. **Subjects and Methods:** The ESAW was designed to evidence the main determinants of successful ageing analyzing social support, health status, emotional well being, and financial resources in a population sample (n=12432; age range: 50 to 89 years, 5687 men and 6745 women) from five European countries (Austria, Italy, Luxembourg, Nederland, UK) by means of a detailed questionnaire performed by trained personal. Preliminary results suggested a large variability of SRHS among the countries studied. The questions included in the analysis evaluated the presence of diseases, number of drugs used, ADL, IADL, quality of life, emotional status, and SRHS. **Results:** We observed significant differences in SRHS and depression symptoms from participants living in urban areas vs. those living in rural areas in the total sample, specially among women. After adjustment for age and sex, there was a significant relationship between functional status, depression symptoms, and SRHS. **Conclusion:** In this European sample, negative SRHS may be an indicator of clinical or subclinical depression, which is more prevalent in urban vs. rural areas.

**PB8 212 PREVALENCE OF DEPRESSION IN BEDRID ELDERLY IN MACEIÓ, ALAGOAS, BRAZIL**

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The objective of this study was to determine the prevalence of depression in bedrid elderly. A cross-sectional descriptive study was conducted January through December 2008, with

elders at the age of 60 and older who have been registered in Elderly Domiciliary Care Service , Maceió, Alagoas, Brazil. The sample includes 75 patients, who were distributed into age ranges, with intervals of 5 years. The Yesavage's Geriatric Depression Scale was utilized. Variance analysis were made among the groups, along with square qui test, in terms of confidence interval (95%). Female predominance was observed (73,7%), the majority of them was between 85 and 90 years (26,31%). Depression was found in 19 elders (25,3%). Thus, the prevalence of depression is important (25,3%), loss of autonomy and dependence are strongly associated with Organic Brain Syndrome.

**PB8 213 IS DEPRESSIVE SYMPTOMS AS A BARRIER TO PARTICIPATION IN PHYSICAL ACTIVITY AMONG OLDER PEOPLE?**

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Introduction: Despite the recognition that physical activity has a beneficial role in health and longevity, sedentary behavior is increasing particularly with age. Physical inactivity is also prevalent among depressed people. Therefore, older people, especially those with depression are at increased risk of a sedentary lifestyle. Identifying the barriers to and facilitators of physical activity among older members of the population is important to inform the development of strategies for physical activity promotion. Some qualitative studies have investigated the barriers and facilitators to physical activity among older people. However, no study investigated the barriers and facilitators to participation in physical activity among older people with depressive symptoms. Methods and Materials: This study was a qualitative study that aimed to further explore the barriers and facilitators to participation in physical activity among community-dwelling sedentary older people with depressive symptoms. This study was a qualitative study. The participants were 12 older people with depressive symptoms who participated in a Randomized Controlled Trial. Data collection was conducted through face-to-face in-depth interviews. Data was analyzed using NVIVO 7 Software. Results: The findings suggest health problems and pain are the main barriers to participation in physical activity among older people with depressive symptoms. Generally, different personal, social and environmental factors may stop or motivate older people from engaging in regular physical activity. Conclusion: Although depression did not emerge as a major barrier to participation in physical activity for the participants in this study, it may still be a possible barrier to physical activity for some individuals.

**PB8 214 DEPRESSION AND ONSET OF CARDIOVASCULAR EVENTS: MODIFICATION BY DISABILITY OR INACTIVITY**

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Introduction: Recent research suggests physical activity is a primary pathway linking depression and cardiovascular events. We investigated whether physical inactivity or limitations in activities of daily living (ADLs) modified the relationship between depressive symptoms and first stroke or myocardial infarction (MI) incidence. Methods and materials: Health and Retirement Study participants age 50+ who reported no prior stroke or MI were followed on average 8.2 years (n=19,547). We used Cox proportional hazards models to assess the hazard ratio (HR) associated with elevated depressive symptoms (3+ items on an 8-item Centers for Epidemiologic Study of the Elderly scale) for onset of MI (1,843 events) or stroke (1,707 events). Baseline disability (1+ ADL limitation) and physical inactivity (participation in vigorous physical activity <3 times/week) were examined as potential modifiers using both stratification and interaction terms. Covariates included age, sex, race, own and parental socioeconomic status, marital status, alcohol use, and smoking; supplementary models were adjusted for self-reported hypertension, diabetes or heart disease diagnoses. Results: Baseline depressive symptom elevation was associated with a 36% increase in the hazard of onset of first stroke or MI (95% CI: 1.23-1.51). The HR was similar among the inactive (1.34; 1.20-1.51) and active (1.37; 1.09-1.71). The interaction between inactivity and baseline depression was non-significant ( $p=0.91$ ). Among those with no baseline ADL limitations the HR was 1.37 (1.21-1.54), but depressive symptoms did not predict onset of cardiovascular events among those with 1+ ADL limitation (HR=1.13; 0.93-1.37). The interaction between disability and depression was marginally significant ( $p=0.07$ ). Additional adjustment for comorbidities did not change the pattern of results. Conclusion: Depressive symptoms predict cardiovascular events in both the active and inactive, but the association was attenuated among individuals with ADL limitations. Research should explore whether ADL disability and depression trigger common pathways that increase risk of stroke or MI.

**PB8 215 HOW GOOD ARE WE AT PREDICTING DEATH ON ELDERLY CARE WARDS?**

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Introduction Various algorithms have been developed to ensure that patients that are dying receive optimum therapy. Within the UK the Liverpool Care of the Dying Pathway (LCDP) is frequently used. In order to ensure the optimum care of all elderly patients within the last days of life, this or similar pathways should be introduced at time when clinicians agree that further active therapy is futile and that the patient should be treated with palliative intent. Methods and Materials During a two month period on a 135 bedded elderly care unit a retrospective study was undertaken of all patients who had died. All notes were scrutinised by a Consultant and a Registrar in Geriatric Medicine and a Palliative Care Specialist Nurse. Results 33 patients were identified (mean age 85 years). Eleven died within 72 hours of admission and the remainder had been inpatients for 3-45 days. In 73% of patients, three days prior to death the patient was considered to be declining and death could be predicted for >90% within the last 24 hours of life. A combination of chronic health status (69%) and severity of conditions on admission (53%) as well as failure to progress despite intensive intervention (56) were the reasons for a patients predicted death. In 97% of patients there was no cancer present. Although clinicians could retrospectively identify those patients who were dying they had not been started on the LCDP. Conclusions Although the LCDP is well documented to support patients, their families and healthcare professionals during the last days of life there is a reluctance of staff to introduce the pathway even when death is predictable. Further work needs to be undertaken to identify barriers which result in patients being actively treated despite deterioration and not having a diagnosis of cancer.

**PB8 216 DIFFICULTIES IN THE DESIGNATION OF THE RELIABLE PERSON IN GERIATRICS AND PALLIATIVE CARE**

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Introduction Six years after defining the reliable person and his aim by the law of March, 4th 2002, twice a week a regular evaluation of medical records of patients hospitalized in our unit for 14 months pinpoints difficulties for in getting the information needed. The reliable person is legally appointed for every hospitalized patient to assist him, especially when that person is "fragile". The reliable person helps the patient in his relationships with the doctors to express his will when there is a communication disability. The law of April, 22nd, 2007 about the end of life reinforces this reliable person's role. In France, his opinion is one of advice and prevails against the families'. European or North American legislations include similar directives. Materials and methods 408 medical records of patients hospitalized in 2008 have been analysed. Several groups according their ages were compared: patients older than 65 in follow-care (227) and palliative care units (124) and the group of younger patients in palliative care unit (57). Results The questioning to appoint the reliable person is provided in 80% of cases, for this interviewed population. Finally, the information is available only in 40% cases. The obstacles in naming this person are analysed in the different groups. Conclusion The designation of the reliable person by older patients appears to be limited by the pathologies affecting the comprehension and the expression. This research has to be repeated during the hospitalisation, the pathologies being fluctuant or reversible. A better information concerning the law must be given to the elderly. The training for the nurses which provide this questioning and a regular information towards the whole health care personal appears to be a necessity.

**PB8 217 DEBRECEN LONGEVITY STUDY I. THE HEMORHEOLOGICAL STATUS IN OLDEST OLD RESIDENTS**

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Introduction: Among the elderly population the number and proportion of the oldest-old (defined as age 90 years or older) will increase most significantly in the near future. Since there was no similar study on this target group in Hungary, we decided to make a systemic analysis of the social, clinical and biological conditions of them under this title: Debrecen Longevity Study. Debrecen is the second largest city in the country, and the oldest old residents represent 0.4 % of the total population (834 residents). Methods: The probands were examined in their homes with an interview, based on a questionnaire which contained questions about their nutrition, health status, physical activity, etc. After the interview medical and laboratory investigation were performed in order to evaluate the general health status of the subjects. We examined 52 routine laboratory parameters. Since age-specific reference values are not available for the oldest-old persons neither in clinical practice, nor

in the scientific literature, our results could be compared only to the general, adult reference values. Results: Blood samples were obtained from 304 persons (228 women, 76 men) randomly selected from the total oldest-old population. Most of the investigated parameters were in the normal range. The alterations were not extreme, but they were statistically significant. We compared these results with our earlier laboratory screening test (completed in 2001) of Debrecen residents between 60-74 and 75-89 years respectively. Thus we had the opportunity to compare three age groups. We have experienced significant decreasing trends at cholesterol and triglyceride levels, while there is an increasing trend at HDL-cholesterol level. Conclusions: During aging the population becomes increasingly selected, namely over 90 years only the "survivors" are alive. As the proportion of „survivors" increases, some parameters stop worsening or even show some improvement.

**PB8 218 USE OF PALLIATIVE CARE AT THE END OF LIFE AMONG VERY OLD PATIENTS IN BELGIUM**

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Introduction: About half of the persons who die in developed countries are very old (aged 85 years or older). In general, there is little information available concerning the circumstances surrounding death of this group and the care received at the end of life. This study aims to describe how often very old patients of whom death is expected by their general practitioner use a specialist multidisciplinary palliative care team in Belgium, and to compare this with younger patients. Methods: We performed a mortality follow-back study in 2005 (Sentinel Network Monitoring End-of-Life Care [SENTI-MELC] study). Data were collected via the nationwide Sentinel Network of General Practitioners, an epidemiological surveillance system representative of all Belgian GPs. Each week, all 205 participating practices reported all deaths of patients in their practice. Sudden, unexpected deaths were excluded. Results: We studied 892 deaths, representative for Belgium. Specialist multidisciplinary palliative care services were provided in 41% of all cases. Patients older than 85 years of age at death used these services in 27% of cases, compared with 46% of patients younger than 85 ( $p<.001$ ). In a multivariate logistics regression analysis controlling for possible differences in sex, cause of death, educational level, estimated financial status, place of death, urbanization degree of place of residence, and region of Belgium, older patients had a 1.02 times (95% CI 1.01 to 1.03) lower chance of dying while using these multidisciplinary teams than younger patients. Conclusions: Although other studies have shown that palliative care needs are often very high among very old patients, this group uses multidisciplinary palliative care less often than younger patients in Belgium. This might be the result of a lower accessibility of these services for older patients, but might also be related to a lack of recognition of very old patients' needs at the end of life.

**PB8 219 CHANGING CULTURES IN CARE CHOMES TO ENABLE GOOD END OF LIFE CARE**

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Death and dying is a constant presence in the life and work of care homes. Almost everyone who enters a Home will after an average stay of around 16 months (nursing) or 28 months (social care), die there. The care home is therefore the setting of the last major event of each resident's life. In the UK 80% of all deaths are of people over 65 and 1 in 5 of them take place in or from a care home. Common practice, until very recently has been to send dying residents with any kind of complications (respiratory difficulties or physical pain) to hospital - to die. Almost everyone close to death needs to talk about and be helped with "last things"; whether these are the practicalities of funerals and memorials or more spiritual issues. Staff need to learn the skills to listen and appropriately respond Pain in late life is as likely to be 'biographical pain' as physical or spiritual. Such pain(s) needs to be skilfully and sensitively addressed. At the far end of life, palliative care skills are essential, but they need to be integrated into a broader end of life care for the whole person. Training needs to be appropriate to care homes, not models made and adapted from other settingsCare homes need to recognize that "death is our business". Biographical reflection is the endemic preoccupation of old age. For some, all memories are golden. But my own research, strongly indicates that life review is usually painful and often deeply anguished -a circumstance I call 'biographical pain'. Being willing to and being capable of listening nonjudgmentally to troubled life stories should be a central task for care staff. But they can only do this with proper training that includes non judgmental listening and appropriate, safe, responses.

**PB8 220 THE**

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The process of dying can be experienced in different ways by each individual, depending on the socio-historical and cultural environment in which they are in. Currently, death is no longer considered a natural phenomenon but it is characterized as failure, impotence or incompetence and being hospitals responsibility.The palliative care is a new approach in

dealing with the process of dying and death itself. Due to proximity and coexistence, the family is better able to monitor the process of health-disease-death of its members. Matherial and Methods: This study is a qualitative research, using interview that took place at diverse family caregivers homes. The objective was to identify and analyze the meanings of the process of dying of nine family caregivers. Results:According to the data obtained the feelings toward the care were: warmth, affection, bonus, sadness, discomfort and worry/anxiety. The feelings toward the process of dying and death were: denial and acceptance of death. Among the difficulties found during the caring process we could mention: lack of technical knowledge, emotional disorders, physical and financial difficulties. Most of the caregivers showed changes in his personal life after having assumed that role. Some interviewees had hope of cure for the patient, while others seem conformed with the situation. In the face of all this, we found that the sources of support that caregivers seek to address the situation include: formal and informal social support, and spiritual support. Discussion: The data revealed that the presence of chronic diseases that lead the elderly in need of palliative care imposes on family caregivers a series of complex and ambivalent feelings. The proximity and inevitability of death of family members collaborate to intensify these feelings, but also allow caregivers to deal with it in a better way.

**PB8 221 MANAGEMENT OF PRESSURE SORES AMONG JUNIOR DOCTORS**

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Pressure sores form an important part in the assessment of the frail elderly patient and contribute to morbidity and mortality. However, doctors often do not take into account pressure sores in the comprehensive management of these patients, leading to their detriment Aim: To evaluate the utilisation of pressure sore documentation among the junior doctors Methods: Doctors who qualified in the past two years, were invited to complete a questionnaire. Results: Twenty five doctors responded, out of a total of about 30 in a district hospital in UK. Majority were medical or surgical. Only one (4 %) regularly examined for pressure sores. When asked, whose responsibility was assessment of pressure sores was, 19 (76 %) said that it was all professionals. Sixty eight percent knew that it was the nurses who documented, while most of the others were not sure. Thirty two percent knew where in the documentation, to look for pressure sore information. Only fifty two percent said the pressure sores influenced the management of patients Conclusion: While most doctors, felt that pressure sore assessments were the duty of all involved professional, very few actually looked for it. Most knew that it was the nurses who documented pressure sores, but a majority did not know where to find it Recommendations Doctor, especially in the most formative years, should be educated about the importance of pressure sores and that this assessment should form a part of the comprehensive geriatric assessments.

**PB8 222 FALL RECORDS IN PERSONS WITH DEMENTIA: A COMPARISON OF DIFFERENT RECALL PERIODS**

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Introduction: The Prevention of Falls Network Europe working group recommends fall recording by combination of a daily prospective method (e.g. fall calendars) with monthly telephone calls (Lamb, 2005). However, is this applicable for persons with dementia? Methods: In a RCT (n=122) on physical training in people with dementia ( $83 \pm 7$  years, MMSE  $22 \pm 3$ ) falls were recorded using five methods: face-to-face interview during practice, phone interview with participants (weekly during 12 week training, monthly during 9 months follow-up), prospective recording by monthly calendar, telephone interview with proxy and GP. Results: The analysis covers six months of fall recording and includes 110 participants (4 deceased, 8 refused). Comparing the three months of weekly phone calls to the three months of monthly phone calls shows a significant decrease in the number of recorded falls even after having excluded falls only registered by face-to-face-interview during practice (85 vs. 56,  $p=0.005$ , Wilcoxon signed-rank test). However, there is no significant difference in recorded falls by calendars (37 vs. 35,  $p=0.55$ ), proxy-interview (36 vs. 38,  $p=0.95$ ) or GP-interview (13 vs. 10,  $p=0.71$ ). The decreased number of reported falls in participant-interviews (56 vs. 23,  $p=0.002$ ) accounts for the difference. Such a considerable decrease in falls after the training intervention seems improbable since we could not register a difference comparing the intervention group with the control group. Furthermore, the number of recorded falls has not changed in any of the other methods. Thus, we presume this difference does not reflect a real decrease in suffered falls but rather the methodological issue of length of recall period. Conclusions: The number of recorded falls in this cohort of persons with dementia is significantly decreased by extending the recall period from one week to one month. Therefore, the Profane-Recommendation has to be re-evaluated for persons with dementia.

**PB8 223 DEVELOPMENT OF AN ALLIED HEALTH PROFESSIONAL (AHP) NEEDS ASSESSMENT TOOL**

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**Introduction:** Allied health professionals play a key role in comprehensive geriatric assessment. Currently, physiotherapy (PT) and occupational therapy (OT) interventions for older people are not always provided on a needs-related basis. **Aim:** To pilot a tool to assess the AHP resource needs in different types of Geriatric Medicine wards and to inform therapy service provision. **Methods:** Over one day, independent therapists used a specifically designed needs assessment tool to interview members of the multi-disciplinary team on six geriatric wards across three acute hospitals. This included geriatric assessment and specialist rehabilitation wards. This entire process was repeated one week later. **Results:** 277 patients in total with mean age of 82 years. Two thirds were female (no difference between ward types). Median lengths of stay were 11 days (assessment) and 37 days (rehabilitation). The resource needs assessment tool revealed the following: For assessment ward patients, >57% (median 62%) required PT and >42% (median 50%) required OT. Needs were higher for rehabilitation ward patients; >72% (median 83%) required PT and >71% (median 81%) required OT. The specialist geriatric orthopaedic rehabilitation unit had the highest requirements of all. There were marked variations in therapy requirement from one week to the next even within the same ward. Total hours of therapy required ranged from 30-128 hours per week for PT and from 13-127 hours per week for OT. The majority of patients requiring PT need one or more sessions of PT per day. Most OT can be delivered with less frequent input. All ward types had a deficit between patients' weekday therapy requirements and current provision. **Conclusion:** Building flexibility into in-patient therapy provision for older people is challenging. A needs assessment tool has identified resource deficits and highlighted inter and intra ward variability. **Comment:** This tool is now being used to inform service re-design.

**PB8 224 EVALUATION OF THE OUTCOME OF PERSONS AFTER A SEVERE TRAUMATIC BRAIN INJURY AT 60 YEARS AND MORE.**

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**Introduction** The morbi-mortality and the load in care to elderly having had a serious traumatic brain injury (TBI), which is frequent consequence of falls over 60 years and more, is little studied (morbidity, taken care by care, care givers' burden, etc.) **Methods and materials** Objectives : To study the care before and after hospitalization and one year after the accident in order to evaluate the outcome of TBI aged 60 years and more. **Materials :** The functional outcomes of survivors was assessed with the GOS-E test ; the behavior troubles were assessed with the DEX. The burden of the care givers was assessed with the Zarit test and their quality of life with the MOS SF-36. Results Studied population : 121 persons aged 60 and more. The TBI is often isolated. It is mainly masculine and, in most cases, is consecutive to falls. Most of the TBI (79%) get in a « grande garde de neurochirurgie » hospital and 34% are admitted in a service of one of these hospitals ; 40% of the elderly only pass on one hospital service. Among them, 21% had an intracranial pressure (IP) monitoring. At last, 55% of the living people got into a re-education service. The functional outcome of the survivors is rather unfavourable (average : GOS-E=4/8) and they present behavioral troubles (DEX=21,3/80). The burden of care givers is less important than foreseen (21/88) and the quality of life is slightly altered (40,9/100). **Conclusion** As a health problem, the TBI the elderly deserves more prevention, information and care.

**PB8 225 CORRELATES OF HEALTH-RELATED QUALITY OF LIFE OF OLDER ADULTS SEEKING SERVICES FOR VISUAL IMPAIRMENT**

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**INTRODUCTION:** Health-related quality of life (HRQOL) is a key outcome measure in health research and interventions. Visual impairment, a frequent reported disability among older adults, has a major impact on someone life and potentially on HRQOL. However, few studies explored the correlates of HRQOL of visually impaired older adults. The purpose of this study was (1) to document HRQOL of visually impaired older adults seeking rehabilitation services and (2) to explore the determinants of their HRQOL. **METHODS:** A convenience sample of 64 participants with visual impairment (mean=79.3 years, sd=5.9 years) were recruited at a specialized low vision center in Québec, Canada. Health-related quality of life was measured with the Visual Function Questionnaire-25 (VFQ-25). The potential correlates were: sociodemographic and clinical characteristics including depressive symptoms (Geriatric Depression Scale/GDS-15), level of and satisfaction with participation (Assessment of Life Habits/LIFE-H), perceived activity level and use of technical aids. Correlations of these potential determinants with HRQOL were examined, followed by multiple linear regression analysis. **RESULTS:** The participants had lower HRQOL than normative data from older adults. The vision-specific subscales (near and distance vision) and two psychosocial subscales (mental health and role difficulties) presented the lowest scores. The VFQ-25 was mostly correlated with the GDS-15 and the LIFE-H. Greater level of participation in social roles, higher perceived activity level, use of writing aids and greater satisfaction with participation in social roles, together, were the best correlates to explain better HRQOL ( $R^2 = 0.66$ ;  $p < 0.001$ ). **CONCLUSIONS:** Health-related quality of life of older adults with visual impairment is lower than the general population and is mainly explained by participation in social roles,

perceived activity level and use of technical aids. Vision rehabilitation specialists should be aware that participation correlates are important for HRQOL of this population and should address this aspect in their interventions.

**PB8 226 STANDARD GERIATRIC ASSESSMENT IN A GERIATRIC WARD**

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**Introduction** The population of Hungary is getting older similarly to the world. The majority of them suffers from multimorbidity and need hospitalization. Patients and methods Since there is no proper data of health state of elderly patients in our region we made a geriatric assessment among our randomly selected patients over 65 years. We processed the data of 368 patients (249 female and 119 male) accepted from their home to our ward as acute cases hospitalized between 2005 – 2008. We used the standard geriatric assessment questionair. Results Over the age of 65 almost all of the patients are still able for independent daily living. The decrease of independence continuously grows with age. Elderly patients tend to use less instruments, they could learn fewer new things. By the scale of the instrumental activities of daily living a large part of the elderly can hardly live without help. Tinetti's balance and gait examination shows that advancing in age the risk of falling increases gradually, the chance of falling reached 100 % at the age of 95+. Fractures happened over the age of 65 was increaseda gradually and reached 100 % at the age of 95+. The nutritional status was estimated with the help of the MNA. It showed, that 60-70% of them has a high risk of malnutrition. Nearly 40-50% of the patients suffer from moderate depression. The prevalence of a serious depression shows a slight increase with advance in life-years. With the help of MMSE we assessed the degree of dementia. In the age between 75 and 80 ages in 2% we noticed serious, in 5% medium, and in 23% moderate dementia. Conclusion We conclude that, our elder patients are in need of more help, care, solicitude. Furthermore all of these examinations helped us in proper diagnosis, careful treatment.

**PB8 227 TREATMENT OF OSTEOPOROTIC VERTEBRAL FRACTURES BY KYPHOPLASTY**

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**OBJECTIVE:** A retrospective clinical and radiological study of patients with vertebral osteoporotic fracture treated by kyphoplasty procedure at a San Carlos Hospital center of Madrid. **MATERIALS AND METHODS.** 104 patients were reviewed (136 vertebrae) between December 2002 to September 2007. Mean age: 71 years. The etiological cause was osteoporotic fracture in all cases. Mean follow-up was 22 months. Pain reduction was assessed by means of the Visual Analog Sacale (VAS), the Karnofsky score and the amount of analgesia used before the procedure and during the follow-up. Pre and postoperative endplate angles were measured to assess the restoration of the sagital alignment. **RESULTS.** A 91 % of the patients improved (97 cases). Mean VAS increased by 5 points (8,45 preop to 3,65 postop). Karnofsky score went from 70 to 87 points. Patients using major opioid went from 54% before surgery to 6% postoperatively. Radiological improvement obtained was 9,8° Coob´s angle (range 0° to 35°). There were 6 anterolateral extravasation, all of them asymptomatic. Two adjacent fractures were detected (both in the first three month postop). **CONCLUSION:** Most cases show a significant improvement whit no associated complications. Kyphoplasty cement augmentation has been a safe and effective method in the treatment of symptomatic vertebral osteoporotic compression fractures (VCFs).

**PB8 228 EVERYDAY PHYSICAL ACTIVITIES AND SPORTS ACTIVITIES IN OLD AND VERY OLD AGE – RESULTS FROM A COMMUNITY STUDY**

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**Introduction:** Although regular physical activity is essential for healthy aging, only a minority of elderly meet established recommendations. One reason might be that many studies only consider sports activities and ignore everyday physical activities with health enhancing effects. In addition, individuals above age 80 are rarely investigated. **Methods and materials:** Physical activity was assessed through a translated and modified version of the CHAMPS questionnaire to fit the needs of a German sample. With this instrument it was possible to distinguish between physical activity as everyday activities (e.g. gardening) and physical activity as sports activities (e.g. swimming). This questionnaire was mailed to 1002 senior citizens of the city of Heidelberg aged 65 to 94 years in June 2008. The response rate was 35 % for men and 25 % for women. **Results:** Considering only activities with MET values of 3 or above revealed that (1) 15 % of the elderly were sedentary, (2) more than 80 % performed at least one activity (MET  $\geq 3$ ) till the end of the ninth decade, (3) education and income had no effect while morbidity influenced the activity level. More important, (4) about 20 % of the women aged 65-79 reached the recommendations of the American College of Sports Medicine and the American Heart Association by everyday physical activities while only 10 % reached them by sports activities. This effect was less

pronounced in men. Beyond age 80 both kinds of activities strongly declined in women while the activity level of men remained rather stable. Conclusion: Evaluation of only sports activities in the elderly might lead to an underestimation of their actual physical activity level, especially for young old women. Interventions to increase physical activity in the elderly should include everyday activities.

**PB8 229 USEFULNESS OF COMPREHENSIVE GERIATRIC ASSESSMENT (CGA) TO IDENTIFY CARE NECESSITIES OF PATIENTS ADMITTED TO A HOME PROGRAM**

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Introduction: CGA is useful for home care teams in the task of prevention of functional decline and admissions to long term care facilities. The objective of our study is to use CGA to define care necessities of a group of patients with chronic illness admitted for home intervention and follow up. Methods and materials: CGA tools at admission -Lawton Index (LI), Barthel Index (BI), MMSE Folstein Index, Charlson Index (CI) and number of main geriatric syndromes and other related health conditions (NGSOC)- were used for a multidimensional assessment of all patients referred to a new home care service. Results: We analized 99 patients admitted consecutively during six months (age 83.0±7.4, female 60.6%). We defined 3 groups: co morbidity (previously independent to instrumental and basic activities of daily living (ADL) patients, main diagnosis COPD, 19%); frail (previously independent to basic ADL patients, main diagnosis heart failure and femur fracture, 41%); and geriatric (previously dependent to basic ADL patients, main diagnosis dementia, 39%). CGA at admission of each group found: age (75.9±8.0; 82.3±5.8; 87.3±5.6, p<0.001), LI (3.6± 1.9; 1.0±1.0; 0.0±0.0, p<0.001), BI (88.0±12.0; 64.22±28.6; 19.1±19.7, p<0.001), MMSE (25.3 ±2.8; 22.9±5.3; 10.9±8.5, p<0.001), CI (2.3±1.4; 2.1±1.4; 2.6±1.2, p 0.379); NGSOC 1.5±0.8; 3.8±1.6; 5.7±1.7, p<0.001). Significant differences in prevalence of geriatric syndromes and related health conditions (%) were found in walking instability in the frail group (10; 54; 28, p <0.001), and in immobility (0; 15; 69, p<0.001), pressure ulcers (0; 19; 36, p<0.05), dementia (0; 14; 69, p<0.001), delirium (0; 2; 30, p<0.001), incontinence (5; 49; 87, p<0.001), constipation (0; 44; 67, p<0.001) and terminal illness (0; 2; 15, p<0.05) in the geriatric group. Conclusion: CGA at admission detected different health status for each group. Due to this situation it seems necessary to define specific intervention programs for each of these groups.

**PB8 230 THE 6-MIN WALK TEST IN ELDERLY WOMAN: CORRELATION WITH CARDIOPULMONARY AND ANTHROPOMETRICS VARIABLES AND PHYSICAL ACTIVITY LEVEL**

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The six-minute walk test (6MWT) is commonly used to measure the functional exercise capacity and the execution of the daily activities. The 6MWT can be performed by elderly, in which aging is generally accompanied by decline in physical activity and functional capacity. Aim: To analyze the 6MWT applicability in elderly woman and to correlate it with cardiopulmonary and anthropometrics variables and also with physical activity level. Method: 45 elderly women were studied. Weight, height, blood pressure, heart rate, oxygen saturation (SaO<sub>2</sub>), ventilometry, and spirometry were measured and they answered the International Physical Activity Questionnaire. The Enright and Sherrill equation was used to calculate the predicted distance (PD). Results: Lower walking distance (WD) for higher body mass index (BMI) was observed. The WD mean was 453.20 ± 66.29m, greater than the PD of 437.76 ± 40.26m. Significant correlation between age(r=-0.37, p=0.01), Peak Expiratory Flow (r=+0.36, p=0.017), heart rate gain (HR) (r=+0.50 p = 0.001) and oxygen saturation fall (r=-0.35,p=0.022), were found. For higher BMI a lower WD was measured. Correlation with physical activity level showed greater DW for higher physical activity levels. Conclusion: Age, Peak Expiratory Flow, heart rate, oxygen saturation and the physical activity level had significantly influenced on WD. Larger WD than PD was also found in this research. These results suggest that more studies should be done to analyze the correlations and equation adjustment for each population.

**PB8 231 FALLS BY AWKWARDNESS? NEVER!**

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Introduction: Falls by elderly are often a reason for admission in emergency services. The care is inconstant and sometimes incomplete, without diagnosis, handling only consequences. This study is about falling patients, which were taken into account by the Geriatric Mobile Team (GMT). It analyses differences between reasons for admission, diagnosis made by emergency service and then by the GMT and finally during hospitalisation. The aim of this work is to know whether it is necessary to suggest to

emergency services a protocol to implement for falling patients. Methods and materials: It is a prospective study from June to November 2008 about patients admitted for falls and examined by GMT in UHCD (Unité d'Hospitalisation de Courte Durée). The first step was data-gathering about age, sexe, dependence, frequency of falls, existence of dementia, and way of life. Secondly, informations about plans at short, mid and long term, length of hospitalisation and readmission were collected. Finally, reasons for admission, initial and subsequent diagnosis were compared. Results: 76 patients were included. 60% were between 80 and 90 years old. More than 50% were living alone. Three-fourths had already felt. In 55% of situations, the reason for admission was a fall by awkwardness. This diagnosis was confirmed by emergency service in 33% of cases but only in 5% of situations by GMT. Finally, after investigations, awkwardness was never taken as the etiology for falls, whereas infectious diseases, orthostatic hypotension, dementia and biological disorders were the most frequent diagnosis. Conclusion: Awkwardness is not a valuable diagnosis for falls and falling patients need systematically clinic and paraclinic investigations. As a result, it seems useful to suggest more interventions of GMT in emergency services, more training in those services about this subject and could lead to the determination of standard investigations for falling patients.

**PB8 232 PRACTICE OF PHYSICAL RESTRAINTS IN A GERIATRIC HOSPITAL.**

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Introduction: During the evaluation of the professional practices, we decided to analyze, a recognized risk practice, the physical restraints. Materials and methods: After the constitution of a multidisciplinary group, it was decided to carry out a clinical audit. We analyzed the population in which was used physical restraints in long term care and sub acute care units over two 6 weeks periods. Four fields of evaluation were selected: medical prescription, installation, supervision and information to patient and his entourage. After analysis of the 1st turn, improvements were made before the 2nd turn. Then a 3rd was carried out 18 months later. Results: 25 situations of physical restraints were isolated during the 1st turn, among which 84% were prescribed, and 76% after appreciation of the benefit risks 18 situations were observed on the 2nd turn among which 100% were prescribed after consideration on the benefit risks but without improvement of the traceability in the patient files: 11% vs 8%. Because some new materials were purchased, there were less missing or degraded materials on the 2nd turn. The supervision progressed between the two turns passing from 16% to 66.7%. Progress was also made for the information given to the patients (78% vs 20%) and to their families (100% vs 88%), but we deplored a weak remaining retranscription. At 18 months of the 2nd turn, 16 situations were still observed among which 94% were prescribed. A specific supervision was programmed in 68.8% of the cases and 37.5% of the given information was retranscribed in the files. Conclusion: Prescribers became aware of the considerable risks of physical restraints. However, it's prejudicial that the reflexion surrounding such an installation was so infrequently retranscribed in the patient file. The third turn confirmed the perpetuation of this risky practice.

**PB8 233 COMPREHENSIVE GERIATRIC ASSESSMENT FOR OLDER ADULTS ADMITTED TO HOSPITAL: INITIAL RESULTS FROM THE COCHRANE REVIEW**

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Introduction: We sought to determine the effectiveness of in-patient comprehensive geriatric assessment (CGA) for frail older adults admitted to hospital as an emergency in comparison to routine or general medical acute care. Methods: We searched for randomised controlled trials in the following. The EPOC Register, Controlled Trials Register (CCTR), Database of Abstracts of Reviews of Effects (DARE), The Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE (from 1966); EMBASE (from 1980); CINAHL (from 1982) and AARP Ageline (from 1978). Results: We identified 21 RCTs comparing CGA with usual care. For the outcome of Death or Institutionalisation at up to 6 months, there was a significant reduction in patients who received CGA compared to usual care (OR 0.81, 95% CI 0.71 – 0.91, p=0.0005). This effect was most marked for patients admitted to CGA wards (OR 0.77, 95% CI 0.68 – 0.88, p<0.0001) as opposed to those reviewed by CGA teams (OR 1.19, 95% CI 0.80 – 1.75, p=0.39). We also looked at those studies which targeted CGA according to a patient's "needs" in contrast to an "age-only" admission criteria. Greatest benefit was observed for wards that targeted a "needs" based admission criteria (OR 0.49, 95% CI 0.32 – 0.73, p=0.0005), followed by wards that targeted an "age-only" admission criteria (OR 0.83, 95% CI 0.72 – 0.96, p=0.009). No benefit was seen from CGA teams for either "need" (OR 1.41, 95% CI 0.75 – 2.63, p=0.29) or "age-only" admission criteria (OR 1.07, 95% CI 0.65 – 1.76, p=0.8). Heterogeneity tests indicate a significant subgroup effect ( $\chi^2$  p=0.04). Conclusion: CGA is effective in reducing death and institutionalisation at up to 6 months.

This effect is most pronounced for CGA wards with a “needs” based admission criteria with no evidence of benefit for CGA teams.

**PB8 234 KNEE AND ANKLE ISOMETRIC MUSCLE STRENGTH IN WOMEN WITH AND WITHOUT OSTEOPOROSIS**

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**Introduction:** The trend towards increased life expectancy will certainly lead to increases in morbidity and mortality related to osteoporosis. Many elderly people experience difficulty in performing activities of daily living, because the strength-generating capacity of their skeletal muscles is reduced. The weak muscles of an elderly person may be a problem for brittle bones by increasing the risk of falls and therefore the possibility of sustaining a fracture. Then, the purpose of this study was to compare knee and ankle isometric muscle strength of osteoporotic and non-osteoporotic women. **Methods:** Twenty osteoporotic ( $69.15 \pm 3.88$  years old) and thirty non-osteoporotic ( $67.4 \pm 5.21$  years old) women participated in this study. Isometric peak torque for the knee flexors and extensors and the ankle plantar flexors and dorsiflexors was assessed using a BIODEX 2 isokinetic dynamometer located at Federal University of São Carlos (UFSCar). Volunteers performed three valid maximal voluntary contractions for each movement, as forcefully as possible during five seconds. Knee and ankle were aligned with the dynamometer axis, as recommended in the Biodex manual. The statistical analysis was performed using nonparametric test Mann-Whitney. The level of significance used for all comparisons was 5% ( $p \leq 0.05$ ). **Results:** It was found that osteoporotic women exhibit a significant lower knee extensors isometric peak torque than non-osteoporotic women for both dominant ( $p=0.005235$ ) and non-dominant sides ( $p=0.002699$ ). They didn't present significant differences for ankle plantar flexors and dorsiflexors and knee flexors isometric peak torque. **Conclusion:** Women with osteoporosis have deficit in the muscle strength function of knee extensors in comparison with non-osteoporotic women. It could represent difficulties in performing activities of daily living like climbing stairs, sitting and standing. Then, knee strengthen exercises are important to osteoporotic women.

**PB8 235 THE ASSESSMENTS OF FALLS AMONG COMMUNITY-DWELLING OLDEST OLD VETERANS IN TAIWAN**

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**Introduction:** Falls are one of geriatric syndromes threatening the independence of older persons, and it's reported that 30-40% of community-dwelling adults older than 65 years fall each year. It's the secondary leading cause of accidental death for elderly in Taiwan, and moreover, it's the common cause for elderly to be hospitalized or institutionalized. This study aimed to explore the falls among community-dwelling oldest old veterans in Taiwan. **Methods and materials:** Elderly residents of a community area were invited for study. A comprehensive geriatric assessment was implemented by a trained nurse and a physical therapist at the same time. **Results:** One hundred and eighty-eight residents (mean age =  $82.6 \pm 4.0$  years, 99.7% men) were enrolled, and 51 (27.1%) residents reported that they fell once at least within one year. Among the residents with falls, 39.2% fell more than twice, and 45.1% reduced their daily activities due to fears of falls. Univariate analysis showed that the using anti-psychotic drugs (23.2% vs. 50.0%,  $p = 0.003$ ), urinary incontinence (19.1% vs. 37.3%,  $p = 0.010$ ), constipation (33.8% vs. 52.9%,  $p = 0.017$ ), and self-reported ambulace problem (45.3% vs. 70.6%,  $p = 0.002$ ) were significantly associated with falls. Using multivariate logistic regression, we showed that using anti-psychotic drugs (odds ratio [OR]: 2.58, 95% confidence interval [CI]: 1.07-6.26,  $p = 0.035$ ) and self-reported ambulace problem (adjusted OR: 2.31, 95% CI: 1.08-4.92,  $p = 0.031$ ) were independent risk factors associated to falls. **Conclusion:** Among the community-dwelling oldest old veterans, 27.1% ever fell within on year. For the residents with high risks of falls, we should educate them to prevent the falls in the community and refer them to the falls clinics to identify and reduce the risks of falls.

**PB8 236 THE CIRCUMSTANCES AND CONSEQUENCES OF FALLS DURING A STUDY TO THE EFFECTIVENESS OF A TAI CHI FALL PREVENTION PROGRAMME.**

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A RCT conducted in the Netherlands to the effectiveness of Tai Chi Chuan (TC) in preventing falls in elderly people living at home showed no beneficial effects on primary outcome fall risk (Adj. HR 1.16; 95% C.I. 0.84 – 1.60) or secondary outcomes: balance, fear of falling, physical activity, blood pressure, heart rate at rest, physical activity and functional status. This study provides more information about the circumstances and consequences of falls during the study period. We used data of 269 community-dwelling elderly people with a high fall risk who participated in the randomized controlled trial (TC: n=138 and Control group (CG): n=131). Participants filled out a fall calendar on a daily basis for one year. When a fall occurred the elderly registered the circumstances and consequences of the fall with a standardised form. We categorised qualitative data based on the content of the answers given. Preliminary results showed 205 registered falls (TC: n= 115, CG: n= 90) of which 108 were injurious. There were 7 (TC n=3, CG n=4) standardised forms missing. The number of falls inside the house equals the numbers of falls outside. Most injuries were minor (bruises: n=52, contusions: n=30, wounds: n= 45), whereas six fractures occurred. Medical attention was required for 14 falls. Both fall localisation and gender were independently associated with an injurious fall: the odds of having an injurious fall were increased by 170 % when the fall localisation was outside and increased by 130 % if the participant was woman. The tai chi training was not independently associated with injurious falls.

**PB8 237 FALL SEVERITY AS A PREDICTOR OF FUTURE FALL RISK**  
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Accidental falls are a significant health issue for older adults. Fall events have been associated with an increased risk of disability and institutionalization among community-living older adults. This study examined the longitudinal relationship between fall severity and future fall risk among a nationally representative community-based older adult sample. Data from the Health and Retirement Survey (HRS), wave 4 through wave 7 (1998-2004) were used resulting in 24,715 person-wave observations. Baseline fall severity was classified based on the number of falls and the occurrence of an injury due to the fall. The sample of baseline fallers, which included community-living older adults identifying one fall event but no injury, multiple falls but no injury, and at least one fall with an injury were older (mean age 76.6 vs. 74.2), had lower education (11.9 vs. 12.1 years of education), and reported poorer health (59.9% vs. 73.8) than the non-fallers. The dependent fall status variable was defined to include: no fall, one fall no injury, two or more falls without an injury, and at least one fall with an injury. Multinomial logit analysis showed a positive association between severity of the fall at baseline and the future fall severity even when adjustments were made to incorporate socioeconomic status, health conditions, health behaviors, and environmental characteristics. Individuals reporting multiple falls without an injury at baseline had lower expected odds of experiencing only one fall in the future (OR=0.80) and higher expected odds of experiencing multiple falls in the future (OR=1.33) and an injurious fall (OR=2.04) compared to individuals experiencing only one fall without an injury at baseline. The findings of this study support fall prevention policy for the community living older adult population.

**PB8 238 TRANSCULTURAL ADAPTATION AND PSYCHOMETRIC VALIDATION OF A FRENCH-LANGUAGE VERSION OF THE DEMENTIA QUALITY OF LIFE INSTRUMENT (DQOL)**

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**Objectives:** This study aimed to validate a French-language version of the Dementia-Quality of Life (DQoL) instrument. **Methods:** Transversal, test-retest study in elderly patients with mild to moderate dementia. Feasibility and acceptability were assessed by the time required to complete the questionnaire, the rate of refusal to participate, and the rates of abandon or non-response. Reliability and reproducibility were assessed respectively by Cronbach's alpha coefficient and Pearson's correlation coefficient. The discriminant validity was tested by evaluating the influence of severity of cognitive decline, dependence, existence of depression or behavioural troubles, as well as caregiver burden. **Results:** Of the 155 eligible patients, 46 did not meet the inclusion criteria defined in the original instrument. The remaining 109 patients had an average age of  $81 \pm 6$  years, 62.4% were women and average Mini Mental State Examination (MMSE) score was  $20.8 \pm 4.4$ . The average time required to complete the questionnaire was  $13.3 \pm 6.9$  minutes. No patient refused to participate or abandoned. The rate of non-response per dimension ranged from 0% to 2.8%. The French-language version of the instrument showed good psychometric properties, with acceptable internal consistency (Cronbach's alpha ranging from 0.70 to 0.87) and good reproducibility (Pearson's r 0.96-1.00). Cognitive status, humour and behavioural troubles had an impact on QoL, whereas dependence and caregiver burden did

not. Conclusion: The French-language version of DQoL, validated by recommended standards, showed comparable psychometric properties to the original version, and is therefore suitable for use in a population of French patients with mild to moderate dementia.

**PB8 239 ASSESSMENT OF FRAILTY PREVALENCE AND SURVIVAL OUTCOME: THE FRAILTY INDEX APPROACH AND THE 5-ITEM PHENOTYPE APPROACH**

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How to quantify frailty remains debated. Two operational definitions have gained popularity. One emphasizes the "core" features that often present in frail older people, whereas the other integrates multidimensional health information. No study has compared the performance of the two approaches in estimating the prevalence of frailty. Here, we constructed a frailty index and approximated the 5-item phenotypic measure. The data come from the Canadian National Population and Health Survey, initiated in year 1994-5 ( $n=2740$ , aged 65-102 years old, 43.3% died by 2004-5). Self-reported information concerning various aspects of health was collected every two years, with complete follow-up of vital status. The frailty index (FI) consisted of 36 variables assessing medical conditions, symptoms, average daily living, and life style, and was calculated as the sum of all health deficits present. Frailty was defined as an index score  $>0.22$ . The 5-item phenotypic measurement (5IPM) was constructed using self report information about strength, mobility, weight loss, fatigue, and limited physical activities. Frailty was defined as the presence of at least 3 of these 5 items. The FI and 5IPM both showed right-skewed distribution, with more people opposing a relatively low level of frailty. Both the FI and 5IPM increased exponentially with age ( $R^2=0.93$ ,  $p<0.001$  for FI,  $R^2=0.89$ ,  $p<0.001$  for 5IPM). The FI estimated that 613 (22%) of the population was frail, compared with 239 people (9%) by the 5IPM. The 10-year mortality was significantly related to both the FI ( $p<0.001$ ) and to the 5IM ( $p<0.05$ ). A dose-response relationship between the 10-year survival probability and the FI was observed. Both the FI and 5IM identify people who are vulnerable in relation to 10-year survival. The FI approach appears to offer greater precision. Whether constructing a 5IPM based on physical performance measures would improve its precision is unclear, but merits further inquiry.

**PB8 240 HANDGRIP STRENGTH AS A LONG-TERM MORTALITY PREDICTOR. TOLEDO STUDY OF AGING.**

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INTODUCCCTION: In recent years, Handgrip strength evaluation has won interest as a marker of health status, showing itself as an accurate predictor of long-term mortality. The aim of this study is to evaluate whether handgrip strength is a predictor of mortality in a Spanish elderly adults cohort. MATERIAL AND METHODS: Data used are from de Toledo Study, a longitudinal population cohort study of elderly people aged 65 years and older living in Toledo County. The subjects were selected by a Multistage Randomized Sampling in 1994 for the study of prevalence and incidence of dementia. 3,214 subjects were evaluated in 1994. In 1996, 2,651 were evaluated (incidence survey). Those subjects that couldn't perform the handgrip strength due to great health deterioration were excluded. Mortality was ascertained from 1996 to 2007. Measurements included socio-demographic factors, Katz and Lawton's Index, Yesavage's GDS, Folstein's MMSE, alcohol and tobacco habits, social support (OARS), comorbidity and handgrip strength (Jamar's Dynamometer). A descriptive analysis of the population was done. The handgrip strength was encoded in quintiles adjusted by gender. Cox proportional hazard model was used to adjust the risk of mortality by the handgrip strength adjusted by confounders. Coxs analysis was performed on 2,462 persons (711 deceased) for accumulative losses. RESULTS: 2,651 subjects were evaluated (56.4% female); the mean age was 75.9 (SD 6.9) years. The mortality percentage was 30.2, 23.8, 24.7, 10.1 and 11.2 for the 20, 40, 60, 80 and >80 ( $p<0.001$ ) handgrip strength quintiles respectively. In the Cox's analysis adjusted by cofactors, an increase of risk was observed over the best quintile of HR: 1.44 (95% CI: 1.07-1.9), 1.55 (1.18-2.03), 1.36 (1.02-1.77) and 1.02 (0.75-1.40) for the quintiles 1, 2, 3 and 4 respectively. CONCLUSION: The handgrip strength is a mortality predictor in the Spanish population of 65 years old and over.

**PB8 241 EXAMINING OLDER WOMEN'S CONCEPTIONS OF PHYSICAL HEALTH USING PHOTOVOICE**

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Introduction The World Health Organization states that falls are the third cause of chronic disability worldwide (Murray & Lopez, 1996). We also know that approximately 30% of adults over the age of 65 fall each year (Nikolauš & Back, 2003). This study examines how thirty-eight women between the ages of 65 and 75 from Vancouver, British Columbia,

Canada, perceive their physical health and the benefits of engaging in an exercise program designed to prevent falls through the use of a novel methodology called photovoice. Methods and Materials Photovoice is a unique research strategy in which participants "use the power of the visual image to communicate their life experiences, expertise and knowledge" (Wang et al. 1998). The participants ( $N=38$ ) were given disposable cameras and were asked to photo document how they experience their health, the aging process and the benefits of engaging in physical activity. In addition to their photographs, participants kept a photo log journal and also participated in in-depth face-to-face interviews. Results Collectively, the participants took 713 photographs. Renewal, Strength, and Commitment to Self and Others emerged as three important themes through analysis of the photographs and verbatim interview transcripts. Renewal signified a regeneration of the physical self and recognition of being able and willing to participate. Strength represented balance and the ability to lift or feel strong as well as inner strength. Commitment to self and others was conceptualized as having the obligation to attend exercise class and to follow through with responsibilities. Conclusion The participants in this study provided diverse visual representations of their health and emphasized common desires to stay involved, to feel strong, and to uphold commitments. These factors are important because they influence the reasons why older women engage in an exercise program, and contribute to the understanding of the aging process.

**PB8 242 UPDRS SCORE IS RELATED TO FUNCTIONAL CAPACITY IN PARKINSON DISEASE PATIENTS**

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Introduction: Functional capacity can be impaired with the aging process. As a result, to perform the daily activities could be considered a difficult task for the older people. In Parkinson's disease (PD) patients, the functional capacity must be investigate as a function of the impaired system. The aim of this study was to verify if the UPDRS points could influence the functional capacity. Methods and materials: 14 idiopathic PD patients participated in this study (66.7 $\pm$ 7.8 years of age; Stages 1 to 3 Hoehn and Yahr). The tests were performed in two consecutive days: 1) clinical assessment done by a neurologist (UPDRS scale); 2) AAHPERD tests (flexibility, agility, strength, coordination and aerobic resistance). In the UPDRS scale, only the functional and motor subscales were considered. The relationship between the UPDRS points and AAHPERD tests was analyzed by Pearson correlation ( $p<0.05$ ). Results: The functional subscale showed high relationship with flexibility ( $r=-0.54$ ,  $p=0.043$ ) and strength ( $r=-0.65$ ,  $p=0.010$ ). Besides, the motor subscale showed not only high relationship with coordination ( $r=0.68$ ,  $p=0.006$ ) but also with agility ( $r=0.56$ ,  $p=0.034$ ). Conclusion: Based on these results, the functional capacity in PD could be influenced by the UPDRS score. So, to perform the daily activities involving flexibility and strength could be even more impaired in function of the some symptoms like hypokinesia (reduction in movement amplitude) and akinesia (difficulty in motion initiation and changing position). Therefore, the motor subscale that investigates the movement components like bradikinesia (slow movements), tremor and rigidity can influence activities involving coordination and agility. PD patients present slow movements that can affect the efficiency of the movements' performance. Finally, the AAHPERD tests could also be considered an important tool to assess some movement disorders related to the disease. Acknowledgements: PROPARKI, FAPESP, CNPq, FNS, CAPES.

**PB8 243 RELIABILITY OF FALLS RECALL - A FACTOR TO KEEP IN MIND FOR IMPLEMENTATION OF FALLS INTERVENTION PROGRAMS**

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Introduction: Falls in older people are a major public health problem, with one in three people aged 65 and over falling each year. Falls are the leading cause of injury-related hospital admissions in older people, accounting for 4% of all hospital admissions in this age-group. Apart from the injurious outcomes falls can also have serious social and psychological consequences . Prevention of falls and subsequent disability is therefore a key priority area in geriatric rehabilitation. The implementation of research knowledge into daily practice is often not very effective. One reason for this failure is the missing theoretical approach in the implementation process. At the Institute of Sport Science of the University of Erlangen a study was conducted to investigate into the implementation process of an EB intervention fall prevention program for community-dwelling active older persons. Related to the RE-AIM model by Glasgow et al. (1999) the first step to Reach for the right participants was investigated. Given the fact that a fall history is one of the most important risk factors, very often an intervention program reaches out for participants with a fall history. One of the key question of this approach is how reliable is the self- reported fall history. Method: 96 community-dwelling active older persons with 55.2% being male took part in a controlled study for falls prevention. The age range was 70 years to 90 years. In a Pre- and Post test design data on fall history, physical performance, fear of falling, cognitive performance and quality of life were collected. The presentation will discuss only the falls data. Falls were monitored with a daily falls calendar handed in every first week of the following months. A fall was defined as an unexpected event in which the participant comes to rest on the ground, floor, or lower level. Participants were being contacted by telephone if the monthly calendar was not returned in due time or to obtain data regarding the circumstances of a fall. After 12 months participants were reassessed and questioned

for fall history of the past 12 month. The numbers of self-reported falls recall were then compared to the falls calendar. Results: In the 12 month according to the falls calendar in total 93 falls occurred whereas 45,2 % of the participants did not report a fall. 22,8 % of the participants reported one fall. The percentage of male non fallers was similar to the female non fallers rate (47,1% vs. 43,9 %). One fall reported 20,8 % of the male participants and 23,3 % of the female participants. In contrast to the falls calendar only 63 falls were recalled after 12 month with only in one case recalling one fall more than actually was obtained via fall calendar. In all other cases the number of recalled falls was less than in the monthly calendar marked. In total about 25% of falls during the past 12 month were not recalled by the participants. Conclusion: The first step in implementing an EB falls intervention program will be the reach of the appropriate target population. In many cases falls intervention programs recruit participants on the recall of their falls history. Given the fact of our results this inclusion criteria might not fully target the right population. Therefore additional risk factors should be included to target the appropriate population, and successfully implement falls prevention programs.

**PB8 244 COULD PHYSICAL ACTIVITY LEVEL INDICATE DEPRESSION AND ANXIETY IN PARKINSON'S DISEASE PATIENTS?**

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Introduction: Depression and anxiety are common problems in Parkinson's disease (PD) patients. However, the causes of depression and anxiety in PD are uncertain. Physical activity level can be related to depression and anxiety in this population. The purpose of this study was to verify the association among depression and anxiety with physical activity level. Methods and materials: 27 idiopathic PD patients participated in the study (63.52±8.55 years of age; Stages 1 to 3 on Hoehn and Yahr-HY; 32.64±13.45 points in Unified Parkinson's Disease Rating Scale-UPDRS; 26.44±2.9 points in Mini-Mental State Examination-MMSE). The tests were performed on two different days and in a random order: a) clinical assessment was done by a neurologist: Hospital Anxiety and Depression scale (HAD), HY, UPDRS and MMSE; b) functional capacity – AAHPERD tests: flexibility, coordination, agility, strength and aerobic resistance. The Pearson correlation was used to verify the relationship among anxiety and depression level with functional capacity components ( $p<0.05$ ). Results: High relationship was observed among depression and anxiety and coordination ( $r=0.38$ ,  $p=0.02$ ;  $r=0.53$ ,  $p=0.002$ , respectively), agility ( $r=0.50$ ,  $p=0.004$ ;  $r=0.54$ ,  $p=0.002$ , respectively) and aerobic resistance ( $r=0.52$ ,  $p=0.003$ ;  $r=0.68$ ,  $p=0.0001$ , respectively). A significant relationship was also observed between strength and depression ( $r=-0.44$ ,  $p=0.01$ ). Conclusion: Low performance in coordination, agility, strength and aerobic resistance tests are associated with anxiety and depression in PD, especially with agility and resistance. The increased functional capacity helps PD patients in the treatment of depression and anxiety. So, it is recommended the enrollment of PD patients in physical activity programs in a regular basis to improve their functional capacity and decrease their depression and anxiety symptoms. Acknowledgements: PROPARKI, FAPESP, CNPq, FNS, CAPES.

**PB8 245 XEROSTOMY IN ELDERLY WITH DIFFERENT FRAILTY LEVELS**

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Introduction.Xerostomy is a lack of saliva stated by individuals that causes discomfort sensation, and can be associated with chronic diseases and/or use of drugs. The aims of this study were: to verify the xerostomy prevalence and its association with chronic diseases and drugs, besides verifying those relations with frailty levels. Methods and materials.This study was conduct in a Geriatric Ambulatory of UNICAMP Clinics Hospital in Campinas, Brazil. It was used a Chi Square Test comparing aged frails and prefrails. Afterwards it was used a logistic regression. The elderly was 60 years old and more. Results. 151 elderly were interviewed with a mean age of 76.3 years ( $sd=8.0$ ). All subject presented 1 disease at least and all subjects were using drugs. 78.8% ( $n=119$ ) used 1 drug at least that could cause xerostomy according to the adverse effects of drug instructions. The prevalence of xerostomy stated by the elderly was less than 68.2%. The average number of diseases among those who related xerostomy was 5.1 ( $sd=2.2$ ). Among those diseases: diabetes (32.4%), heart disease (49.5%), depression (17.2%), and psychiatric disorders (9.7%), Chagas' disease (18.3%) and others – there were many with comorbidities. Elderly with dry mouth felt more chronic pain. It was verified among all examined subjects that 4.6 ( $n=7$ ) were classified as non frail, 40.4 %( $n=61$ ) as prefrail and 55% ( $n=83$ ) as frail. The frailty condition did not have association with xerostomy ( $p>0.05$ ). Conclusion.Xerostomy is a high prevalent condition among elderly who is using drugs as a routine, but this condition does not differ according to frailty levels. Xerostomy was highly prevalent (68.2%) in this aged group, justifying additional studies about this condition and its association. Fapesp 05/58980-4

**PB8 246 INTEREST OF POSTUROGRAPHY DURING THE FALLS CONSULTATION**

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Introduction: Fall is a major public health problem in the elderly. Posturography allows to measure static and dynamic balance. The primary objective of this study was to determine to which clinical parameters are static posturography data correlated. The secondary objective was to determine the predictive value of posturography parameters for recurrent falls. Methods and materials: The study concerns 111 consecutive persons referred to the Falls Consultation between June, 2003 and December, 2005 and having undergone a static posturography. All outpatients were assessed by a geriatrician, a neurologist and a physiatrist. For statistical analysis, a Mann-Whitney test for quantitative variables and a Pearson's correlation test for qualitative variables were used. Results: There was no statistically significant correlation between clinical parameters and static posturography data except for the parameter mediolateral mean sway with closed eyes which was correlated to the timed up and go test ( $p < 0.05$ ), the one-leg balance ( $p = 0.05$ ), and the ADL score ( $p < 0.05$ ). Furthermore, there was no correlation between posturography parameters and the number of falls within the 6 months following the initial evaluation. Conclusions: Posturography does not predict recurrent falls and, in practice does not influence our therapeutic propositions. Nevertheless this method could be helpful to define the strategies of rehabilitation of the fallers.

**PB8 247 SPONTANEOUS ACTIVITY OF OLDER PEOPLE: ASSOCIATION WITH BODY COMPOSITION AND LEG STRENGTH AND POWER OUTPUT**

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Introduction: Spontaneous physical activity and its correlation with body composition and muscle function has been studied through the use of accelerometers and pedometers. New generation activity monitors allow the registration of more detailed aspects of activity; the ActivPAL™ system registers the time sitting/lying, time standing, time stepping, step number and number of sit to stand transitions. The aim of this study was to measure the spontaneous physical activity of men and women aged 75 years and to investigate associations with body composition and lower limb strength and power. Methods and materials: Eighteen healthy participants, (mean age 79.8±3.8 years, n=10 female), were studied. All participants wore the monitor on the anterior thigh for seven days. Body composition was determined using dual energy X-ray absorptiometry, isometric knee extensor strength (IKES) was measured using a specialised chair equipped with a strain gauge and data acquisition system. Lower limb power output was measured using the Nottingham Power Rig. Results: Body mass index was 24.2±3.6 kg.m<sup>-2</sup>. Percentage body fat was 31.2±8.3 (women) and 22.3±1.3 (men). Mean sitting/lying time was 17.3±1.6 h/day, time standing was 4.9±1.3 h/day, time stepping was 1.7±0.6 h/day, number of steps taken was 8589±3283 steps/day and the number of sit to stand transitions 52±9.8. In women, time sitting/lying and number of sit to stand transitions were associated with percent body fat ( $r=0.683$ ,  $p=0.029$  and  $r=0.819$ ,  $p=0.004$ , respectively); time sitting/lying and time standing were correlated with BMI ( $r=0.820$ ,  $p=0.004$  and  $r=-0.752$ ,  $p=0.012$ ); there were no correlations with leg strength or power. In men, there were no correlations with body composition and IKES was correlated with time stepping and number of steps ( $r=0.738$ ,  $p=0.037$  and  $r=0.810$ ,  $p=0.015$ ). Conclusion: In this study, spontaneous physical activity of women only, was associated with body composition, while leg strength was associated with spontaneous physical activity in men only.

**PB8 248 INCIDENCE OF SECOND HIP FRACTURE IN MEN AND WOMEN: A SYSTEMATIC REVIEW**

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Introduction: Most published literature on health outcomes following a hip fracture have been focused on women and less is known about the recovery process for older men. Early literature on second hip fracture reported frequencies ranging between 2% to 11% of people with a first hip fracture; there may be differences in the incidence of second hip fracture between men and women however this has been less studied. Therefore our aim was to review the available evidence that compared the incidence of low-trauma second hip fracture between men and women aged 60 years and older. Methods and Materials: We searched the published literature from 1990 to present using OVID MEDLINE, CINAHL, Embase, Cochrane Database of Systematic Reviews and key journals/authors who published in this area. Keywords included hip fracture, second hip fracture, re fracture, reinjury and recurrent hip fracture. We limited our search to English language and people aged 60 years and older. We determined the methodological quality of included studies and provided a qualitative description of fracture risk for older men and women. Results: Ten

articles met inclusion criteria. Overall, we noted some methodological issues used to report fracture incidence. Despite the fact that women have a significantly higher risk for the initial hip fracture, five observational studies reported no significant differences in incidence of second hip fracture between older men and women. Conclusion: Based on the available evidence, men and women have similar risks for a second low-trauma hip fracture. Secondary prevention strategies are important for both men and women to reduce the risk of future fractures.

**PB8 249 A META ANALYSIS OF THE IMPACT OF MEDICATIONS ON FALLING IN THE ELDERLY**

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Background There is increasing recognition that prescribed medications can contribute to falls in seniors. However, determining which medications contribute to falls and which do not remains a clinical challenge. The most recent meta-analysis of medications associated with falls only included studies to 1996 and did not consider all currently relevant drug classes. Therefore, this meta-analysis includes studies on a wide range of relevant drugs published through to 2007. Materials and Methods: Studies were identified through a systematic search of English-Language articles collected from EBM, CINAHL, EMBASE and MEDLINE using the keywords: falls, accidents and accidental falls, aged or age factor, elderly, drug or drug therapy and therapeutic. Studies were limited to those with subjects >60 years exposed to one or more drug therapies and having an identified outcome of falling. Meta-analyses were completed on those drug classes with 4 or more published studies completed in the period 1996-2007. Bayesian methods allowed for the use of the results from Leipzig et al's (2000) meta-analysis which incorporated 40 articles published from 1966-1996. Leipzig's findings combined with newly available information were used to provide pooled odds ratio (OR) estimates and 95% credible intervals (95% CI) Results: Of 11081 identified articles, 20 met our inclusion criteria and were used in our meta-analysis. Meta-analyses were completed on 9 unique drug classes including 75,792 subjects. For each of the classes the following Bayesian OR point estimates (95% CI) were found: Anti-hypertensives: OR=1.16(0.92-1.14); Sedatives/hypnotics: OR=1.49, (1.35-1.63); Diuretics: OR=1.08, (1.02-1.16); Neuroleptics: OR=1.06, (1.34-1.89); Anti-depressants OR=1.69, (1.49-1.91); Beta-blockers OR=1.01, (0.85-1.19); Benzodiazepines: OR=1.53, (1.35-1.73); Narcotics: OR=0.95, (0.77-1.18); and NSAIDS OR=1.17, (0.99-1.40). Conclusion: Diuretics, antidepressants, neuroleptics, sedatives/hypnotics, and benzodiazepines demonstrated a significant association with falls in seniors.

**PB8 250 FRACTURES PREDICT SHORT- AND LONG-TERM FUNCTIONAL DECLINE IN THE AGED - A POPULATION-BASED STUDY WITH 8- YEAR FOLLOW-UP.**

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Introduction: The independent relationships of fractures on functional decline are poorly known. The objective of this study was to describe short- and longer-term relationships between fractures and functional abilities in older population. Methods and materials: A population-based, prospective, cohort study in the municipality of Lieto, Finland. Data on health, health behavior, fractures, and functional ability was collected in 616 participants (291 men, 472 women) aged 65 or older both in 1991 and 1999. Change in the level of mobility, managing activities of daily living (ADL) and instrumental activities of daily living (IADL) were analysed both in short-term (0-2 years) and long-term (2.1 -8 years) follow-ups. The cumulative logistic regression model with cumulative odds ratios (COR) and their 95% confidence intervals (95% CI) were used in analyses. RESULTS: During the 8-year follow-up, 112 (18%) persons sustained at least one fracture. In the multivariate analyses, lower body fractures (hip, pelvis, lumbar vertebrae and lower limbs) predicted decline in performing mobility tasks and activities of daily living (ADL) both in short-term (COR 4.7, 95%CI: 1.9-11.7), (COR 3.1, 1.3-7.6) and long-term (COR 2.6, 1.1-6.2), (COR 4.7, 2.0-11.4) follow-ups, respectively. Upper body fractures (shoulder, thoracic vertebrae, ribs and upper limbs) decreased only ADL functions in long-term follow-up (COR 2.5, 1.3-4.8). In addition, inactivity in leisure-time physical exercise at baseline predicted decline in all three areas of function independently of other predictors CONCLUSION: Lower body fractures are powerful independent predictors of short-term and even long-term functional decline in older people. Improved actions to prevent fractures and to make rehabilitation more effective as well as extended re-assessment after sustained fractures are

needed in order to reduce functional decline and dependence in aged persons. Promoting physical activity and exercise are important factors in these actions.

**PB8 251 HIP PROTECTORS - ADHERENCE IS INSUFFICIENT FOR EFFECTIVENESS: DATA FROM THREE RANDOMISED TRIALS**

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Introduction: Adherence with hip protector use is a major factor in their doubtful clinical effectiveness. We hypothesised that adherence with hip protectors can be increased by reducing their cost and providing education about their use. Methods: Three randomised trials with a preplanned meta-analysis are reported. These are two cluster randomised trials with participants recruited in sub-acute hospital wards or residential aged care facilities, and an individually randomised trial in frail older people living in the community. Participants are allocated to a control group (who receive a brochure about hip protectors), or intervention group 1 (supply of three pairs of hip protectors at no cost ('no cost')), or intervention group 2 (free hip protectors and an educational program that aims to encourage their use ('combined')). The primary outcome measure is adherence with the use of hip protectors at six months which was defined as wearing the hip protectors 50% or more of the recommended time in the month before follow-up. Results: 714 older people (81% female, mean age 84.8) years participated. The percentage of participants who were adherent at 6 months was 4.6% in the control group; 43% in the 'no cost' hip protector group and 43% in the 'combined' hip protector and education group ( $\chi^2=99.1$ , df 2,  $p < 0.001$ ). Adherence was higher in people recruited from a community setting (41% versus 25%,  $p < 0.01$ ). There were 10 hip fractures (including three sustained while wearing the hip protectors). Conclusions: The study has shown a level of adherence with hip protector use that is inadequate for clinical effectiveness. However, supply of hip protectors at no cost to the user is a better strategy than merely providing information. Further developments in hip protector design are needed, as are incentives for hip protector use.

**PB8 252 UPTAKE AND TWO-YEAR ADHERENCE TO ANTI-OSTEOPOROTIC TREATMENT IN PATIENTS WITH RECENT HIP FRACTURE**

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Introduction: Hip fractures (HFx) are associated with increased mortality and risk of further fractures, however, fracture discharge programs are rarely routine. The aim of our study was to evaluate uptake and adherence to anti-osteoporotic treatment in a population-based cohort of patients with recent HFx. Methods and materials: During 2005, all HFx patients  $\geq 45$  years were offered participation in a fracture discharge program excluding patients with dementia, severe comorbidity, and pathological fractures. Osteoporosis was defined as low bone mineral density  $\leq -2.5$  SD and/or presence of a vertebral fragility fracture. Follow-up was minimum 2 years. Data are shown as median[range] or mean(95% CI). Results: During inclusion period, 496 HFx patients (337 women (82.6[46.9;97.4] years); 159 men (77.7[45.8;97.4] years)) were admitted to our hospital. Age-adjusted cumulative 2-year survival was higher in patients offered participation in the program (n=310) compared with those excluded (n=186) (0.83(0.78-0.88) vs. 0.51(0.41-0.60),  $p < 0.01$  and 0.65(0.56-0.74) vs. 0.38(0.27-0.50),  $p < 0.01$  in women and men, respectively). A total of 204 patients showed up and 169 were diagnosed with osteoporosis (114 women (81.1[46.9;96.2] years); 55 men (76.2[45.8;94.5] years)). Age-adjusted cumulative 2-year survival was higher in patients with osteoporosis receiving treatment (n=139) compared with those left untreated due to comorbidity or decline by patient (n=30) (0.89(0.84-0.95) vs. 0.51(0.34-0.69),  $p < 0.01$ ). In HFx patients still alive after 2 years, 71% were adherent to specific anti-osteoporotic treatment. Adherence to treatment was predicted by "any fracture prior to present HFx" (odds-ratio, OR 3.22(1.12-9.28),  $p < 0.05$ ) and "any fall in the year prior to present HFx" (OR 3.41(1.08-10.79),  $p < 0.05$ ). Conclusion: The fracture discharge program successfully identified HFx patients with low mortality and thus likely to benefit from anti-osteoporotic treatment. Furthermore, the majority of patients initiating medical treatment were adherent to this at 2-years follow-up. Nevertheless, only 25.8% of patients alive after two years were on treatment.

**PB8 253 ANALYZING COMPLICATIONS IN A CONVALESCENCE CARE GERIATRIC UNIT (CCGU).**

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Introduction and aims: know the profile of patients remitted to a CCGU coming from Acute Hospital Geriatric Units (AHGU). Estimate risk factors for development of acute

complications and/or mortality. Methods: We analyzed 99 consecutive discharges in our Hospital, collecting personal history, reason for admission, clinical stability, functional status prior admission, analytical parameters, instrumentation, as well as complications requiring medical intervention. Data base in ACCESS, analyzing SPSS(15.0). Results: Age:81'73(SD:9'05); 62% > 80y. Mean length stay: 35'06 d(SD: 28'8). Chronic-diseases: mean:4'72; 69% had≥4 chronic diseases. Hypertension:60'6%; diabetes:34'3%; dementia:34%; Atrial F.: 26 %; dyslipidemia:24'2%; COPD:23%; stroke:23%; IschemicC.:15%. Reason admission:respiratory:29'3%; neurological: 27'3%; infectious:14'1%; traumatology:10'1%; cardiopathy:9'1%; others:9'1%. Prior functional status:Barthel:62'4. Total dependency:25%; severe:18'7%; moderate:14'6 %; mild:39'6. Mobility: total immobility:17'7%; moderate:36'5%; mild:5'2%; without-help:40'6%. Prior drugs:5'94 (> 4 drugs:61'4%). Origin: emergency-room(21'9%); surgical(17'7%); AGHU(55'2%); primary-health(5'2 %). Complications:73%. There were 152: respiratory infection(23%); confusional syndrome(15%); urinary-tract infection(14%); exacerbation reason for admision(12%); renal failure(11%), gastroenteritis (10 %), cardiac failure (7%); urinary retention (7%). Medical complications : in 46% of hypertension; 28% of dementia; 27% of diabetes; 22% of dyslipidemia; 19% of stroke; 17% of COPD; 16% of AtrialF.; 12% of isquemicC. % Institutionalization: if complications:39%; if not:8%(p=0'04). Exitus: if complications:30%;if not: 4%(p=0'04). Probability of death greater if complication was renal failure(p=0'02)or exacerbation of reason for admission (p=0'001). Risk factor more associated with exitus was stroke (p=0'04) and dementia (p=0'04). Complications appeared more frequently in diabetes (p=0'02) and dyslipidemia(p=0'016). Conclusions: Patients who come to our Convalescence Unit are elderly patients, with pluripathology and polypharmacy, dementia, great dependency level. Main reasons for admission are convalescence of respiratory and neurological pathologies. There is high probability of being complicated, especially when there're vascular risk factors or dementia. The fact of suffering complications (fundamentally renal failure or exacerbation of reason for admission) increases the probability of institutionalization and exitus.

**PB8 254 THE EFFECT OF LOW HAEMOGLOBIN LEVELS ON THE POST-OPERATIVE OUTCOMES OF FRACTURED NECK OF FEMUR REPAIRS IN THE ELDERLY**

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The one-year mortality rate following fractured neck of femur repairs is typically reported as 20-35%, significantly higher than in the general population of comparable age. There is also a significant post-surgical morbidity. Studies have linked post-operative outcomes, such as post-operative time to mobilisation and time to discharge with worsened morbidity and mortality. Identification of risk factors for poor post-surgical prognosis is therefore important. Recent studies have suggested that pre- and post-operative haemoglobin levels may be one such risk factor. A retrospective study of 87 patients, over 65 years, undergoing fractured neck of femur repairs at University Hospital Lewisham, was carried out between September 2007 and April 2008. Data was gathered from the patients' case notes and the hospital's computerised results system. Post-operative outcomes (including mortality, time to mobilisation, time to discharge and pre- and post-operative infection rates) were analysed against pre- and post-operative haemoglobin levels. Significant ( $p<0.05$ ) relationships were found between pre-operative haemoglobin levels greater than eleven and both faster times to mobilisation and discharge. Similarly, there was a significant ( $p<0.05$ ) relationship between post-operative haemoglobin levels greater than nine and faster time to mobilisation. No significant relationships were found linking either pre- or post-operative haemoglobin levels with improved post-operative morbidity or mortality. These results suggest a need to consider pre- and post-operative interventions to maximise haemoglobin levels. However, given the risks to the patient associated with blood transfusions, coupled with the expense and scarcity of blood as a resource, it would be necessary to conduct further (preferable prospective) studies with larger sample sizes to discover whether transfusion in this cohort of patients is prudent.

**PB8 255 EFFECTS OF PHYSICAL EXERCISE TRAINING ON COGNITION, QUALITY OF LIFE AND FUNCTIONAL CAPACITIES IN FRAIL OLDER ADULTS**

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Introduction: Recent studies suggest that physical fitness training can significantly enhance cognition and quality of life in sedentary but otherwise normal older adults. However, it is not well known if this kind of intervention might improve cognition and quality of life in frail older adults. This is a major issue since frail elders are at greater risk of experiencing mobility limitations, reduction in psychological well-being and an increase in cognitive problems. Objectives: The principal objective of this study was to assess the impacts of a twelve-week physical training program on cognition, quality of life and functional capacities in frail elderly persons. This program included aerobic, muscular and flexibility exercises. The study also aimed at comparing the effects of this intervention between frail

and non-frail sedentary participants. Methods and materials: Out of 80 older adults that participated in this research, 71 (33 frails and 38 non-frails) completed all of the assessments (pre/post-test). They were distributed between two experimental conditions: an intervention group (physical activity program) and a control group (no intervention). This study was conducted in a gymnasium equipped for a geriatric population and involved a multidisciplinary team of health care professionals: a geriatrician, a physiotherapist, a kinesiologist and a neuropsychologist. Results: Results indicate that compared to the control group, participants who completed the physical training program showed performance improvements in cognitive tests that assessed attention and attentional control functions. They also reported changes in quality of life and showed a significant increase in functional capacities. Moreover, changes in cognition, psychological well-being and functional capacity were equivalent overall among frail and non-frail individuals despite group differences in baseline performances. Conclusion: Physical activity programs combining aerobic, muscular and flexibility exercises seem to be a very promising non-pharmacological approach in order to enhance physical, psychological and cognitive functioning in frail older adults.

**PB8 256 MAINTENANCE OF ELDERLY MUSCULAR STRENGTH IN A RESISTANCE EXERCISE PROGRAM**

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The muscular strength has a key role for the maintenance of functional capacity of the elderly. The elderly resistance exercise (RE) guidelines propose 2 day per week sessions. However, it has been suggested that, after an initial 2 days week phase, the reduction of the week frequency, may maintain the strength gain. Thus, the purpose of this study was to verify if the week frequency reduction can maintain de strength level of the elderly. This way, 10 elderly subjects ( $68,1 \pm 6,5$  years) participated in a two phases 16-week RE program: the first phase was a strength gain phase (SGP) consisted in 8 weeks, 2 days a week, followed by 8 weeks maintenance phase (MP), performed 1 day a week. In these two phases, the elderly performed 2 sets, 10 repetition maximum (RM) of leg press, lat pull down, military press and chest press. The muscular strength was measured at the initial (ISGP) and at the end (ESGP) of the SGP and MP (EMP), with 10 RM tests. The Repeated-measures Analysis of Variance was used to data analysis, followed by Scheffé post-hoc test ( $p<0,05$ ). From the ISGP to the ESGP the muscular strength of the group increased for all exercises, except for the Leg press. In the MP the strength levels were unchanged. Between ISGP and EMP the strength level of Leg press increased, but was not significant ( $p=0,06$ ). The results indicated that the reduction of week frequency was efficient to maintain strength gains, after an initial period of 2 times a week. Furthermore, the entire program was not sufficient to elicit significant strength gain in the leg press exercise. Thus, additional studies are necessary to verify possible differences of strength gain and maintenance, between different exercises and muscle groups.

**PB8 257 FACTORS ASSOCIATED WITH FALLS IN INSTITUTIONALIZED ELTERS, IN SÃO PAULO, BRAZIL**

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Introduction: Institutionalized elders usually have elevated risk for falls. Fall risk assessment in long term care (LTC) settings can be challenging, considering that functional and clinical status of residents may vary. Few studies have evaluated fall risk instruments for institutionalized elders. This study goal is to determine factors linked to fall risk in LTC. Methods and materials: Two groups of elders were compared: those who had one or more falls between January and June 2008 and those who did not fall during that year. Variables taken for statistical comparison were functional status, Downton Index, FIM (Functional Independence Measure), TUGT (Timed Up and Go Test), POMA (Performance Oriented Mobility Assessment), grip strength, MMSE (Mini Mental Status Examination), GDS (Geriatric Depression Scale), and number and classes of medications prescribed. Statistical analysis was conducted using SPSS for Windows. Quantitative variables were compared through t-Student or Mann-Whitney tests, and chi-square or Fisher tests were used for categoric variables. Multivariable logistic regression was applied in order to search for fall predictors. Results: 59 subjects had at least one fall in the study period, and 51 did not fall. Mean age of fallers was  $85,75 \pm 5,97$ , compared to  $83,18 \pm 6,16$  of non-fallers ( $p=0,029$ ). Subjects scored  $4,66 \pm 1,39$  and  $3,75 \pm 1,71$  in Downton Index, respectively ( $p=0,003$ ). FIM-cognitive domain scores were lower for fallers (26,00; 18,00-31,00) than for non-fallers (30,50; 23,50-34,25); ( $p=0,036$ ). GDS scores also differed between the two groups:  $5,67 \pm 3,80$  and  $3,17 \pm 2,22$  ( $p=0,001$ ). No statistically significant difference was found concerning gender, dependency status, grip strength, POMA and TUGT scores, MMSE and number of medications. Logistic regression identified Downton Index as a predictor of falls (OR=1,76 (1,02-3,04)). Conclusion: In this population, the Downton Index predicted fall events. Factors linked to cognitive decline

and positive screening for depression were associated to falls. These findings may contribute to planning fall prevention interventions in LTC settings.

**PB8 258 THE EFFECT OF PHYSIOTHERAPY PROGRAMME IN THE QUALITY OF LIFE IN SUBJECTS WITH OSTEOARTHRITIS GRADE I AND II.**

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Introduction: Osteoarthritis (OA) is a degenerative joint disease that causes deterioration of the articular cartilage, changes in subchondral bone, pain and stiffness motion. Of all joints the knee is the most frequently affected by OA, which leads to the greatest loss in functional performance and incurs the highest social costs. The WOMAC (Western Ontario and Mc Master Universities) is a quality of life specific questionnaire for OA of the knee and hip and was validated for the Portuguese language. It is divided into three subscales (pain, stiffness and physical function) with separate scores, which identify each area. Methods and materials: The purpose of this study was to evaluate pain, joint stiffness and physical functions through the WOMAC before and after physical therapy in patients with knee OA in grade I or II. We evaluated 12 male volunteers in knee OA patients ( $51.42 \pm 6.24$  years) and 15 healthy subjects ( $55.6 \pm 6.75$  years). Every subjects will be selected by physical and radiograph assessment and submitted to a standardized program of physical therapy treatment (flexibility, strength training and sensory-motor), 11 weeks, whereas before and after treatment was applied WOMAC. Results: Significant difference was found between OA and control groups before and after treatment for all sessions of the WOMAC pain ( $p = 0.0004$ ), stiffness ( $p = 0.01$ ) and physical function ( $p = 0.000018$ ). For the analysis between the OA group before and after treatment a significant difference was found for scores on the WOMAC pain section ( $p = 0.003$ ) and physical function ( $p = 0.015$ ). Conclusion: Thus, it appears that the protocol of treatment for 11 weeks was effective in reducing pain and improving functionality of the individual with knee OA, contributing to improved quality of life and emphasizing the importance of exercises in individuals with chronic degenerative diseases.

**PB8 259 FALL IN SENIORS PRESENTING TO THE EMERGENCY DEPARTMENT: DOES MANAGEMENT BY AN INTERDISCIPLINARY GERIATRIC TEAM HAVE AN IMPACT ON PATIENT'S CARE AND OUTCOME?**

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Introduction: Falls is a common presenting complaint for seniors in the Emergency Department (ED). Numerous intervention programs for 'fallers' in the ED have been described in the literature. Most have been based on specialized geriatric nursing in the ED. The management of seniors presenting with falls by an interdisciplinary geriatric team in the ED has not been described. Objective: To describe the interdisciplinary management and outcome of seniors presenting with a fall to the Emergency Department of a large university affiliated hospital in North America. Methods: Prospective observational study. Consecutive seniors presenting in ED with a diagnosis of fall over a 6-month period are included. Information on basic demographic and living arrangements is collected. Description of patient's management and intervention is done using a pre-established protocol. Outcome measures include satisfaction with care, disposition at the time of discharge from ED and rate of return ED visits. Results: Preliminary data on interdisciplinary management of consecutive seniors presenting to the ED with falls is available. Geriatric Liaison Nurse systematically screens seniors with falls and/or fall related injury. Consultations to the most appropriate member of the interdisciplinary team are then done. Aetiologies and interventions are classically multi-factorial, involving most commonly 2 to 3 professionals. Most seniors are discharged home with home care services and geriatric assessment clinics (including Geriatric Day Hospital). A growing percentage is referred to rehabilitation/ convalescence centres. A minority need hospitalisation. Return ED visits is low and often unrelated. More detailed findings from data analysis will be presented. Conclusion: Management of seniors presenting with falls by an interdisciplinary geriatric team in the ED of a large university affiliated hospital has a positive impact on care and outcome. Comparison with other models of care and cost-effectiveness study would be very useful.

**PB8 260 BODY COMPOSITION, MUSCLE STRENGTH AND FUNCTIONAL PERFORMANCE OF AN INDEPENDENT URBAN BRAZILIAN OLDER POPULATION**

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Introduction: the development of sarcopenia is clearly linked to dependency and functional restrictions. Studies on the correlations between body composition and muscle function are scarce in developing countries, where different anthropometric and nutritional characteristics have been described in the rapidly aging population. This study was aimed to characterize and correlate the body composition of the independent older population of an urban area in Brazil with markers of muscle strength and performance in a walking test. Methods and materials: one hundred and one volunteers with no physical or psychic limiting illnesses, of both genders, aged from 60 to 75 years were studied. After clinical evaluation and blood tests, volunteers were submitted to the assessment of body composition by DXA, lower limb performance through the 6-minute walking test (6WT) and handgrip strength by dynamometry. Descriptive analysis of data was performed, as well as bivariate correlation analysis followed by linear regression to correct the influence of height and body mass index (BMI), with the significance level of 0.05. Results: there was high prevalence of overweight and obesity, and 64% of the women and 41% of men had their BMI above 27. Although there was a positive correlation between lean mass (LBM) and BMI, the ratio LBM/fat mass (FBM) was inversely correlated with BMI, specially in women. No linear correlations were identified between handgrip strength and 6WT. While the percentage of FBM was negatively correlated with 6WT in both genders ( $r=0.370$  and  $p=0.022$  in men and  $r=-0.272$  and  $p=0.034$  in women), LBM and appendicular lean mass (ALM) were significantly correlated with 6WT (and handgrip) in men only ( $r=0.439$  and  $p=0.006$  for 6WT and  $r=0.448$  and  $p=0.004$  for handgrip). Conclusion: in this population, correlations of body composition and physical function are essentially different between genders and a better understanding of fat mass influence is fundamental.

**PB8 261 THE EFFECT OF WEIGHT LOSS PROGRAM ON BONE METABOLISM IN JAPANESE OBESE PEOPLE**

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Introduction Recently the metabolic syndrome has been a subject of public interest in Japan. It is necessary for obese people to lose weight in order to prevent the metabolic syndrome. However, the long-term effect of lifestyle intervention for weight loss on bone metabolism is unknown. To evaluate the effects of an intervention program for weight loss on bone metabolism in obese adults, we examined the change of bone mass caused by the one year interventions undertaken in our program (Saku Control Obesity Program (SCOP)). Subjects and Methods Japanese obese subjects aged 40 to 64 with a high body mass index ( $BMI > 28.3 \text{ kg/m}^2$ ) were selected for our weight loss program from those who had undergone a medical checkup at the Saku Central Hospital. They received one year interventions by healthcare professionals to change their dietary habits and physical activity in order to achieve weight loss. Result Of 235 participants, 98 subjects (47 men and 51 women) received an examination of bone mineral density (BMD) at the lumbar spine and hip before and after the intervention. Body weight significantly decreased 6.9 kg and 4.2 kg in men and women respectively. The mean waist circumference and visceral fat area in men and women were also significantly decreased. BMD at the total hip were significantly decreased, however, BMD at the femoral neck and the lumbar spine did not show the significant changes. When divided into tertiles based on weight loss, men in the lowest tertile (weight loss  $< 3.1\text{kg}$ ) did not show a loss of BMD at the total hip. Meanwhile, a significantly larger loss of BMD at the total hip in men was found in the middle and highest tertiles than in the lowest tertile. Conclusion Weight loss induced by the long-term modest intervention may decrease hip BMD in obese adults.

**PB8 262 TOOLS TO ASSESS FALL RISK: COMPARISON OF GAIT SPEED, TIMED UP & GO WITH LORD**

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Introduction: Lord's PPA is a validated fall risk assessment tool. PPA z-scores of  $<\text{less than or equal to } 2.0$  identify individuals at risk for  $>\text{greater than or equal to } 2$  falls. However, the PPA requires  $>\text{greater than or equal to } 15$  minutes to administer and is not easily incorporated into physician visits without additional personnel support. We determined whether performance on 2 shorter tests: gait speed and the Timed Up & Go test (TUG) could discriminate high from low risk fallers (PPA  $>\text{greater than or equal to } 2.0$ ) and potentially help triage patients to a resource intensive falls clinic for comprehensive testing. Methods: We tested 363 consecutive new patients aged 65-100 years at 2 falls prevention clinics in Vancouver, Canada from July 2004-February 2008. We used logistic regression and ROC curve analysis to measure the association of TUG time and 4m gait speed with PPA z-scores, adjusted for age and Mini Mental Status Exam (MMSE) scores, and to identify cut-off values for characterizing high-risk fallers (defined as PPA scores of  $>\text{greater than or equal to } 2.0$ ). Results: Fall clinic attendees were 75% female and  $81 \pm 7$  years

old. Gait speed was  $0.77 \pm 0.28$  m/s. Median TUG time was 16s. Mean PPA z-score was  $2.01 \pm 1.50$ , with 52% classified as high risk fallers. 19% had MMSE scores < 25/30 (median 28). ROC curve analysis indicated that TUG and gait speed could be used to identify high risk fallers with cut points of 14s for the TUG (sensitivity 0.83, specificity 0.65, AUC=0.81) and 0.81 m/s for gait speed (sensitivity 0.80, specificity 0.63, AUC=0.80). Conclusions: We confirmed previous work using a larger sample with a cut point of 14s on the TUG and found that a gait speed of &lessthanorequalto 0.81 m/s identified high risk fallers. These brief measures may facilitate triage of high risk older fallers for detailed fall risk assessments.

#### PB8 263 IN-PATIENT FALLS – CAUSES AND CONSEQUENCES

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**Introduction** This case control study was designed to look at the causes and consequences associated with hospital wide in-patient falls. Methods Consecutive in-patient fallers were identified over a 3 month period using the Incident Information Management System (IIMS). Patient records were reviewed within 48 hours of a fall event being registered on IIMS. Data was collected from the patient records and medication charts. Fallers were matched in a ratio of 1:2 for age, gender, ward and duration of hospital stay. Logistic regression modelling was used to identify predictors of in-patient falls. Results 244 fallers were matched with 122 controls. 28% of hospital falls occurred in Aged Care wards. 89 falls resulted in an injury including 4 fractures and 1 death. 50% of falls occurred within the first 12 days of admission to hospital and 80% within 41 days. In patients with a length of stay of up to 12 days, outlier status (OR 2.481, 95%CI 1.030 - 5.976), cognitive impairment (OR 3.710, 95%CI 1.524 - 9.032) and consuming three or more centrally acting medications in the 24 hours prior to a fall (OR 2.979, 95%CI 1.390 - 6.383) were independent predictors of fall risk. Both cognitive impairment and consuming 3 or more CNS medications remained independent predictors in falls occurring up to 41 days after admission. Conclusion Important independent predictors of risk were identified across a hospital which can potentially inform intervention strategies. The predictors are not always possible to extract from the existing reporting system.

#### PB8 264 NURSE-LED WARD-BASED CONTINENCE REHABILITATION PROGRAM-A BIG FOOTSTEP FORWARD

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**Introduction** Urinary incontinence is a common problem encountered among hospitalized elderly (Bradway, 1998). Fung Yiu King Hospital conducted a point prevalence survey in 1997. The result showed that 68% of in-patient had urinary incontinence on admission. To prevent hospital-acquired urinary incontinence and improve the quality of life of patients and carers, a Nurse-led ward-based continence rehabilitation program has been implemented in the Geriatric Rehabilitation Ward since June 1999. The program was extended to patients over 65 in Medical and Geriatric Ward and Orthopedic Ward from July 2003. Methods A focus assessment was carried out on patients with urinary incontinence on admission. Ward nurses were responsible to identify different types of urinary incontinence by means of the continence assessment form including a problem related checklist. The patients who were identified with overflow, urge and stress incontinence would be referred to Continence Clinic for further management. Meanwhile, the patients who were diagnosed with functional incontinence would be recruited into the program. A specific and constructed management plan was then established according to the identifying problems. The range of cause-specific treatment options included the problems related to environmental barrier, impaired mobility, impaired dexterity, sensory deficits, language barrier and psychological unwillingness. Nursing interventions included diaper weaning regimen, bladder training, environment and clothing modification for toileting, mobility training, communication enhancement, psychological support and compensatory training of adapted device (i.e. bedpan, urinal and commode). The continent status of the patients before and after intervention was compared to check for any improvement in functional incontinence. Results The results are based on data obtained in the program conducted from July 2003 to Nov 2008. There were 587 patients recruited into the program during the period. 51.1% (300) were male and 48.9% (287) were female with a mean age of 81.8. Their average AMT was 7.7. After a mean period of rehabilitation (approximately 18.3 days), 49.5% (268) had no more functional incontinence. 28.8% (156) patients had reduction of incontinence at both day and night time while 7.6% (41) patients had reduction of incontinence at day time and 3.9% (21) at night time. 53 out of 587 (9.8%) had no improvement after the management process. Most of them were due to deterioration in general condition, mobility and cognitive status. Lastly, 46.9% & 91.9% patients were successfully weaned off diaper and Paul's tube respectively. Conclusions / Recommendations Functional incontinence in hospital is preventable and manageable through the program. Although urinary incontinence is multi-factorial, the problem-based managing approach assists nurses to identify patient's incontinence problems as well as to develop a constructed and specific management plan. Ward nurses play the coordinating role successfully in initiating continence rehabilitation program. As a result, promoting

continence should be considered as one of the major nursing practice domains in geriatrics. Urinary incontinence is also a common problem of elderly in the community particularly in institutions. Continence rehabilitation program is highly recommended as an essential element to improve their quality of life.

#### PB8 265 HEART RATE IN ELDERLY WOMEN IN WATER AEROBICS EXERCISE

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**Introduction:** Physical activity leads to several temporary and future gains, looking for successful aging, it also corresponds to a reduction and the postponing of developmental changes. One physical activity in particular, aqua aerobics, is an excellent choice for exercising without harmful effects, because in liquid environment various healthy and beneficial changes can happen, even more for elderly. The justification for this study is the necessity to identify the specific physiological variables, with self-protocol, that could assist with the instructor's future lesson plans, offering healthier benefits. Therefore, the purpose of this research is to analyze heart rate (HR) levels in water aerobics exercise protocol, inside and outside water, in elderly women. Methods and materials: This was a direct research method and fieldwork adopting the quantitative-descriptive method. Sample was composed of 27 elderly women. The data collection took place inside and outside water. HR levels were verified before and after the aqua aerobics basic exercises protocol. Results: All results showed that HR is lower in water when compared to outside. The resting ( $69.07 \pm 10.36$ ) and exercising ( $114.22 \pm 16.32$ ) HR in water was lower when compared to outside ( $77.48 \pm 11.47$  and  $118.74 \pm 18.29$ ; respectively). When comparing the rise from resting to exercising HR, the differences in water and outside were significant. When this group was separated in two groups, with or without medication for high blood pressure, the difference in outside resting HR was significant ( $p=0.027$ ) but the same wasn't true for inside the water. And significant difference was found in exercising HR inside and outside of the water. Conclusion: These results can help exercise prescription for elderly people keeping in mind that this group needs special attention, particularly when high blood pressure medication are taken.

#### PB8 266 IS FUNCTIONAL FITNESS RELATED TO INDICATORS OF SARCOPENIA?

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Recent information indicates that reduced lean tissue mass is associated with functional impairment in late life. Despite several suggestions, a definitive measure of sarcopenia has not been widely accepted. If a feasible field test of functionality could be used to predict measures of sarcopenia, then practitioners could more easily identify those at risk for sarcopenia. The purpose of this study was to examine the relationship between measures of functional fitness and indicators of sarcopenia. Twenty-five women (age  $80.67 \pm 6.72$  years) completed four tests of the Senior Fitness test (chair stand, arm curl, 8-foot up-and-go, and 6-minute walk) as well as hand-grip strength assessment. A total body DEXA scan was used to assess appendicular skeletal muscle (ASM) and fat mass (AFM). Three potential measures of sarcopenia were calculated: ASM divided by height squared, ASM divided by body mass, and the ratio of ASM to AFM. Pearson product moment correlation coefficients were used to assess the relationships between all variables. No significant correlations were observed between functional measures and body composition measures ( $p > .05$ ). These preliminary results do not support the use of hand-grip strength or functional tests from the Senior Fitness Test as field measures of sarcopenia. Despite non-significance, this study does contribute important information regarding which tests might be indicators of sarcopenia. Due to the exploratory nature of this study and the small sample size, this question should be studied further in a larger and more diverse group of elders. Additional measures (i.e. functional tests of muscular power) should also be examined as the field moves toward a more definitive assessment of sarcopenia.

#### PB8 267 OPTIMAL SHOE FEATURES FOR BALANCE, GAIT AND STOPPING: FINDINGS OF THREE SYSTEMATIC STUDIES

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**Introduction:** Despite footwear being an easily modifiable falls risk factor, what constitutes safe footwear for everyday use by older people is still largely unknown. Methods: The effects of common shoe features (elevated heel, soft sole, hard sole, flared sole, bevelled heel, high-collar and tread sole) were systematically compared to standard shoes in three studies examining: (i) standing balance, leaning balance and stepping in 29 older people, (ii) centre of mass (COM)-base of support (BOS) margins and, vertical and braking loading rates in 11 young and 15 older people walking on even and uneven surfaces, and (iii) temporal-spatial gait variables and gait termination in 10 young and 26 older people, on level, irregular and wet surfaces. Results: Elevated heel shoes impaired overall

performance in functional tests of balance and stepping. They were also perceived as lacking comfort and stability and led to a conservative walking pattern characterised by increased step width and double-support time and reduced braking and vertical loading rates on various surfaces. Soft sole shoes increased lateral COM-BOS margin and step width, indicating reduced medio-lateral walking stability. When wearing these shoes, subjects displayed longer total stopping times and on the wet surface, reduced step lengths and shoe/floor angles at heel strike, suggesting an increased risk of slipping. The high-collars shoes improved balance, reflected by increases in the lateral COM-BOS margin, double-support time and step width. Shoes with hard, flared or tread soles or a bevelled heel did not affect balance, gait or stopping ability. Discussion: These three studies revealed that shoes with a low square heel, a sole of medium hardness (shore A-40) and a high-collars provide the greatest stability for older people and are the safest in terms of reducing falls risk when walking and stopping on dry, wet and irregular surfaces.

#### **PB8 268 EFFECTS OF A FLOOR-RISE TRAINING PROGRAM FOR ELDERLY PEOPLE AT RISK OF FALLING**

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**BACKGROUND AND AIMS** Elderly adults often have difficulty to get up from the floor after a fall even when they are not seriously injured. This inability to rise is associated with substantial morbidity and may lead to dependency. Despite these risks, few therapists teach elderly people how to get up from the floor. The main aim of the study was to evaluate the benefits of a floor-rise training program in older adults at risk of falling. **METHODS** Participants: 41 elderly subjects (mean = 84.1 & more or less 5.4 years), at risk of falling (TUG & higher than 14s), non-demented (MMSE & higher than 23) and without any neurologic, muscular or articular disease. Testing: subjects' ability to rise from the floor with the help of a chair was assessed before ( $t_{pre}$ ), just after ( $t_{post}$ ) and 3 months after the end of the training-program ( $t_{3m}$ ). In case of success, rise times were also measured. Training: subjects were trained for 15 min, 2 times a week for 3 weeks. They practiced the intermediate movements necessary to get up and were trained to perform complete floor-rise sequences as soon as possible. **RESULTS** Proportions of subjects able to rise:  $t_{pre}$  = 0.41,  $t_{post}$  = 0.68,  $t_{3m}$  = 0.67. The increase between  $t_{pre}$  and  $t_{post}$  was significant ( $\chi^2$  test,  $p < 0.01$ ). Rise times:  $t_{pre}$  = 34 s,  $t_{post}$  = 24 s,  $t_{3m}$  = 24 s. The decrease between  $t_{pre}$  and  $t_{post}$  was significant ( $t$  test,  $p < 0.01$ ). Proportions and rise times remain stable at  $t_{3m}$  compared to  $t_{post}$  ( $p > 0.05$ ). **CONCLUSIONS** This study shows that a short rise-training program is sufficient to significantly improve the ability of elderly people at risk of falling to get up. Considering the complications associated with the inability to rise after a fall, therapists in charge of such patients should systematically teach them how to get up.

#### **PB8 269 THE EFFECT OF THE FUMANET® EXERCISE ON THE ELDERLY WALKING ABILITY.**

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**Introduction:** It is widely recognized that exercise is very important to improve ADL and prevent falls for the elderly. In order to make these exercises easier for them, a new exercise method, named the Fumanet® exercise, is invented. Fumanet® is a 4-meter-by-1.5-meter net. The Fumanet® exercise uses 50 square centimeter meshes and features low impact physical movement. Participants are asked to walk across the net without stepping on the ropes or getting caught in the net. **Method and Materials:** Non-randomized controlled trial was conducted to examine the effect of the Fumanet® exercise. 21 people of an exercise group (9 males, 12 females, average age 79.0) voluntarily participated in 60 minutes Fumanet® exercise every once in a week. 17 people of a control group (8 males, 9 females, average age 80.6) carried out ordinary daily rehabilitation program in every once in a week. TUG (timed up and go test) was measured for both groups before and after the 6 weeks trial. Result: TUG was significantly shortened ( $p=0.009$ , Wilcoxon matched pairs signed ranks test) and 9 % improvement was observed only in the Fumanet® exercise group in the period of 6 weeks. Conclusion: The result indicated that Fumanet® exercise improved the walking ability of the elderly. Cooperation between the motion of exercise and the sense of sight seems to be effective to improve of the body balance for the walking ability. Participants of an exercise group were strongly required visual attention to make their foot away from net and step over the ropes, while they were walking across the net.

#### **PB8 270 NEUROPROTECTIVE AND CONSEQUENT NEUROREHABILITATIVE OUTCOMES IN ELDERLY WITH SEVERE BRAIN CONDITIONS, TREATED WITH NEUROTROPHIC DRUGS ACTOVEGIN® OR/AND CEREBROLYSIN® - PRELIMINARY RESULTS**

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**Objective:** assessment of the outcomes obtained in our PRM Clinic with Actovegin®, Cerebrolysin® and combined - neuroprotective/ neurotrophic therapy. **Materials and Methods:** Three homogeneous lots of elderly, admitted between 2007 - 2008: 62 with Actovegin®, 39 with Cerebrolysin® ; 67 with Actovegin® + Cerebrolysin®. The mathematical method(s) used, consisted within analyses of variance (ANOVA). There have been assessed 13 parameters, among which the most contributive ones were: admission/ discharge Functional Independence Measure (a/d FIM), (global) status at discharge (ES), number of physical therapy days (PT), hospitalization length (H), days until the recovery of: functional (orthostatism enabling) knee extension (EXR), (assisted) walk between parallel bars (WPB), cane assisted walk (CWR), first time independent stairs ascent/ descend (SR). **Results:** For the Actovegin® lot, the most significant statistical correlations were PT- H ( $r = .99$ ;  $p=.001$ ) and EXR - WPB ( $r = .87$ ;  $p=.001$ ); the most statistical significant predictors of the dependent variables d FIM, were independent variables: a FIM ( $T=9.553$ ;  $sig.T=.000$ ), and ES ( $T=7.620$ ;  $sig.T=.000$ ); and respectively, for a FIM: d FIM ( $T=9.553$ ;  $sig.T=.000$ ) and ES ( $T=-4.509$ ;  $sig.T=.000$ ). For the Cerebrolysin® lot, similarly: PT - H ( $r = .99$ ,  $p=.001$ ) and CWR-SR ( $r = .97$ ,  $p=.001$ ); d FIM was explicited by ES ( $T=10.494$ ;  $sig.T=.000$ ), a FIM ( $T=7.466$ ;  $sig.T=.000$ ) and respectively: a FIM, by d FIM ( $T=7.466$ ;  $sig.T=.000$ ) and ES ( $T=-5.179$ ;  $sig.T=.000$ ). For the Actovegin® + Cerebrolysin® lot, similarly: PT - H ( $r = .99$ ;  $p=.001$ ); EXR - WPB ( $r = .87$ ;  $p=.001$ ); d FIM were explicited by a FIM ( $T=9.553$ ;  $sig.T=.000$ ), ES ( $T=7.620$ ;  $sig.T=.000$ ) and respectively: a FIM, by d FIM ( $T=9.553$ ;  $sig.T=.000$ ) and ES ( $T=-4.509$ ;  $sig.T=.000$ ). **Conclusion:** Our initial - in elderly - study, emphasized a significant variance, favourable to an important therapeutic benefit for the combined use (simultaneously/ sequential) of Actovegin® and Cerebrolysin®. **Key words:** Actovegin, Cerebrolysin, neuroprotective agents.

#### **PB8 271 CLINICAL EVALUATION OF NPWT FOR CHRONIC WOUNDS TREATMENT IN HOSPITALIZED ELDERLY**

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**INTRODUCTION:** Negative pressure wound therapy (NPWT, VAC® therapy) is a topical treatment used to promote healing in acute and chronic wounds. It is seldom used in the elderly with bedsores. The aim of this study is to evaluate the benefit of NPWT for pressure ulcers in hospitalized geriatric patients. **METHODS AND MATERIALS:** The study was carried out at René Muret Geriatric University Hospital (550 beds). A retrospective review of medical records was performed for patients treated with NPWT between June 2006 and January 2009. Demographics, diagnosis, nutrition status, Norton scale value, associated treatments, localization and stage of pressure ulcers, length of NPWT and withdrawal reasons were also recorded. **RESULTS:** 14 patients (9 females), mean age 81 years, were evaluated. Most patients had a critical health status and presented with severe denutrition before treatment. NPWT was used on sacral bedsores for 11 patients (stage III = 3, stage IV = 8); on heel pressure ulcers for 3 patients (stage III = 2, stage IV = 1). Mean score of Norton scale was 10. Mean length of NPWT was 21 days [10; 35]. 13 favourable evolutions (92, 8%) were observed (recovery for 3 patients, granulation for 10). **DISCUSSION:** In our study, the important proportion of positive response showed a real clinical benefit of NPWT. This profit is observed in spite of the wound stage often advanced, due to the general health status of these patients; independently of Norton's score and evolution of the wound or duration of the treatment. The nutritional aspect seems important and need to be further analyzed. **CONCLUSIONS:** This study shows that the NPWT is effective in treatment of chronic wounds in that population. It is necessary to pursue the search for predictive factors. The economic interest of this practice versus classic treatment remains to be confirmed.

#### **PB8 272 FUNCTIONAL STATUS ONE YEAR AFTER HIP FRACTURE: RESULTS FROM THE SARCOPEANIA AND HIP FRACTURE (SHIP) STUDY**

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**Introduction** This report investigates the pattern of change in 8 areas of function during the first 12 months following hip fracture in participants of the SHIP study. **Methods and**

**Materials** Community-dwelling persons (n=193, 81 ± 8 years, 72% women) admitted for hip fracture to 3 acute care hospitals in Sydney, Australia were followed prospectively. Function was assessed at baseline (in reference to pre-fracture period), and 4 and 12 months following hip fracture using Part C (Activities of Daily Living) of the National Health and Nutrition Examination Survey I. A summary functional score, and eight separate functional scores (Dressing, Eating, Hygiene, Walking, Transferring, Errands/Chores, Reaching, and Grip) were obtained for each time-point. Results Mean functional scores were 9 to 51% poorer in all eight areas at 4 and 12 months when compared to pre-fracture. In the period between 4 and 12 months, mean scores improved for Dressing and Eating, were poorer for Reach and Grip, and were unchanged in other areas. Only 22% of participants were at their pre-fracture level of function (>= summary score) at 4 and 12 months following hip fracture. At 12 months when compared with function at 4 months, 37% of the cohort had improved, 50% had deteriorated, and 13% were at the same level of function. Walking was most impaired (44% at pre-fracture level at 4 months, 45% at pre-fracture level at 12 months), and grip was least impaired (84% at pre-fracture level at 4 months, 74% at pre-fracture level at 12 months). Large inter-individual variation was observed for direction of change in scores for all areas of function between all time-points. Conclusion One year following hip fracture only about one-fifth of persons are at their pre-fracture level of function. Large heterogeneity exists in functional recovery during the first year following hip fracture.

#### PB8 273 COMPARISON OF PHYSIOLOGICAL AND FUNCTIONAL PERFORMANCE BETWEEN CAUCASIAN AND CHINESE OLDER PEOPLE

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Older community-living Chinese and Japanese have significantly lower falls rate (approximately 20-25%) than Caucasian (typically 30-35%). Previous attempt in identifying factors mediating such rate differences between Japanese and Caucasian older women reported that Japanese women had better functional and balance performance while Caucasian women were stronger and had quicker reaction times<sup>1</sup>. To date, no studies have compared the prevalence of fall risk factors between Chinese and Caucasian groups and reasons for the lower falls rate remain unknown. A cross-sectional study of 2 elderly cohorts consisted of 278 Chinese in Tainan, Taiwan and 298 Caucasian in Sydney, Australia. A range of standardised physiological and functional performance measures were assessed. Responses to subjective health, falls history and falls-related questions were also recorded. Significantly fewer Chinese older people (29.0%) reported having fallen in the past year compared to the Caucasian group (36.9%) ( $p=0.04$ ). After adjusting for age and gender, the Caucasian cohort performed better in both physiological (simple reaction time, lower limb proprioception and tactile sensitivity, postural sway, contrast sensitivity and depth perception) and functional (sit-to-stand time, alternate stepping time and near tandem stand with eyes closed) measures. The Chinese cohort were significantly less likely to rate their balance as good, and significantly more likely to report a fear of falling. The difference in falls rates between the two populations could not be explained by physiological or functional measures. However, it appears that the Chinese cohort demonstrated a greater appreciation of their balance limitations and risk of falling. Further longitudinal studies are required to investigate the role of behavioural, psychological and social factors as falls risk factors in Chinese older people. <sup>1</sup>Davis JW, Nevitt MC, Wasnich RD, et al. A Cross-Cultural Comparison of Neuromuscular Performance, Functional Status, and Falls Between Japanese and White Women. *J Gerontol A Biol Sci Med Sci* 1999; 54A:M288-292.

#### PB8 274 INTERACTION BETWEEN THE LEVEL OF WALKING SPEED AND THE ABILITY TO MULTI-TASK CONDITIONS IN OLDER PEOPLE

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**Introduction:** The walking speed is a common measurement of physical performance in older people. They require more attention to walking in the multi-task conditions than simple-task one. The purpose of this study was to determine the relationship between the maximum walking speed and the reaction time under different conditions in community-dwelling older people. **Methods and materials:** We evaluated data on 135 older people (92 women and 43 men; age: 68 to 91 years; mean age: 77.6 years). Participants performed the 5m walk tests at a maximum pace. The reaction time was measured under the three different conditions; quiet standing (simple-task), stepping in place (dual-task) and counting backward while stepping in place (triple-task). Participants were required to push a handheld button as quickly as possible in response to a visual stimulus. **Results:** Participants were classified by the two levels of walking speed. Both of the two levels, the reaction time increased with task difficulty. For reaction time, the results showed that there are statistically significant main effects of task ( $F=6.6$ ,  $p<0.05$ ) and level of walking speed ( $F=13.7$ ,  $p<0.01$ ). In addition, statistically significant interaction between task and level of

walking speed was revealed in reaction time ( $F=4.9$ ,  $p<0.01$ ). **Conclusion:** The results suggest that the ability to multi-task may have influenced by physical performance such as the walking speed in community-dwelling Japanese older people.

#### PB8 275 ASSESSMENT OF THE IMPACT OF PHYSICAL CONDITION ON THE HEALTH AND FUNCTIONAL STATUS OF COMMUNITY DWELLING OLD PEOPLE

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**Introduction –** The aging process is characterized by biological changes, specially the deterioration of global physical condition. In considering new paradigms for the prevention and treatment of disease and disability, assessing the influence physical condition has on other variables that follow the aging process, is of extreme importance. The purpose of this study was to investigate relationships between physical condition and the health status of the old people, so as in their functional status. Methods and materials – the sample was derived from a larger study designed to examine the predictors of the active ageing (WHO, 2002), conducted in a sample (N=1266) of old people (mean age 70.3 years, SD 8.66), living in the community, in mainland of Portugal and in the islands of Madeira and Azores. Different measures on physical condition (grip strength and self-report physical condition), functional status (composite index of ADLs e IADLs) and health status (number of medical diagnosis, self-reported health, medication use and visual impairment) were used. Results – the cross sectional analyses confirm that physical condition decreases with age. Physical capacity is associated with all the variables tested. Self-reported health was highly correlated ( $p<.001$ ) with several physical capacity measures. 46.7% of the participants have a good physical condition and rate their health as "good" likewise, 90% of those presenting health problems that intervene with their professional and house activities reveal a frail physical condition. Conclusions – the results are analyzed in order to comprehend one of the top challenges in active aging, the formulation of a preventive health care to the older population. Taking in consideration the influence of physical condition on these variables, and the imperative implementation of interventions designed to maintain or improve the physical condition, some recommendations on this issue are presented within the active ageing framework.

#### PB8 276 MIDLIFE VASCULAR RISK AND OVERWEIGHT PREDICT FRAILTY IN OLD MEN

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**Introduction:** An interconnection between cardiovascular disease and frailty has been proposed but it is not known whether these conditions also share similar risk factors. We explored this in a socioeconomically homogenous sample of Finnish men followed from midlife to old age. **Methods:** In 1974, cardiovascular risk was assessed in 1815 healthy middle-aged men (the Helsinki Businessmen Study). They were followed up for 26 years. Frailty status and disease prevalence were appraised using postal questionnaire including RAND-36 in 2000 (response rate 87.8%, mean age 73 years). Four criteria were used to define frailty: 1) >5% weight loss from midlife, or BMI <21 kg/m<sup>2</sup> in 2000; 2) physical inactivity in 2000; 3) low vitality (RAND-36); 4) physical weakness (RAND-36). The respondents with 3 to 4 criteria were classified as frail, with 1 to 2 criteria as prefrail, and with zero criteria as robust. Total mortality from 2000 to 2007 was assessed from central registers. **Results:** According to our criteria, 34.2%, 54.1% and 11.8% were classified as robust, prefrail and frail, respectively. Both prefrailty and frailty were powerful predictors ( $P<0.001$ ) of mortality between 2000 and 2007, even after adjustment for prevalent diseases in 2000. As compared to robust old men, frail men had significantly ( $P=0.02$ ) higher body mass index in midlife but lower in old age. Also systolic blood pressure was higher and smoking more frequent in midlife among those who became frail in old age ( $P$  for trend  $<0.001$ ). Consequently, age-adjusted composite risk score of coronary artery disease in midlife was 1.7, 1.8, and 2.1 among robust, prefrail and frail men, respectively ( $P=0.04$ ). **Conclusion:** Cardiovascular risk and overweight in midlife were associated with characteristics related to frailty in old age. Hence, attempts to prevent vascular disease may also have significance in preventing frailty in later life.

#### PB8 277 RESPIRATORY REHABILITATION PROGRAM IMPLEMENTED TO THE HOSPITALIZED ELDERS WITH COPD

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**Introduction:** Older people declare that illness, pain or injury force them to restrict their activities on a regular basis. Restricted activity may prove to be a useful indicator of permanent functional decline. Patients reported five different problems as causes for restricted activity. Respiratory rehabilitation is an integral part of the clinical management and health maintenance of patients with chronic respiratory disease who remain symptomatic or continue to have decreased function despite standard medical treatment.

**Methods and materials:** The respiratory rehabilitation program performed by the medical team, psychotherapist and kinetotherapists includes all symptomatic patients with restrictive, obstructive or mixed ventilatory dysfunction. At the admission, the patients are assessed by case history, physical exam, dyspnea on the Medical Research Council scale, quality of life questionnaire (MRF28, Saint George, Dijon), pulse oxymetry, ECG at rest, spirometry and bronchodilatatory test, meeting patients in GOLD stages for COPD and calculation of the BODE score, thoracic radiography, other explorations related to the pathologies, and the exploration of the exercise capacity. Varying with the exercise capacity assessed by the 6 minutes walk test, by cycloergometer 25 W test and by cardiovascular exercise test, the patients were divided in 4 groups, and so they can benefit by specific respiratory rehabilitation programs. **Results:** 1. Reducing symptoms, decreasing disability, increasing participation in physical and social activities, and improving the overall quality of life for patients with chronic respiratory disease. 2. Achieving goals through patient and family education, exercise training, psychosocial and behavioral intervention, and outcome assessment. 3. The rehabilitation intervention is geared toward the unique problems and needs of each patient. **Conclusion:** Respiratory rehabilitation is a multidimensional continuum of services directed to persons with pulmonary disease and their families, performed by an interdisciplinary team of healthcare professionals, to achieve and maintain the individual's maximum level of independence and functioning in the community.

**PB8 278 ASSOCIATION OF HALLUX VALGUS AND FOOT FUNCTION IN OLDER MEN**

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**Introduction:** Hallux valgus is common deformity of the metatarsophalangeal joint that also affects elderly people. The aim of this study was to investigate the association between hallux valgus and foot function in older men. **Methods and Materials:** One hundred and six feet of fifty three older men (mean age: 73.79±7.08 years) were assessed. Hallux valgus was evaluated using The Hallux Valgus Index (HVI) which is a goniometric measurement of the angle between the first metatars and phalanx from medial side of the foot and the Hallux Valgus Grading Score (HVGGS) (Grade 0-3). The foot function was assessed with the timed up and go test (TUG), walking speed and the Foot Function Index (FFI) which is a questionnaire (a higher score indicating worse foot function) covering foot pain, disability and functional limitation. To determine the foot pain was used Visual Analog Scale (VAS). **Results:** HVI was  $17.32 \pm 11.29$  degrees for right foot and  $16.45 \pm 10.65$  degrees for left foot. There were poor correlations between HVI with TUG ( $r=0.12$ ,  $p>0.05$ ), walking speed ( $r=-0.19$ ,  $p=0.05$ ), FFI ( $r=0.31$ ,  $p>0.05$ ), VAS ( $r=0.27$ ,  $p>0.05$ ), and HVGGS with TUG ( $r=0.08$ ,  $p>0.05$ ), walking speed ( $r=-0.11$ ,  $p>0.05$ ), FFI ( $r=0.14$ ,  $p>0.05$ ), VAS ( $r=0.10$ ,  $p>0.05$ ). **Conclusion:** The results showed that the degree of hallux valgus by itself isn't reflected in the values of FFI although it partially affected the walking speed in older men.

**PB8 279 FACTORS ASSOCIATED WITH SELF-RATED HEALTH IN COMMUNITY-DWELLING INDEPENDENT JAPANESE OLDER PEOPLE**

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**Introduction:** Self-rated health (SRH), a subjective measure of health, has been shown to be a reliable predictor of functional decline. Relationships between physical performance (muscle strength, balance, flexibility and mobility), higher-level functional capacity, habituation of exercise and self-rated health in community-dwelling independent Japanese older people were examined. **Methods:** Ninety seven older individuals participated in the study including 65 women and 32 men; aged 75 to 91 years (mean age 80.1 years). Participants were asked about their health through the question: "In general terms, how would you describe your health: very good, good, poor, or very poor?" and their higher-level functional capacity according to the Tokyo Metropolitan Institute of Gerontology (TMIG) index of competence. We assessed their habituation of exercise using stages of behavior change within a questionnaire. Participants were measured lower muscle strength, one-leg standing test, flexibility and 5-m walking time. SRH was dichotomized into good (very good or good) and poor (poor or very poor). **Results:** Overall 79.4% respondents rated their health as good. Good responders showed a significantly higher physical performance as compared to respondents rated their health as poor (lower muscle strength;  $p < 0.05$ , one-leg standing test;  $p < 0.01$ , 5-m walking time;  $p < 0.01$ ). We found significant differences in habituation of exercise between good SRH (42.1% habitual exercisers vs. 57.9% non-habitual exercisers) and poor SRH (15.8% habitual exercisers vs. 84.2% non-habitual exercisers). However, there were no statistically significant differences in higher-level functional capacity between good SRH and poor SRH ( $p = 0.23$ ). **Conclusion:** These results suggest that in spite of there are no differences in higher-level functional capacity, higher physical performance and habituation of exercise associate with good self-rated health in community-dwelling independent Japanese older people. Physical

performance and habituation of exercise might be important factors to maintain good SRH in older people.

**PB8 280 CLINICAL ASSESSMENTS OF BALANCE ASSOCIATED WITH INCREASED FALL RISK: A PROSPECTIVE STUDY**

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**Introduction:** Impairment in balance is a major predictor of falls in older adults but there is a lack of information on how to effectively measure it in the clinical setting. Balance assessment features prominently in clinical practice guidelines for fall prevention screening, which should have easy and valid measurement tools to identify increased future fall risk. The objective of the study was to evaluate the independent contribution of the clinical assessment of balance on future fall risk using five methods to quantify balance impairment on the outcome any fall. **Methods and materials:** Sub-sample from Project to Prevent Falls in Veterans (n=182, mean age=79.7 years, 70% male). A questionnaire and comprehensive geriatric assessment were performed at baseline. Prospective falls were collected monthly for 1 year. Balance impairment measured by single leg stance, tandem stand, limits of stability, observational gait assessment, and the self-report of balance problems was evaluated. Multivariable modified Poisson regression modeling was used to obtain relative risks (RR). **Results:** Seventy-eight people (43%) fell. Prevalence of balance impairment varied with the method used; single leg stance (63%), tandem (43%), self-report (30%), limits of stability (24%) and unsteady gait (17%). Adjusted RR estimates were statistically for single leg stand [RR=1.58 (1.03, 2.41)], limits of stability [RR=158 (1.02, 2.09)] and self-report of balance problems [RR=1.46 (1.02, 2.09)]. **Conclusions:** The number of people identified as having a balance impairment varied with the measurement tool used to clinically assess balance, therefore measurement tools are not interchangeable or equivalent in defining an at risk population. The self-report of balance problems, single leg stand test, and the limits of stability test were associated with increased risk for any fall in this population of community-dwelling older adults. A finding of impairment using these measurement tools indicates an individual who would benefit further comprehensive geriatric assessment.

**PB8 281 BODY COMPOSITION INDICES AND FUNCTIONAL DISABILITY IN OLDER WOMEN: THE EPIDOS STUDY**

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**Introduction:** The link between low muscle mass and functional disability is not established in elderly. The aim of the study was to assess the association between body composition indices, including body mass index (BMI), waist circumference (WC) and muscle mass (MM), and functional disability among older women. **Material and methods:** Between 1992 and 1994, 7598 women aged 70 years and older were included in the EPIDOS cohort study in 5 French centres. Functional disability was assessed by the Instrumental activity of Daily Living (IADL) scale and Short Performance Physical Battery (SPPB). Muscle mass was assessed by dual-energy x-ray absorptiometry (DEXA). Association between body composition indices and functional disability at baseline was estimated using multivariable logistic regression models adjusted for age, marital status, educational level, smoking, alcohol consumption and chronic conditions. **Results:** At baseline, 2500 women (33%) had a self-reported functional disability (IADL) and 3672 (51.8%) a physical limitations assessed by the SPPB. Adjusted odds ratios of fourth quartile of BMI ( $\&\geq;$ ;  $27.9 \text{ kg/m}^2$ ) compared to second quartile ( $22.5 \text{ } \&\leq;$ ;  $BMI \&\leq;$ ;  $25.1 \text{ kg/m}^2$ ) were 2 (95% confidence intervals (95%CI): 1.8-2.3) and 1.9 (95% CI: 1.6-2.2) respectively for self-reported functional disability and physical limitations. Similarly, adjusted odds ratios of fourth quartile of WC compared to first quartile were 2.34 (95% CI: 2.0-2.7) and 2.72 (95% CI: 2.3-3.2). Adjusted odds ratios of first quartile of muscle mass (sarcopenia) compared to fourth quartile were 1.4 (95% CI: 0.96-2.2) and 1.52 (95% CI: 1.03-2.24) after additional adjusted for BMI. **Conclusion:** Increase of body mass index and waist circumference and decrease of muscle mass were significantly associated with functional disability in older women.

**PB8 282 ASSESSING OLDER PATIENTS AT THE POINT OF HOSPITAL ADMISSION - SIMPLE CLINICAL CRITERIA IDENTIFY FRAILTY**

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**Introduction:** Frailty is recognised as a crucial concept in Geriatric Medicine yet there is debate about how best to identify it. Validated tools such as the Rockwood Frailty Index (FI) are cumbersome to use in clinical practice. In our hospital we developed simple clinical criteria to identify patients suitable for admission to Care Of The Elderly (COTE). We sought to determine if these criteria identify frailty. **Methods:** We assessed consecutive patients aged 65 or older with unscheduled admission to acute medicine in a Scottish

district general hospital in March 2008. Our criteria determined suitability for COTE or general medicine care. Baseline characteristics, length of stay and mortality during the index admission and at 3, 6 and 9 months were recorded. A FI was constructed using routinely recorded data and calculated by retrospective case note review in 200 patients. Results 312 patients were admitted. 58% were suitable for COTE by criteria. Compared with general medical patients, COTE patients had higher mortality during index admission (17.7% vs 3.8%, P=0.0002), at 3 months (24.7% vs 7.7%, P<0.0001), 6 months (31.9% vs 8.5%, P<0.0002) and 9 months (33.5% vs 10.8%, P<0.0001). Hospital length of stay was longer for COTE patients (mean 18.9 vs 6.9 days, P<0.0001). The FI predicted mortality during the index admission and at 3.6 and 9 months. Less frail patients (FI=0-0.2) had a mortality rate of 1.6 % at 9 months whilst frailer patients (FI=0.4-0.6) had a mortality rate of 45.3% (P<0.0001). The proportion of patients suitable for COTE by criteria increased in a linear fashion with FI. Inter-rater reliability was calculated for the criteria ( $\kappa$ =0.78) and for the FI ( $\kappa$ =0.94). Conclusion Our simple clinical criteria correlate with the frailty index and predict mortality.

**PB8 283 IS REHABILITATION FOLLOWING A STROKE SUFFICIENTLY ATTENTIVE TO SOCIAL ROLES?**

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Introduction: Intensive rehabilitation following stroke focuses principally on the remediation of capabilities and on the restoration of independence in daily activities. Then the person returns home to resume their social roles (including responsibilities, community life, interpersonal relationships, and leisure). We hypothesized that the ability of older adults to carry out their daily activities at rehabilitation discharge would be weakly associated with the expression of their social roles 6 months later. Method: The study followed 111 post stroke older adults (mean age 77 years). The Functional Autonomy Measurement System (SMAF) was used to obtain a daily activities measure at discharge. Data collected at 6 months included socio-demographic information, capability measures as well as a measure of social roles (Assessment of Life Habits) which comprises four life domains: responsibilities, community life, interpersonal relationships, and leisure. Hierarchical regression analyses were conducted to isolate the association between daily activities and social roles by controlling for capability variables (e.g. physical foot, physical arm, language, cognitive, depression). Results: Independence in daily activities increased the variances by 7 &% to 8 &% for social roles (total score), responsibilities and community life models. The total explained variances ranged from 47 &% to 52 &% with corresponding beta values for daily activities ranging from -0.37 to -0.41. The lack of association between independence in daily activities and both interpersonal relationships and leisure were striking results. The lowest social roles' scores were in the leisure domain. Conclusion: The association between daily activities at discharge and social roles 6 months following rehabilitation varies depending on the social role domain. Leisure may not be sufficiently addressed during rehabilitation warranting a "second wave" of rehabilitation upon return to the community.

**PB8 284 THE PREVALENCE ANALYSIS OF ISCHEMIC AND HEMORRHAGIC STROKE IN THE ELDERLY POPULATION AND CORRELATION STUDY WITH LOCAL AVERAGE TEMPERATURE: A HOSPITAL-BASED CROSS-SECTIONAL STUDY IN SOUTHERN TAIWAN**

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Introduction: Stroke is a commonly encountered neurologic disorder in the elderly population in Taiwan, but the prevalence and extent of severity is not clear. Previous studies suggest there might be an association between weather pattern and risk for ischemic stroke. Methods and materials: We conducted a cross-sectional study by reviewing the stroke patients who admitted to Chang Gung Memorial Hospital for six years period (Jan 2003-Dec 2008), and patients over 60 were recruited for study. Comparative studies including type of stroke, gender, length of admission, peak prevalence age were analyzed. Local average temperatures were also calculated for correlation. Results: 6733 patients reviewed, 3583 (53.2%) were over sixty years. Among them, 1089(30.4%) were hemorrhagic and 2494 (69.6%) were ischemic. The female to male ratio is 0.77(477/612) in ischemic stroke and 0.81 (1123/1371) in hemorrhagic stroke. The average length of admission is 11.51-12.22 days (95% confidence interval) in ischemic and 11.25-13.85 days in hemorrhagic stroke patients. The peak prevalence age is 76 in ischemic and 71 in hemorrhagic stroke patients. The regression analyses of prevalence in stroke patients over 60 and local temperature are: R square 0.095 in 2003, 0.099 in 2004, 0.259 in 2005, 0.068 in 2006, 0.015 in 2007, 0.003 in 2008 respectively. Conclusion: The patients between 70-80 are 1.4 times more likely to have stroke than those between 60-70, 2.14 times than those between 80-90. Above 60, the overall prevalence of ischemic stroke is about 2.3 times more than hemorrhagic stroke. Men are about 1.5 times more likely to have stroke than women. The peak prevalence age is older in ischemic than hemorrhagic stroke. The severity hemorrhagic stroke is statistic significant more than ischemic stroke, according to

length of admission (p<0.05). In stroke patients over 60, there is no significant correlation between the prevalence and local average temperature.

**PB8 285 THE RELATIONSHIP BETWEEN THE MUSCLE STRENGTH OF LOWER EXTREMITY MEASURED BY LEG PRESS MACHINE AND BASIC ACTIVITIES OF DAILY LIVING IN FRAIL OLDER PEOPLE**

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Introduction: The purpose of this study was to explore the relationship between muscle strength of lower extremity measured by leg press machine and basic activities of daily living (BADL) status in frail older people. Methods: The participants were 123 older adults (86 women, mean age  $78.6 \pm 6.3$  years) who utilized day-care services. The BADL status was assessed by the Barthel Index (BI). The physical performances measurements included the grip strength, 1 repetition maximum (1RM) of leg press, one-leg standing (OLS), functional reach test (FRT), and 10m-walking time as maximum speed (MWS). Mann-Whitney test was used to compare the physical performances between the participants with 100 point in the BI (independent) and those with less than 100 point in the BI (dependent). Multiple logistic regression model was used to examine the relationship between the BADL dependency and the physical performances. Results: The independent participants in the BADL showed significantly higher functioning in the 1RM, OLS, FRT, and MWS than the dependent participants in the BADL. Multiple logistic regression analysis revealed that only 1RM was associated significantly with the BADL disability (OR 0.27, 95% CI 0.11-0.69, P = 0.027). Conclusion: The results suggested that muscle strength of lower antigravity muscles was more important performance to maintain the BADL than the grip strength, balance, and gait performances in the frail older adults.

**PB8 286 PERFORMANCE-ORIENTED MOBILITY ASSESSMENT OF ELDERLY ATTENDED AT DAY CENTER, A CARE ASSISTANCE OF RESIDENCIAL ISRAELITE ALBERT EINSTEIN, SAO PAULO-SP, BRAZIL**

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The objective of this study is to analyze and describe the mobility performance of these elderly attending activities twice a week, being supported by a multi-professional team at the institution. POMA (Performance-oriented mobility assessment), TUG (Time get up and go test) and hand grip were the tools used in the methodology to evaluate the 16 elderly with ages between 68 and 89. Descriptive analysis were held for the continuous variables (age, hand grip, gait and balance) and for the categorical variables between two groups, the Fisher and Mann Whitney exact test, the Spearman correlation coefficient and, at last, the level of significance adopted for the statistic tests was of 5%, i.e., p<0.05. This way, it was observed that the application of the tools used are complementary in functional capacity assessment and the consequent motor performance, and when analyzed with the hand grip, predictors of frailty, prevention of fall risks and promotion of active ageing can be visualized, which reinforces the initiative of maintaining tools for assessment in this Day Center model. For gait and balance, 25% showed high risk of fall; for hand grip, the significant difference occurred in the male gender. There was a significant correlation between the age range and the balance, where the higher the age the lower the score of balance. A significant difference was noted among groups, with larger values of gait time for the ones with high risk of fall. This fact is confirmed in other studies in the international literature, as for the POMA total score, being known that it brings damages to the physic and subjective functional performance of elderly and we can infer measures directed to the Day Center, according to the management of this institution.

**PB8 287 THE RELATIONSHIP BETWEEN THE FREQUENCY OF UTILIZING A DAY-CARE PROGRAM AND THE EFFECTS ON PHYSICAL FUNCTIONS IN FRAIL OLDER PEOPLE**

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Introduction: The purpose of this study was to identify the relationship between the frequency of utilizing a day-care program and the effects on physical performance or activities of daily living (ADL) status in frail older people. Methods: The participants were 51 older adults (46 women, mean age  $80.7 \pm 7.5$  years) who utilized day-care programs with once a week (n = 8) and with twice a week (n = 43). The programs included stretching, muscle strength of lower extremities (60% of 1 repetition maximum), balance retraining using form, and gait exercise. ADL functions and physical performances were assessed by the Tokyo Metropolitan Institute of Gerontology (TMIG) index and the grip strength, muscle strength in leg-press, one-leg standing (OLS), functional reach test (FRT), timed up and go test (TUG), and maximum 10m-walking speed (MWS), respectively. The

participants performed the tests before and after 3 month study period. Results: The participants with exercise twice a week improved significantly the grip strength, OLS, FRT, TUG, and MWS ( $P < 0.05$ ) after the 3 month period, although there was no significant improvements in the participants with exercise once a week. Conclusion: The day-care exercise twice a week could improve muscle strength, balance, and gait performances in the older adults. Our study results suggested that exercise programs should be performed at least twice a week to improve physical performances in the older adults.

**PB8 288 RISK FACTORS OF FALLS IN COMMUNITY-DWELLING ELDERLY IN TAIWAN: A PROSPECTIVE COHORT STUDY**

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Introduction: There are very few population-based studies that examine the risk factors for falling in Asian countries. This longitudinal cohort study contributes to this literature by examining the risk factors for falls in community-dwelling elderly in Taiwan. Methods and materials: Analytical Data came from 2003 and 2007 Survey of Health and Living Status of the Elderly in Taiwan, nationally representative sample from community-dwelling elderly in Taiwan. Logistic regression models were used to examine the relationships between risk factors in 2003 and falls in 2007. Risk factors considered included pain, incontinence, cognitive status, depression, exercise habit, and activities of daily living. Control variables included demographics, vision, comorbidity, and social support. Results: Among the risk factors examined, depression and activities of daily living most significantly predicted falls in 2003. Conclusions: Future study should examine the effectiveness of depression treatment and activities of daily lives intervention in preventing falls.

**PB8 289 SARCOPENIA: REVERSIBILITY OF THE PROCESS QUANTIFIED IN A SEGMENT OF THE THIGH BY WAY OF CT SCAN IN ELDERLY WOMEN BY AN EXERCISE PROGRAM OF PROGRESSIVE RESISTANCE**

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Introduction: Sarcopenia is a characteristic of aging which involves alterations in the quality and, most importantly, the amount of movement, resulting in a high rate of disability and dependence in the Elderly. A proper Program of Training in Progressive Resistance (PTPR) produces a physiological response that increases functional independence and has a positive influence on the risk factors of the elderly improving their quality of life and self sufficiency. Purpose: To determine whether the PTPR delays or reverts the process of Sarcopenia in the lower limbs of institutionalized elderly women. Material and Method: 40 institutionalized elderly women, between 65 and 101 years old divided in a control group (CG) and an experimental group (EG). The EG was subject to a PTPR during three months, 3 times a week. Results were obtained from CT images taken before and after the training period. To muscle volume (cm<sup>3</sup>) were analyzed with Stata 0.01.<statistical program and Student's T Test p Results: The muscular volume in the CG showed no significant media (0.2957) cuts. The EG=0.1171) and 20 cm (p=differences for the 6 mm (p 0.0006)=volume showed statistically significant changes for the 6 mm (p 0.0002) cuts. The statistical evidence allows to=and the 20 cm (p sustain the hypothesis that muscular volumes were increased after PTPR. That means that after applying PTPR a muscular volume increase was obtained in the EG over a 99% limit. Conclusion: PTPR increases the muscle volume in the studied group thus reducing Sarcopenia showing that there is a possibility to slow or revert the process. This work gives scientific evidence on the efficacy of PTPR as a tool to avoid the problems derived of Sarcopenia which can be developed in the community as part of the activities used to promote health and render a more active and independent aging.

**PB8 290 GAIT CHARACTERISTICS AND PREDICTORS FOR GAIT OUTCOME 3 MONTHS AFTER HIP FRACTURE**

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INTRODUCTION: Hip fractures in elderly are associated with high mortality and reduced function. Little is known about gait characteristics after hip surgery. This study investigates gait characteristics and factors predicting gait outcome 3 months after hip surgery. METHODS: 88 hip-fracture patients (mean age 81.6±5.8 yrs) participated. Gait was measured 3 months after surgery using an electronic gait mat. Participants walked back and forth the gait mat at different speeds, without walking aid if possible. Gait parameters were walking speed, cadence, step length, step width, and single support. Within-subject means, asymmetry ratios (affected/unaffected), and variability (CV) were calculated. Gait characteristics of 165 healthy elderly (mean age 79±5 yrs) were used as reference data. RESULTS: Hip-fracture patients had significant reductions in Activities of daily living

(ADL), and a strong increase in use of walking-aids three months post-surgery compared to before the fracture. Compared to the reference group, hip-fracture patients walked slower with shorter steps, had shorter single-support phases, increased step-length variability, and increased asymmetry in step length and single-support. Apart from step-length variability, these differences persisted after controlling for walking speed. Multiple linear regression within the hip-fracture group, with gait characteristics as dependent variables, demonstrated that speed was the single most significant predictor. Other predictive variables were age (all measures), Body Mass Index and pain (mean and CV of step length and single support), ADL and fracture type (variability measures), and use of walking aid (step length and single support). CONCLUSIONS: Gait three months after hip surgery is characterized by high asymmetry and variability. In combination with slow walking speed, small steps, and long double support phases, this reflects high risk for new falls, with associated further functional loss. The predictive value of multiple background variables for gait characteristics reflects the complexity of functional loss in elderly hip-fracture patients.

**PB8 291 RISK OF FALL AND EXECUTIVE FUNCTION IN DIABETIC AND NON DIABETIC ELDERLY**

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Introduction: Type 2 diabetes elderly (DM2) tend to show cognitive deficits related to more complex processes such as the executive function, which can lead to greater risk of falls. The aim of the study was to compare DM2 and not DM2 elderly regarding the risk of falls and executive function, and check the correlation between these variables. Methods and Materials: 40 community elderly participated in the study and were divided into two groups: G1: DM2 elderly and G2: non DM2 elderly. Socio-demographic and clinic data were obtained by means of a structured questionnaire. The risk of falls was assessed by the Timed Up and Go test (TUG, cognitive TUG) and the executive function was assessed by the Verbal Fluency Test (animal category) (VFT). For the characterization of the sample a descriptive analysis was carried out; to compare the groups the Mann-Whitney test was used and the correlation between the risk of fall and executive function was verified through the Spearman test ( $a<0.05$ ). Results: The variables age (G1:71.0±7.6; G2:68.4±7.4 years), BMI and gender ( $p=0.67$ ) were similar between the groups. The diabetic elderly showed worse performance in the verbal fluency test (G1:14.9±4.9; G2:17.7±5.6;  $p=0.03$ ). A statistic difference was observed between the groups regarding the risk of falls; G1 presented worse performance in TUG (G1:10.5±1.8sec; G2:8.9±1.9sec;  $p=0.01$ ) and cognitive TUG (G1:13.9±3.2sec; G2:10.9±2.3sec;  $p=0.004$ ) tests. A significant correlation was observed between the cognitive TUG and VFT only in G1 (G1:s=-0.53;  $p=0.01$ ; G2:s=-0.25;  $p=0.28$ ). There was no correlation between the TUG and VFT in the groups. Conclusion: DM2 elderly showed more risk of falls and worse performance in the VFT, which suggests higher cognitive alteration. The correlation between cognitive TUG and VFT in G1 showed that the greater the alteration in the executive function, worse the performance in mobility and greater the risk of falls.

**PB8 292 EXPERT SURVEY REGARDING ASSESSMENT INSTRUMENTS ON PHYSICAL ACTIVITY AND PHYSICAL FUNCTIONING IN OLDER PEOPLE**

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Introduction Assessment is critical in identifying individuals at risk and in measuring outcome in intervention studies aimed at reducing physical frailty and increasing mobility. One of the overall objectives of the European Network for Action on Ageing and Physical Activity (EUNAAPA) was to offer advice concerning the assessment of physical activity and physical functioning in older people. The first step in this process was to give an overview of instruments currently used in Europe. Methods A questionnaire including a great number of instruments was sent to 14 countries and distributed to experts according to a matrix covering both community-dwelling and institutionalised older persons at regional as well as national levels. The categories addressed were Physical Activity and Physical Functioning, here including Endurance, Mobility, Balance, Range of Motion, Dexterity, Muscle Strength, Overall Indexes and Activities of Daily Living (ADL). Results A lack of knowledge in Europe concerning a great number of assessment instruments was revealed, and it became obvious that in many countries only a few instruments are being used. Physical activity: The most common questionnaires were IPAQ and PASE, and for performance-based evaluation Pedometer. Physical functioning: The dominating Endurance test was the Six-Minutes Walking test and for Mobility the Timed Up and Go. Balance was most often assessed through Romberg, One-Leg Stance and Berg's Balance Scale. Hand in Neck and Hand in Back were the most used Range of Motion tests and for Muscle Strength, Grip Strength was the most common test. The most used overall index was Tinetti's Performance Oriented Mobility Assessment and regarding ADL, Barthel Index and Katz ADL Index dominated. Conclusion The results of the survey lead to an

increased knowledge in Europe of good instruments that need to be translated to other languages, and a heightened awareness of other measures that need to be taken.

**PB8 293 IS THE ASSESSMENT OF GRIP STRENGTH FEASIBLE AND ACCEPTABLE IN A COMMUNITY HOSPITAL?**

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Introduction Grip strength is used to characterise frailty in older people participating in research but is not used in routine clinical practice in the United Kingdom. We were interested to assess the feasibility and acceptability of grip strength assessment amongst older people undergoing in-patient rehabilitation. Methods and materials Patients aged 70 years and over were prospectively recruited within one week of admission to a community hospital for a period of rehabilitation. Maximal grip strength was assessed three times in each hand one minute apart using a Jamar dynamometer. A Mini Mental State Examination (MMSE) and a questionnaire on pain/tiredness associated with measurement of grip strength were administered. Patients were admitted from acute hospitals or their own homes, but those for terminal care were excluded. Results 100 / 160 eligible patients participated (m 37: f 63, median age 83.6 years, range 70-99). 60 patients were not included (12 too unwell; 12 severely confused; 4 refused; 11 discharged or transferred before review; 21 assessor could not be seen within one week of admission). Only one patient (with advanced peripheral neuropathy) could not hold the dynamometer. Patients with arm fractures, arthritis or hemiparesis could all grip with at least one hand, and those with lower MMSE scores (overall median 23.0, range 7-30) could participate with clear instruction and demonstration. Assessment of grip strength took around five minutes and only three patients did not want repeat measurement. It did not cause pain or tiredness in 90% of participants. Median grip strength was 16.6 kg (range 2-39kg). Conclusion Assessment of grip strength is feasible and acceptable among most community hospital inpatients. Further research is required to establish normal ranges and quintiles for this group, and whether low grip is associated with poor outcomes as has been found with community dwelling older people.

**PB8 294 HOLY GRAIL QUEST FOR A FALLS DETECTOR: PRELIMINARY RESULTS FROM A PILOT STUDY**

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Introduction: Falls are common in older people and can have serious consequences such as injuries, fractures, and disability. About a fifth of elderly people are unable to get up from the floor by themselves after a fall. This can result in further disability due to prolonged immobilization and consecutive increased fear of falling. Despite multiple attempts there are no reliable systems currently available that could permit early fall detection and limit these additional adverse consequences. The objective of this pilot study was to evaluate the falls detection rate of an experimental falls detector. Methods and materials : Two young volunteers performed a standardized fall protocol, under supervision in a laboratory setting. Falls were performed from standing position, in different directions (forward, backward, to the sides), with and without upper-limb protective reaction. Sports protections and a mat were used for safety reasons. A watch-like falls detector was worn on the wrist by the volunteers. This device, based on a mechanical impact detector, is activated by direct and indirect shock. To provide a preliminary estimate of false detection, the detector was also worn during daily activities over a 18 hours period. Results: Overall, 82% (23/28) of falls were detected. Further analyses showed that detection rate for falls without upper-limb protective reaction were 100% (10/10) for backwards falls, 80% (8/10) for falls to the sides, 75% (3/4) for forward falls. In contrast, detection rate for forward falls with upper-limb protective reaction was only 50% (2/4). During daily activities only 2 false positive detections were recorded. Conclusion: Falls detection rates seem promising in this pilot study with young volunteers. Further testing in a larger number of volunteers is now planned to confirm these preliminary results before undertaking clinical testing in older persons.

**PB8 295 TIMED UP AND GO (TUG) IN ELDERLY PHYSICALLY ACTIVES**

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INTRODUCTION: The Timed Up and Go (TUG) is widely known on scientific literature and very much used as a randomized measure to use for institutionalized and community-dwelling elderly as the assessment of the risk of falls and gait functional decline. Bohannon

(2006), had determined normative reference values for TUG based on a meta-analyses study with 21 studies that used this instrument in community-dwelling older people, however none of them where done with physically active elderly. OBJECTIVE: The purpose of this study was to assess the TUG in physically active elderly. METHODOLOGY: The sample had 65 older with at least three years non-stopping physical exercises activity began after completing 60 years old (minimal age of the sample were 63 years). The subjects used to do physical exercises to improve their functional capacity at least three times a week. There were excluded subjects that present some affection that compromise the gait and its performance. There were taken three trials, one of them in the usual path and the other two as quickly as they can. It was considered to statistic analyses the average velocity of the two trials. The statistical program used was Sigma Stat 3.5. RESULTS: the data obtained was: for the age of 63 to 69 years (n: 27) in usual velocity:  $8,42 \pm 1,65$  seg and in quickly as possible was  $6,08 \pm 1,21$  seg. For the ones of 70 to 79 years (n:34) it was:  $8,60 \pm 1,68$  seg. and  $6,64 \pm 1,28$  seg. respectively; and at the 80 and older (n: 4) it was:  $9,91 \pm 0,88$  seg. and  $7,41 \pm 0,48$  seg. respectively. CONCLUSION: the data obtained can be useful to comparative studies that will try to determine reference normative values for the TUG in community-dwelling older people that are physically actives.

**PB8 296 FUNCTIONAL CAPACITY, HEALTH CONDITIONS, DEPRESSION SYMPTOMS AND WELL-BEING IN ELDERLY OF CH-UNICAMP, CAMPINAS-SP, BRAZIL**

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With the progressive increase of elderly people in the Brazilian population, it's verified the increase of comorbidities associated to chronic and degenerative diseases that consequently represents a higher demand of drugs used by this population. The fact submits us to the observation of the functional capacity preservation, sometimes leading to a worse functional limitation in reason of this comorbidities and well-being deficit. Is important to recognize and carefully evaluate this association in order to know the effects in the process of aging. The aim of this study is to identify and evaluate the profile of 122 elderly that were attended from August 2005 to August 2007, by a multidisciplinary support team of the Geriatric Ambulatory on the University of Campinas Clinical Hospital, Sao Paulo, Brazil, related to the presence of depressive symptoms, number of comorbidities and drugs prescriptions, in association to the locomotion and mobility, items that are essential for the preservation of the individual functional capacity. This evaluation allowed estimating the level of interference of these variables in the life and well-being of the individuals, through a Protocol applied by a group of health professionals. Instruments were inserted to appreciate the objective and subjective aspects of physical and mental health of elderly, highlighting the use of these instruments and scale: FIM, SPPB, CES-D, Cantril, besides the number of disease and medication prescribed, according to medical register. A higher level of functional incapacity, presence of depressive symptoms, comobidities and polipharmacos could be noted, mainly with more prevalence in female gender. The results obtained from the associations to the variables in this study are fundamental to manage actions related to the functional capacity, aiming to allow a better independence, autonomy and quality of life for these elderly.

**PB8 297 VIDEO RECORDING OF REAL-LIFE FALLS TO INVESTIGATE THE CAUSES AND CIRCUMSTANCES OF FALLS IN LONG TERM CARE FACILITIES**

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INTRODUCTION Falls and fall related injuries are a major health problem in the elderly population. However, a major impediment to the design and evaluation of fall prevention strategies is our inability to obtain objective data on the incidence, cause, and circumstances of falls in real life. Instead, our current understanding of "how falls occur" is based on studies that report the post-hoc recollection of the faller [1,2], which is known to be of limited accuracy. These studies suggest that slips and trips are the most common causes, and that forward falls are twice as common as backward and sideways. In the current study, we tested whether this describes the scenario for most falls in long term care, by analyzing video recordings of 81 falls from two long-term care facilities in the Vancouver area. METHODS All 81 falls occurred in common areas and were captured with networks of digital video cameras. A team of three experts reviewed each fall recording to determine the primary cause and activity of the individual at the time of the fall. The experiment was approved by the Office of Research Ethics at SFU. RESULTS Only 15% of falls were caused by tripping and 5% by slipping; the most common cause (32% of cases) was incorrect weight transfer. 28% of falls occurred during standing, 15% during forward walking, 14% while initiating walking, and 12% while moving from standing to sitting. Backward falls were more than twice as common as forward or sideways. Furthermore, head impact occurred in 28% of falls, hip/buttock 88% of falls, and hand/forearm in 44% of falls. CONCLUSIONS These results challenge traditional assumptions regarding the nature of falls in older adults, and have important implications

for the design and evaluation of fall and injury prevention strategies targeting intrinsic and/or environmental factors.

**PB8 298 PHYSICAL ENVIRONMENTS AND THEIR IMPACT ON OUT-OF-HOME SOCIAL PARTICIPATION AMONG ELDERLY CANADIANS WITH PHYSICAL DISABILITIES**

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**Objectives:** Although physical barriers are generally believed to impede out-of-home social participation for people with physical disabilities, scientific evaluations on this issue are scant. Based on the WHO ICF (International Classification of Functioning, Disability and Health) conceptual framework, the objectives of this study are: 1) to describe the patterns of out-of-home social participations among the elderly Canadians with physical disabilities and 2) to examine how various physical barriers in home-design and in public areas affect out-of-home social participation in this population. **Methods:** A sub-sample of 5,820 individuals aged 65 years or older selected from the 2001 cross-sectional Canadian Participation and Activity Limitation Survey (PALS) was included in this study. Out-of-home participation was derived from eight self-reported activities within the past 12 months and was dichotomized no-restriction (at least once a week) and restriction. Measures of assistive aids and devices included automatic/easy open doors, lever handles, widened doorways/hallways, elevator/lift device, and ramps/street level entrances. Other predictor variables included level of disability, income, age, gender, and living arrangement. Exploratory data analyses and multivariate logistic regressions were conducted to examine the associations of interest. **Results:** As anticipated, people with severe disability, older age and living alone were more likely to report out-of-home participation restriction with corresponding odds ratios of OR=3.293 (2.762-3.926), 2.017 (1.753-2.402, every 10-years) and 2.003 (1.225-3.276). Similarly, self-reported barriers in home-design significantly contributed to participation restriction with OR=1.844 (1.387-2.501). In contrast, individuals having access to public assistive aids and devices were more likely to engage in out-of-home social participation with OR=0.806 (0.673-0.966). However, income level did not present significant impact on social participation. **Conclusion:** Our study suggests barriers both in home-design and in public areas are significant factors affecting out-of-home social difficulty among elderly Canadians with disability. Thus, reducing these barriers is expected to enhance social participation in this population.

**PB8 299 POSITIONAL RELEASE THERAPY TECNIQUE OF PAIN AND EMG ACTIVITY OF TRAPEZIUM IN ELDERLY PATIENTS**

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**INTRODUCTION:** Positional Release Therapy is an indirect technique. It is a method of evaluation and treatment using sensitive points in a position with minimum tension of the muscle. The sensitive points are located and palpated, soon after a comfort position is sought, which this comfort produces the ideal relaxation of the involved fibers. The objective of this study was to verify the reduction of pain, through an analogical visual scale, of descending fibers of the trapezius after the use of the PRT (Positional Release Therapy) technique in elderly patients. **METHOD AND MATERIAL:** The collection data was accomplished with 14 elderly patients, ages between 65 to 77 years, with pain above 5 in a visual analogical scale after the palpation of the tender point of the descending fibers of the trapezius. The EMG activity was collected with EMG MIOTEC model miotool 400 of 4 channels and surface electrodes of Ag/AgCl, round, pre gelled and auto adhesive from Meditrace, during gait for 5 minutes. All of the samples were divided into two groups, a treatment group and a control group, therefore, containing 7 individuals in each. For the individuals of the treatment group (PRT) the correct form of the technique was applied, while for the samples of the control group, a relax technique was applied. A level of significance of 0.05 was defined for this study. **RESULTS:** After having made the entire collection of data and statistical analysis, it was established that averages for both of the groups after the evaluation were smaller than the average before, but only in the group of PRT, can it be said that a statistically significant difference, 8 EVA pain scale and 123,33μV (RMS mean) before and 2 for the EVA and 65,60 μV after the PRT ( $p=0,001$ ). **CONCLUSION:** This study suggests a decrease pain and EMG activity of Trapezius muscle during gait in elderly patients after PRT technique.

**PB8 300 INSPIRATION EXERCISE, FLOW AND VOLUME RESPIRATORY STIMULATOR IN ELDERLY PATIENTS**

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**INTRODUCTION:** Evidences suggest that deep inspirations exercises could be so effective as respiratory stimulators (RS), which are contradictory in clinical practice when referring to the use of flow respiratory stimulator and volume respiratory stimulator. The objective of this study was to investigate the activity of some ventilatory muscles as

scalene (ESC), external intercostals (EI) and rectus abdominal (RA) during the utilization of a flow respiratory stimulator, volume respiratory stimulator and maximal sustained inspiration exercise throughout EMG. **METHODS AND MATERIAL** 19 subjects, 10 women; 9 men were evaluated with a EMG MIOTEC model Miotool 400 of 4 and surface electrodes of Ag/AgCl, round, pre gelled and auto adhesive from MEDITRACE. Electromyography data were randomly collected during quiet breathing and pulmonary re expansion exercises. **RESULTS:** It was observed statistically significant differences in the electromyographic values for media and peak when comparing maximal sustained inspiration exercises to respiratory stimulators ( $p<0,001$ ), however there wasn't significance between flow and volume respiratory stimulator for external intercostals ( $p=0,542$ ) and scalene muscle ( $p=0,730$ ) **CONCLUSION:** Maximal sustained inspiration exercises as well as respiratory stimulators provoked muscle recruiting in the analyzed respiratory musculature, once electromyographic activity was higher when the devices were utilized.

**PB8 301 STEP LENGTH PREDICTORS CHANGE AFTER ENROLMENT IN A PHYSICAL ACTIVITY PROGRAM FOR PARKINSON'S DISEASE PATIENTS**

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**Introduction:** Short step length is one of the major gait consequences of Parkinson's disease (PD). Interventions have been conducted to increase patients step length. A multi-mode physical activity program focusing on the functional capacity components (aerobic capacity, flexibility, strength, coordination and balance) was not able to change step length in PD patients. The aim of this study was to analyze the step length predictors before and after the enrolment in program. **Methods and materials:** Eleven PD patients (65.9±7.8 years of age), in low to moderate stages of PD (1 to 2 sages of Hoehn-Yahr scale) completed at least 70% of the program (6 months, 72 sessions, 3 times a week, 60 minutes per session). Patients walked on an 8m pathway in their preferred velocity, in 5 trials, and kinematic gait data collection was done before and after the program. Functional capacity was assessed by the AAHPERD tests and by Berg balance scale, while physical activity level was measured by the Baecke's instrument for older people. A digital camcorder recorded the trajectories of markers attached on the right fifth metatarsal and on the left first metatarsal joints on the right sagittal plane. The images were analysed in the Dvideow6.3 and a specific algorithm was written in Matlab7.0 to calculate the dependent variable: step length, stride velocity and length, cadence, and stride phases durations. **Results:** Multiple regression analysis (stepwise) before the program revealed an association of physical activity level, stride velocity, cadence, swing phase duration and scores in balance and strength predicted step length ( $R^2=0.95$ ;  $p<0.001$ ). After the program, stride velocity and duration and swing phase duration were revealed as predictors of step length ( $R^2=0.80$ ;  $p<0.001$ ). **Conclusion:** A multi-mode physical activity program was able to change the step length predictors. We recommend interventions for PD patients focusing on temporal gait parameters. **Acknowledgements:** CNPq, CAPES.

**PB8 302 COMORBIDITY AND FUNCTIONAL RECOVERY IN A GERIATRIC REHABILITATION UNIT (GRU).**

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**Introduction:** Functional outcome is the most important objective for the GRU inpatients, so it is interesting to select those patients who can benefit from this specialized level. The principal aim of this study was to know the factors related to an incomplete recovery (IRE) at hospital discharge, taking into account the basal functional situation. **Methods and materials:** GRU inpatients consecutively admitted for 6 years were selected. The principal admission pathologies were: hip fracture, stroke, and immobility secondary to medical illnesses. A formula to calculate the incomplete recovery (IRE) included the modified Barthel index: basal (BMBI) and at hospital discharge (DMBI):  $DMBI - BMBI \times 100/BMBI$ . Different variables were studied: age, gender, dementia diagnosis (mild and moderate), nutritional items (albumin, prealbumin and cholesterol) and comorbidity measures: CIRS (Cumulative Illness Rating Scale) and Charlson index. **Results:** 461 patients were included (women 69.8 %), mean age 84.9 years (65-100). Diagnosis on admission: hip fracture (23.2%), stroke (25.2%) and immobility (51.6%). Mild to moderate dementia (29.0%). Median BMBI 85 (interquartile range - IQR 70-95), DMBI 50 (IQR 30-70). Median IRE was 29.41 %. Only 52 patients (11.2%) fully recovered the basal situation. After age adjustment several variables were IRE predictors: prealbumin ( $p=0.039$ ; OR 1.03 -CI 95%: 1.002-1.072), dementia diagnosis ( $p=0.000$ ; OR 0.42 -CI 95% 0.290-0.621-) and Charlson index ( $p=0.016$ ; OR 0.886 -CI 95%: 0.803-0.978). CIRS showed a significant tendency ( $p=0.059$ ; OR 0.962 -CI 95%: 0.924-1.001). Length of stay was higher for the patients with worst IRE ( $p<0.001$ ; OR 0.98 (0.977 - 0.991)). **Conclusions:** A complete functional recovery was not possible in a third of the sample. Comorbidity, prealbumin and mild-moderate dementia were functional recovery predictors, taking into

account a basal functional status. In this study, Charlson index was better than CIRS to predict the functional evolution.

**PB8 303 FLAIL CHEST AFTER MINOR TRAUMA IN GERIATRIC POPULATION: THREE CASES.**

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**Introduction:** Dyspnea is a frequent complaint in geriatric patients. Flail chest is a common diagnosis in trauma victims and can be more difficult to be identified in old patients than in young people. **Materiel and methods:** We report three cases. **Results:** The first patient was a 75-year-old lady living in an old people's home. She was admitted for respiratory distress. Her physician diagnosed acute lung oedema. She rapidly required intubation and mechanical ventilation. Twelve hours later pulmonary gas exchanges had improved. A weaning trial failed and a respiratory paradox was seen. A novel questioning of her nurses revealed that the patient had fallen on the ground the day before admission. The second patient was a 84-year-old lady living in a nursing home. She felt the day before admission and was found in a comatose state on the next morning, needing intubation, and ventilation. Initial head and cervical CT-scan did not reveal traumatic injury. The patient improved the next day. A weaning trial failed. During the next day weaning trial respiratory paradox was seen. X-ray of the chest did not show rib fracture. Bone scintigraphy identified the anterior flail chest. The third patient was a 81-year-old man living at home. He suffered of morbid obesity and syringomyelia and most of the day he stayed in bed. The night before admission he felt. He was admitted to hospital for dyspnea. An airways infection was suspected and treated by antibiotic. Six days later he presented a respiratory distress and required intubation and ventilation. Then after a weaning trial failed and another analyse of the first chest x-ray showed a right flail chest. **Conclusion:** In these three cases the diagnosis of flail chest was delayed. The trauma was minor. The chest pain was not a symptom. The chest x-ray is not always demonstrative. The co-morbidities can hide the real diagnosis.

**PB8 304 CAN WE PREDICT ADVERSE GERIATRIC EVENTS (AGES) IN ELDERLY PATIENTS ADMITTED FOR TRAUMATIC FEMORAL FRACTURE?**

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**Introduction.** Home-resident elderly patients admitted for femoral fracture (FF) are heterogeneous. This study wanted to describe in such patients 1] the geriatric profile, 2] the incidence of common hospital adverse geriatric events (AGEs) and 3] the value of admission scores (ISAR, VIP and pre-KATZ) to predict AGEs. **Methods.** Cohort of consecutive community elderly patients (age>75 years) admitted for traumatic FF in orthopaedic divisions over 18 months. The geriatric liaison team performed early screening (ISAR' JAGS-1999;47:1118-24; VIP'Eur.J.Geriatrics-2008;10:120-6) and evaluation of pre-hospital features (ADL=pre-KATZ, pre-existing geriatric syndromes). Medical and nursing hospital notes were thoroughly reviewed to collect the incidence of three common and preventable AGEs, namely major behavioural problems (aggressiveness/agitation/delirium), pressure sores and fall. The predictive value of a score for AGE incidence was assessed by four measures: its sensitivity (Se) and specificity (Sp) at all cut-off values, the area under the curve (AUC) of its ROC curve, and its likelihood Ratios (LR, negative and positive) and accuracy (Acc=TruePos+TrueNeg/All) at the most sensitive cut-off. **Results.** 1] Of 145 FF patients (mean age 84±8 years; 77% women; 57% living alone), 65 (45%) showed pre-existing G syndromes (recent falls 32%; dementia 15%; cachexia 15%). 2] Within hospital, 81 (56%) patients developed some AGE: behavioural troubles (46%), pressure sores (16%) and/or falls (5%). 3] Scores showed poor sensitivity-specificity trade-off (ROC curve, AUC: ISAR 58%, VIP 53%, pre-KATZ 57%) and weak LR and accuracy at the most sensitive cut-off: ISAR'2+6 (Se0.86,Sp0.22,-LR 0.63,+LR 1.10; Acc58%), VIP'1+3 (Se0.70,Sp0.28,-LR 1.07,+LR 0.97; Acc=51%), and pre-KATZ'7+24 (Se0.53,Sp0.59,-LR 0.80,+LR 1.29; Acc56%). No score provided valuable predictive information (-LR<0.5 or +LR>2) at any cut-off. **Conclusions.** These scores, developed for frailty screening, were unable to predict AGE occurrence in elderly patients with femoral fracture. If these results were confirmed in other elderly populations, better screening instruments should be searched to select inpatients for geriatric management.

**PB8 305 POST-FRACTURE USE OF CALCIUM PLUS VITAMIN D AND ANTI-OSTEOPOROTIC DRUGS AND SURVIVAL AMONG HIP FRACTURE PATIENTS**

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**Introduction:** The Finnish guidelines for medical treatment of hip fracture patients are: osteoporosis medication and the daily concomitant use of prescribed calcium and vitamin D supplements. However, it has not been studied previously whether the post-fracture use of these drugs has any association with the survival. Our aim was to study the survival of

hip fracture patients in association with the patients' other characteristics and the post-fracture use of prescribed calcium plus vitamin D and anti-osteoporotic medication. **Methods and materials:** The survival of hip fracture patients (n=221) treated in 2003-2004 was analysed. After a median of 27.5 months follow-up the patients who were still alive at the time (n=137) were inquired for the use of prescribed calcium plus vitamin D supplementation and of anti-osteoporotic drugs. Furthermore, the use of these drugs in all patients (n=221) was checked in the data of the Finnish Social Insurance Institution. These data contain information on the reimbursement of drug prescriptions. The survival was analysed by using both the Bayesian multivariate analysis and the life table method. **Results:** The combination of variables which best explained the post-fracture survival were age under 80 years, ASA class 2, post-fracture use of prescribed calcium plus vitamin D supplements concomitantly with anti-osteoporotic drugs, post-fracture use of prescribed calcium plus vitamin D supplements, post-fracture use of anti-osteoporotic drugs only, and type of fracture. At 36 months we observed a reduction of 36 % in the deaths of the females who used prescribed vitamin D plus calcium supplementation and, correspondingly, 43 % in males. The survival of females who used anti-osteoporotic drugs concomitantly was even better during the whole follow-up. **Conclusion:** Our results indicate a potential relationship between the post-fracture use of prescribed calcium plus vitamin D supplementation and, in females, the concomitant use of anti-osteoporotic drugs, and reduced mortality.

**PB8 306 ARE THE CONTEXTUAL FACTORS URBAN VERSUS RURAL LIVING, GENDER AND AGE ASSOCIATED WITH ACTIVITIES AND PARTICIPATION AMONG OLDER PEOPLE?**

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**Background:** Urban versus rural living, gender and age can all be categorized as contextual factors within the framework of the International Classification of Functioning, disability and health (ICF). These contextual factors may play an important role in older peoples function or disability through their association with activity and participation in this group. **Material and methods:** Cross-sectional data, collected in Iceland in June through September 2004. Participants were randomly selected, community-dwelling, 65-88 y/o, 68 rural (40% females) and 118 urban (53% females) adults. The Late-Life Function and Disability Instrument (LLFDI) was used to obtain measures of self-reported activity limitations, participation limitation and participation frequency. Three-way analysis of variance (ANOVA) with residency, gender and age group as main factors, was used to test the association with the three outcome variables. Statistical significance was accepted at  $p \leq 0.05$ . **Results:** Participation limitation was more pronounced among those living in rural areas ( $p < 0.001$ ), females ( $p = 0.01$ ) and the older age group ( $p = 0.02$ ). The interaction between residency and gender, however, was associated with participation frequency ( $p = 0.03$ ). More specifically, rural females reported higher participation frequency than the rural males while females and males in urban areas had similar scores on this outcome measure. The measure for participation frequency was lower for the older than the younger group ( $p < 0.001$ ). Finally, the measure for activity was not associated with urban and rural residency while females reported more limitations in activities than males ( $p < 0.001$ ) and the 75-88 y/o more limitations than the 65-74 y/o ( $p = 0.001$ ). **Conclusion:** The contextual factors: residency, gender and aging are strongly associated with older peoples' activities and participation and should therefore be in focus when studying and developing strategies to optimize activity and participation with increasing age.

**PB8 307 CLINICAL PROFILE, TREATMENT PATTERNS AND OUTCOMES OF ELDERLY BRAZILIANS WITH HIP FRACTURES**

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**Introduction:** Around the Globe there is great variability concerning the epidemiology of Hip Fractures (HF). The greatest increase regarding the incidence of HF is expected to occur in the developing countries of the World, nevertheless those are also the regions from where less information is available regarding the epidemiology of those fractures. The present research aims to describe the clinical profile, patterns of care and mortality rates of elderly with HF in one University Hospital responsible for a substantial share of all HF surgeries in Rio de Janeiro, Brazil. **Methods and materials:** All medical records of patients aged 60 and older with a main admission diagnosis of HF between 1995 and 2000 were reviewed. Mortality rates were determined by means of Probabilistic Record Linkage Methodology linking the Hospital database with the Brazilian Mortality Information System. **Results:** Among 354 subjects, 74.3% were women and the mean age was 77.3 years. 53% of patients had one or two comorbidities, while 52.5% and 35.3% had American Society of Anesthesiology (ASA) scores of 2 and 3, respectively. The mean gaps from fracture to hospital admission and from admission to surgery were 3.6 and 14.6 days, respectively. Most HF (54.5%) were of the intertrochanteric type, while 37.6% and 7.3% were femoral neck and subtrochanteric fractures, respectively. A fall was the cause of the

fracture in 88.7% of the cases. Internal fixation and hip arthroplasties were performed in 64.12% and 35% of patients, respectively. Most patients (74%) underwent general anesthesia, 14.7% spinal anesthesia and 9.6% a combination of both types of anesthesia. Mortality rates 30 days, 90 days and one year after the fracture were 3.4%, 8.2% and 13.6%, respectively. Conclusion: Understanding the epidemiology of HF, its patterns of care and outcomes in developing countries is vital for the design of elder friendly public policies.

**PB8 308 STUDY REGARDING THE EFFICIENCY OF POSTURAL REHABILITATION FEEDBACK IN ELDERLY PATIENTS AFTER STROKE**  
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Introduction Posture represents a neuro-mechanical response in the process of interaction with gravity, with huge impact on the overall health status of the individual. One of the aims of physical therapy for elderly after stroke is to improve posture in daily living. Sometimes this goal is very difficult due to weakness and spasticity in affected limbs, which it rises secondary the risk of developing sarcopenia, joint stiffness and ankylosis. Methods and materials We evaluated the postural changes of a group of 30 elderly (sex ratio 1/1, average age 68.7 years) after stroke (1-3 months after the acute event) by using a 3 cell computerized stabilometric platform with a software which allows dynamic exercises for balance improvement. This method utilizes the visual control of the barycenter (postural feedback) during stabilometric dynamic exercises. Results The assessment showed initially a low postural control level for all elderly (unequal distribution of the load on both feet and on support points), reflected in relative altered scores for medium frontal (left/right) and sagittal (anterior/posterior) deviation, curve length of barycenter displacement, statokinesigram surface area (for 90% confidence interval) and fundamental harmonic frequencies (Fourier type, left/right and anterior/posterior). After three weeks of daily dynamic postural exercises (30 minutes by day, 5 day by week) we concluded that our patients developed a better orthostatic posture behavior, scoring significantly higher for all mentioned parameters ( $p < 0.001$ ). In addition, the specific test for postural feedback recorded a medium improvement of 35% ( $p=0.001$ ). Conclusion The evaluation of plantar stabilometry is very useful for understanding the postural physio-pathology in elderly after stroke; the posturo-stabilometric feedback has a large applicability in postural rehabilitation, as a real alternative for the classic posture corrective therapies. Thus, the long-term balance recovery after stroke could prevent some severe complications, which interfere with normal life functions.

**PB8 309 ANEMIA AS A MARKER OF DISABILITY AT HOSPITALIZATION OF ELDERLY PATIENTS**  
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Introduction: The maintenance of independence in activities of daily life is the major goal of geriatrics care and the disability is not a static condition, so it is important to know which people need more attention at hospitalization. The objective of this article is analyzed if the value of hemoglobin in elderly patient is a marker of functional loss for their first hospitalization. Methods and material: Observational longitudinal retrospective study. We selected patients aged over 65, at geriatric sector of University Hospital Clementino Fraga Filho. 448 outpatients that had the first hospital stay occurred between 1999 and 2008. Of these, 60 were chosen because they have complete data on the review of medical records. The instruments used to measure the activity of daily living (ADL) and instrumental activities of daily living (IADL) respectively were KATZ and LAWTON and anemia was defined according to the criteria of the World Health Organization. Other second variables have been seeing like cognition with the mini mental state exam (MMSE), length of hospitalization, socio demographics factors and co-morbidities. Results: The mean age was 82.8 years, 56.6% women; the prevalence of anemia was 55%. Of all patients 35% died in first hospitalization, 71.4% with anemia. Statistical analysis has shown that patients with anemia have increased length of hospitalization stay ( $P$  value = 0.0147) and patients with anemia have increased dependence for ADL ( $P$  value = 0.0003), IADL ( $P$  value = 0.0005) and low score at MMSE ( $P$  value = 0.015) at admission. Conclusion: Anemia is a marker of disability and longer time of hospitalization in the elderly people.

**PB8 310 MYASTHENIA AND OLD AGE**  
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Myasthenia is an unusual affection with two peaks of frequency: between 20 and 40 years in feminine ascendancy and between 55 and 75 years in male ascendancy. Frequency of myasthenia at the late beginning is with difficulty estimable. Diagnosis of myasthenia must not be underestimated for all that in the old age. Two old patients with polyopathy are hospitalized for fluctuating neurological deficit. It is about 84-year-old man presenting a ptosis of right eye fluctuating during the day, deteriorated by the tests of fatigability. His histories include: a multi defect dementia, a depressive syndrome, a hypercholesterolemia

level. 87-year-old woman is hospitalized for dysphagia, ptosis of right eye and dysphonic. In his histories: of the degenerative osteoarthritis, a cerebro vascular accident ischemic passing. It had been recently coverage for spontaneously regressive left facial deficit of the right upper limb and the paralysis with a diagnosis of accident passing composed ischemic (cerebral scanner without sign of ischemia or bleeding). In front of this fluctuating symptom, increased in the effort an electromyography is in favour of an infringement of the neuromuscular junction with a significant decrement of 15 % for him and 18 % for her after the effort. Antibodies anti receptor of the acetylcholine are positive, thoracic scanner does not find a thymoma. The answer to the anti cholinesterase treatment is favourable to the patient with disappearance of the symptom. The myasthenia at the late beginning it must be evoked in particular when there are signs bulbar and oculo-bulbar, frequently revealing. However the diagnosis in the old age is all the more difficult as the old person's polyopathy, poly-medicated with multiple differential diagnoses. It is nevertheless interesting to put the diagnosis because treatments allow an improvement of the considerable symptoms and thus a better quality of life for these very old patients.

**PB8 311 DYSPHAGIA SEVERITY AND THE RISK OF THE ELDERLY POPULATION DEVELOPING ASPIRATION PNEUMONIA**  
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Introduction Brazil's geriatric population growth occurs at large rates. Around 32 million people over 60 years old are expected within the next 15 years, which means an increase of chronological disabling diseases that can generate complications associated to oropharyngeal dysphagia. The tendency is that morbidity increased by oropharyngeal dysphagia will amplify the prevalence of aspiration pneumonia which leads to worsening the elderly population's health situation and also interfering in their quality of life and health costs. The purpose of this study was to investigate the correlation between dysphagia severity and the risk of the elderly population developing aspiration pneumonia with associated diseases under videofluoroscopic vision of deglutition. Methods and materials Videofluoroscopic views of 217 elderly were analyzed, divided in five groups according to: normal deglutition, slight oral phase alteration without aspiration, laryngeal penetration, tracheal aspiration and silent aspiration. To determine pneumonia occurrence, clinical and radiological data was investigated in the time span of six months prior and after deglutition videofluoroscopic execution. The variables included in breathing and clinical data analysis were age, sex, original disease, feeding way, coughing, fever, prostration, oxygenotherapy use and radiological image compatible with pneumonia. Results The analysis of the results revealed that 106 individuals with average age of 82 evolved with aspiration pneumonia, with statistical difference ( $p$  value = 0.000) when compared with the group without pneumonia. The main risk factor was central neuropathy with prevalence of 72.5%. Videofluoroscopy revealed that pneumonia was observed in two patients (0.9%) with normal deglutition, 15 (6.9%) with slight deglutition alteration, 16 (7.4%) with laryngeal penetration, 22 (10.1%) with tracheal aspiration and 51 (23.5%) with silent aspiration. Conclusion Elderly with tracheal aspiration and silent aspiration had 170 and 280 times, respectively, more chances to develop aspiration pneumonia. The existence of correlation between aspiration pneumonia development and dysphagia severity observed by videofluoroscopy was verified.

**PB8 312 PREVALENCE OF FRAILTY ACCORDING TO FRIED'S CRITERION IN A COMMUNITY GERIATRIC POPULATION ASSESSED IN A GERIATRIC DAY UNIT IN ANNECY, FRANCE**  
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Introduction: Frailty has been proposed as a state of decreased physiologic reserve conferring increased vulnerability to stressors. Fried's and all, proposed in 2001, a new phenotype of frailty defined as a clinical syndrome in which at least three criterion out of five were present: unintentional weight loss, self-reported exhaustion, weakness (grip strength), slow walking speed, and low physical activity. The overall prevalence of frailty in the validation cohort (Cardiovascular Health Study) was 6.9%. Since, a few authors applied those criterion to various population, with a prevalence varying from 4% to 25.7%. The purpose of this study was to measure the prevalence of frailty according to Fried's criterion, in a community dwelling geriatric population. Methods and materials : From March 2008 to July 2008, all consecutive patients attending the Geriatric Day Assessment Unit of Annecy' Hospital were included. Addressed by their generalist practitioner, all patients benefit from a Comprehensive Geriatric Assessment focused on balance, nutrition, cognitive function, comorbidities, disability, social environment. We applied for all patients the Fried's criterion: Weight loss: (10 pounds unintentionally in, the last year); Exhaustion: Using the CES-D Depression Scale; Physical Activity: Based on the short version of the Minnesota Leisure Time Activity questionnaire; Walk Time, stratified by gender and height (gender-specific cutoff a medium height). Grip Strength, stratified by gender and body mass index (BMI) quartiles. Results : among 261 patients, 28.3 % were frail, 46.3 % were intermediate and 25.4% not frail. Sex ratio (W/M) was 64.4%, mean age 80.9 years; 82.8% living in the community. Comorbidities were highly prevalent (77.4% with CIRS $c>2$ ) as disability : 72.4%. Frailty was associated with being older,

higher disability and comorbidities. Conclusion : Using Fried's criterion, the prevalence of frailty in a community dwelling population attending a Geriatric Day Assessment Unit was very high.

**PB8 313 NO ASSOCIATION BETWEEN OUTCOME EXPECTANCIES AND FUNCTION 6 MONTHS AFTER HIP FRACTURE SURGERY**

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Introduction: It has been suggested that expectations of a favourable outcome are related to high self-efficacy, and that perceived self-efficacy is an important contributor to performance. For health-purposes it is presumable that those with expectations of a favourable outcome would have a better outcome, which has also been suggested for hip fracture patients. In this study we investigate the relationship between outcome expectancies and postoperative function for hip fracture patients. Methods and material: Data are from an evaluation study of an orthogeriatric unit. 31 women and 11 men (mean age 77.8, SD 6.7) admitted for hip fracture surgery were asked: (1) "To what extent do you believe that your injury will affect you negatively in the coming 6 months?" and (2) "To what extent do you think you will be able to function as you did before your injury?". Responses were graded from 0 to 10. Function was measured with the Timed "Up & Go" (TUG)-test at 6-months follow up. Results and conclusion: Analysis (Pearsons r) showed no association between responses to question (1) and TUG after 6 months ( $r=0.0$ ) and between responses to question (2) and TUG after 6 months ( $r=0.0$ ). The lack of association could be caused by the fact that a hip fracture is a complex injury with unforeseeable consequences. Also, high self-efficacy does not in itself produce new skills, that may have been important in the rehabilitation process. In addition, the questions were not directed at what the respondents believed they were capable of and the TUG may not have been the right outcome.

**PB8 314 CHALLENGES AND PARADOXES OF FALL PREVENTION RESEARCH**

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Introduction: By any statistical definition, falling in community-dwelling older adults is a major population health problem. Responsible for >90% of hip fractures, falls are a significant factor in loss of independence and reduced quality of life, and a major driver of direct and indirect health care costs. Reviews suggest that many falls can be prevented cost-effectively through multifactorial risk factor identification and modification, although accumulating evidence suggests a minimal intensity level for interventions to yield a detectable effect. Specifically, conducting a risk assessment and providing recommendations for care seem insufficient; the intervention should include the actual ongoing provision of care. Algorithms such as the AGS Guidelines have entry points from either primary-care case finding or emergency room admissions. But not all developed nations have national fall prevention strategies. In Canada, fall risk assessment and risk modification are not routinely incorporated in primary care. Given that much more is known than unknown about preventing falls, my question is: What are the barriers keeping fall risk abatement from achieving equivalent status to, for example, hypertension and lipid screening and treatment? Methods: Reviews, editorials and fall researchers were used to identify key factors that prevent fall prevention from occupying a higher societal profile in the care of older adults. Results: Nine challenges and paradoxes of fall prevention were identified: i) falling in humans is normal, expected and common; ii) falling is funny; iii) environmental factors are seen as primary; iv) protective factors become risk factors; v) some falls are 'good' falls; vi) some steps to reduce risk actually increase it; vii) a major genetic role has not been identified; viii) interventions are 'low-tech' and unprofitable, ix) there are no 'celebrity fallers'. Conclusions: Considering these factors strategically might assist the social marketing of the message that many falls can and should be prevented.

**PB8 315 THE EFFECT OF STRETCHING AND PROGRESSIVE LOADING EXERCISES IN THE BODY WEIGHT OF OSTEOPENIC FEMALE RATS**

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Introduction: The aim of the present study was to evaluate the effect of stretching and resistive exercise in the body and muscle weights of osteopenic female rats. Materials and Methods: Sixty four female Wistar rats (8 weeks old, 280 ± 42g) were divided into 8 groups (n=8): CONT- intact control; OH- ovariectomy and hysterectomy; STRET- left soleus muscle was submitted to stretching; RE- resistive exercise; RE+STRETCH- resistive exercise and stretching. OHS- ovariectomy, hysterectomy and stretching. OHRE- ovariectomy, hysterectomy and RE. OHSRE- ovariectomy, hysterectomy, STRET and RE. The soleus muscle stretching protocol consisted by 10 bouts of 1 min, manually, through maximal dorsal flexion of the left ankle, twice a week. Resistive exercise was performed by four bouts of 10 jumps with progressive

loading carried out by fixing an additional load on the animal's body, 3 times a week. After 6 weeks the soleus muscles of both hindlimbs were dissected and it was evaluated body and muscle weights. It was used paired Student t test to compare the initial and final body weight and also to the comparison between right and left soleus muscle. The groups were compared by ANOVA. Results: The final body weights of RE (256±28g) and OHRE (255±19g) were slight in comparison to CONT (330±24g), p≤0.001. However, OH & plus RE (338±24g) was higher (p=0.006) when compared to STRET (298±13g). The body weight of OH was higher (307±8g) than RE (256±28g), p=0.007. It was not found difference in the soleus muscle weights. Conclusion: It can be supposed that progressive loading and its combination with stretching was sufficient to prevent the gain of body weight. The ovariectomy and hysterectomy induced an increase in the body weight even when the rats were submitted to exercises.

**PB8 316 PREVALENCE OF FRAILTY SYNDROME IN NURSING HOME ACCORDING TO DIFFERENT DEFINITIONS**

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Introduction: The frailty syndrome is associated with higher mortality, disability and hospitalization. There are many definitions of frailty, but a standardized definition has not yet been established. In Cardiovascular Health Study about 7% of the population older than 65 year of age and 20% of the population older than 80 years were frail. Our aim was to establish how many patients in nursing homes are frail and to compare two methods of describing the frailty patients. Study Groups and methods: We examined 96 of all 118 patients over 65 years old living in two nursing homes in Cracow. We excluded subjects who refused to take part in study. Frailty was measured using the Cardiovascular Health Survey definition (frail-CHS) and the CHSA-Clinical Frailty Scale (CHSA- $\sim$ CFS). Results: Mean age of participants was 83,6 ± 8,2 yrs ( range: 66-101 yrs) and 79,7 % of them were women. According to the CHSA-CFS the prevalence of frailty syndrome was 77,1% of all 96 patients (mildly frail-22,9%; moderately frail-21,9%; severely frail-33,3%). The assessment based on CHSA definition was possible in only 14 subjects as 74 patients suffered from dementia (MMSE < 24 points), and another 6 from paraparesis and 2 from aphasia. In 9 of them frailty was diagnosed, and 3 of them fulfill also the criteria of CHSA-CFS. Conclusion: The frailty syndrome is a very frequent observed amongst the elderly living in nursing homes. Choice of the different scales influences on the frequency of the recognition of frailty syndrome. Scale based on CHS study seems to be less useful due to the high prevalence of dementia and disability amongst elderly patients of nursing homes.

**PB8 317 IMPACT OF RESISTIVE TRAINING ON ELDERLY CARDIOVASCULAR PHYSIOLOGY: BENEFITS AND ADVERSE EFFECTS**

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Introduction. Resistive training prevents loss of strength and improves quality of life in sedentary subjects, particularly in elderly. Some works suggest that weight training benefits are better than those from aerobic exercise in this specific population. However, possible adverse effects related to cardiovascular overload during resistive training are not completely understood. Objectives. To evaluate the impact of a 4 months resistive training program on cardiovascular variables related to cardiac performance and clinical risk secondary to overload damage in sedentary subjects older than 60 years, analyzing two different resistive training protocols (strength S and power P) comparing to control group (C). Methods and Materials. Thirty nine subjects were randomly allocated into 3 groups: 10 C, 14 S and 15 P and performed a cardiopulmonary testing until exhaustion on treadmill, before and after the intervention. We analyzed heart rate (HR bpm), systolic blood pressure (SBP mmHg), double product (DP mmHg.bpm) and oxygen pulse (mL/bpm), in resting, anaerobic threshold (AT) and peak of exercise. Data were compared by two-way ANOVA and post-hoc test of Newman-Keuls ( $p<0.05$ ). Results. All the groups showed reduction on SBP in resting and AT, without differences in peak exercise. HR remains unchanged in 3 groups in resting and AT, but only in C the peak HR decline. DP, a major index of myocardial stress was not increased after 4 months in all groups. Oxygen pulse, a variable related to ventricular performance, raised in all exercise moments in 3 groups. Conclusion. All the groups showed improvement on cardiovascular performance after 4 months. Moreover, both training modalities exhibited excellent profile of safety cardiovascular variables, either in maximal and submaximal exercise. These findings suggest that resistive training with S or P protocols don't have negative impact or increased damage overload in cardiovascular physiology, without additional risk in these subjects with increased susceptibility to cardiovascular diseases.

**PB8 318 COGNITIVE IMPAIRMENT AND FUNCTIONAL OUTCOME IN A GERIATRIC INPATIENT REHABILITATION UNIT.**

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**INTRODUCTION:** Cognitive impairment is often considered a predictor of adverse rehabilitation outcomes in the geriatric patient. However, the relative contribution of cognitive impairment and other risk factors remains unclear. **OBJECTIVE:** To assess, the relative value of cognitive impairment on admission using the Cognitive Performance Scale (interRAI MDS) for predicting functional outcomes in a Geriatric Inpatient Rehabilitation Unit. **METHOD:** Observational prospective, comparative, study performed in a Geriatrics Inpatient Rehabilitation Unit. Functional outcome (positive gain in ADL hierarchical scale) were predicted using logistic regression models with age, sex, weekly minutes of physiotherapy, length of stay, incontinence and depression as independent variables. **RESULTS:** A total of 1558 patients, 57.8% female, with mean age of 80 years, range 25-75 74-84 were included; Cognitive Performance Scale showed 229 cases (14.7%) with mild impairment and 316 cases(20%) moderate-severe impairment. Cognitive impairment, incontinence, depression and minutes of physiotherapy were associated with functional outcome in univariate analyses. In multivariate analysis, only dementia and minutes of physiotherapy proved to be independent predictors of functional recovery. **CONCLUSIONS:** Cognitive impairment assessed by the Cognitive Performance Scale on admission in a Geriatrics Inpatient Rehabilitation Unit predicts independently functional gain.

**PB8 319 THE IMPACT OF EXTRA NUTRITIONAL SUPPLEMENTS AND RESISTANCE EXERCISES ON UNDERNOURISHED OLDER ADULTS WITH A RECENT HIP FRACTURE: 12 MONTHS RESULTS OF A RANDOMISED CONTROLLED TRIAL EXAMINING A MORE INTENSIVE REHABILITATION PROGRAM**

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Introduction Rehabilitation outcomes in older people following hip fracture are generally modest and there is interest in new approaches. While nutritional supplementation and extra resistance training seem sensible there is uncertainty around the independent and combined effects of these approaches in frail patient groups which include nursing home patients Methods and materials 100 nutritionally at risk older adults (70+) hospitalised following a fall related lower limb fracture. We stratified on pre-fracture accommodation (community dwelling or residential care) and randomised patients to receive individually prescribed oral supplement (6.3kj/ml) for 6 weeks (n=25), supervised tri weekly resistance exercises for 12 weeks (n=25), combined treatment (n=24) attention control (n=26). All participants also received usual hospital and post hospital rehabilitation. Cognitively impaired older adults able to follow instructions and those from nursing homes were included. Results At 12 months there were 3 withdrawals leaving 97 older adults with hip fracture available for masked assessment. Of these 19% had died, 29% had been admitted to hospital at least once, 21% moved to a higher level of care. There were no differences between groups in the outcomes achieved. When those receiving any additional intervention were compared with the attention control group mean gait speed was 21 secs (SE 2.2) compared with 26.4 secs (SE 5.7). Improvements in gait speed were seen in those from nursing homes as well as those from the community. Conclusion This small trial suggests that augmenting conventional rehabilitation may improve gait speed over 12 months but there was little evidence to support an impact on key health outcomes. Larger trials are now needed to explore whether the shifts in walking achieved can be translated into meaningful health outcome changes which would justify investment by health services in additional therapies.

**PB8 320 PROFIT FOR THE GERIATRIC DAY HOSPITAL IN VERY ELDERLY PATIENTS**

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**AIMS:** Analyze the benefits of the use of the Geriatric Day Hospital in very old patients. **METHODS:** Prospective observational study of patients admitted in the last 3 years (1-2006 to 1-1-2009) in a day hospital for Geriatric Services from Madrid area V. Excluding those with incomplete data (1), attending <4 (73 (12%). N: 542; 344, women, mean age 83,7 +/- 6,34 years. Three groups in study : A: patients > 90 years; B: patients 89-90 years; C: < 80 years. Discusses : Discusses functional gain according Barthel scale (admission-discharge) and improvement in gait and balance according Tinetti scale (admission-discharge), attending and institutionalization at discharge. Statistical análisis with  $\chi^2$ , Mean difference by paired T of student (admission-discharge), and Anova factor (Bonferroni test and Games-Howells test) for differences between groups. IC and signification level 95%. **RESULTS:** A) > 90 years: N= 99 (71 women, mean age 92,72 +/- 2,5 years). Mean attending: 15 +/- 5,6 days. Show a gain functional mean in Barthel of

15,18 (13,05-17,32) p<0,001, and in Tinetti of 4,33 (3,66-5,00) p<0,001; institutionalization discharge rate of 0%. B: 89-75 years; N : 180 ( 122 women , mean age 82,5+- 3,7 years) . Mean attending: 15,33 +/- 5,49 days. Show a gain functional mean in Barthel of 14,08 (12,95-15,16) p<0,001, and in Tinetti 4,44 (4,08-4,77) p<0,001); institutionalization discharge rate of 2%. C) <80: N= 328 (203 women , mean age 84,54 +/- 2,71 years). Mean attending: 16,13 +/- 6,28 days. Show a gain functional mean in Barthel of 14,26 (12,21-16,31) p<0,001 and in Tinetti of 5,21 (4,54-5,87) p<0,001); institutionalization discharge rate 0%. Comparing the three groups, no statistically significant differences between among the different variables. **CONCLUSIONS:** Very elderly patients aged more than 90 years to benefit from the Geriatric Day Hospital at the same extent as younger showing a similar gain in Barthel as in Tinetti, without more assistance.

**PB8 321 EFFECT OF VITAMIN D3 ON FALL AND FALL RISK ASSESSMENT IN GERIATRIC INPATIENTS**

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**Introduction:** The aim of this study was to determine the risk factors of fall and the relationship between vitamin D3 level and fall risk assessment tests in geriatric inpatients. **Methods and materials:** Fifty patients (43 female and 7 male) ages 61 to 86 (mean age 71) were included in our study. Patients included in our study if they were able to walk with or without aid and were able to complete the fall risk assessment tests. For fall risk assessment, timed get up and go, tandem walk, gait speed and stand-up from chair tests were performed. Patients' last one year femur neck and lumber 1-4 (L1-4) dual energy X-ray absorptiometry (DXA) T- scores and blood vitamin D3 level were also noted. Results: 40% of patients have had at least one falling history after age 60 and 25% of these were living alone, 15% had anemia, 25% had low glomerular filtration rate, and 75% had polypharmacy. Out of 20 fallers 9 have had fragility fracture history. More than half of the patients that were failed in timed get up and go test and gait speed below 1 m/s had low vitamin D3 level (<20IU/l). Among patients who have had fragility fracture 37.5% have osteoporosis. Conclusion: The results of this study show that patients hospitalized in physical therapy and rehabilitation center over 60 years of age were under high risk of fall. Fall risk factor assessment and appropriate interventions should be done to prevent fragility fractures.

**PB8 322 OSTEOPOROSIS IN MEN ADMITTED TO THE OSTEOPOROSIS AND METABOLIC BONE DISEASE CLINIC OF A GERIATRIC INSTITUTE**

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In literature one in three osteoporotic fractures (FRC) occur in men but only too few men at high risk of FRC are detected and treated. Fragility FRC are the primary clinical expression of osteoporosis (OP) in men, the most frequent sites being the hip, the vertebrae, the humeral and the distal forearm. In our Clinic we follow around 800 patients (pts) with OP and metabolic bone disease of whom only 66 men. Our aim was to define clinical characteristics, instrumental and laboratory findings of the male population we have in charge. In all of the 66 pts were collected a clinical and anamnestic evaluation including risk factors for FRC, previous clinical FRC, BMD (DXA/QUS), X-ray and laboratory evaluations and past or previous treatment for OP. Results: of the 66 pts studied (n $\pm$ SD): age: 69 $\pm$ 11 yrs, BMI: 25 $\pm$ 3 kg/cm $^2$ ), 12 had positive familial history for hip FRC (18%), 3 a history of alcohol abuse (4%), 6 were smokers (9%) while 26 smoke in the past (26%), 10 drank 3 or more cups of coffee per day (15%), 27 did regular physical exercise to keep fit (41%), but only 5 out of 15 pts with vertebral FRC did physical exercise, 4 were taking corticosteroids (CS)(6%) and 10 took CS in the past (15%), 23 showed previous fragility FRC (35%)(15 vertebral, 2 femoral, 2 of the wrist e 4 humeral). The daily calcium intake was 720 mg/die, but 44 pts (76%) had a calcium intake less than 1000 mg/die, only 12 pts (18%) were taking calcium supplements. The calcemia was in the normal range in all of the subjects (9.46 $\pm$ 0.6 mg/dl), while the concentration of 25OH-D3 was below the normal range (<30ng/ml) in 33 of the 42 pts (78%) and very low (<15 ng/ml) in 16 pts (36%). All the pts with low levels of calcium and/or vitamin D were supplemented with oral calcium and colecalciferol; 18 pts on 42 (19%) had a iperPTH (2 primary and 6 secondary, to reduced level of vitamin D). Eight pts of 42 (19%) had ipercacalciuria (>300mg/24h) and 11 pts (26%) had low calcium excretion (<100mg/24h). Of the 46 pts studied with X-ray and morphometric exam, 26 showed silent vertebral FRC (65%). Of the 61 pts who underwent a spinal or femoral DXA or calcaneal QUS, 27 showed T-score < -2,5SD (44%). Only 23 pts were taking therapies for OP. Considering overall the clinical, DXA, morphometric and laboratory data, we detected 49 pts with OP presenting with fragility FRC, clinically evident (23) or silent (26), of whom 43 with idiopathic male OP, 4 with OP secondary to CS therapy, 1 with OP secondary to hepatic failure, 1 with OP due to renal transplantation (treated with alendronate, risedronate, teriparatide), 2 pts with primary iperparathyroidism (sent to the surgery), 2 pts with Paget disease (treated with neridronate). In conclusion, according to literature, our preliminary data show that OP is a

significant problem in old men (still largely underdiagnosed and undertreated) that request a greater awareness among both the physicians and the general population.

**PB8 323 THE INTRODUCTION OF AN IN-PATIENT HOSPITAL EXERCISE VIDEO**

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**Introduction:** A program of simple exercises shown via a bedside entertainment system was developed at Cambridge University Hospital NHS Trust to increase activity and decrease the incidence of thromboembolism in the in-patient population. Reduced activity due to immobility is a weak risk factor for venous thromboembolism. Additionally, periods of bed rest and immobility associated with hospital stay have been linked with adverse effects at musculoskeletal and cardiovascular levels, compromising functional recovery and increasing length of stay. **Method:** A randomised qualitative review of a heterogeneous selection of one hundred patients found 88% were in favour of a short program of bed and chair based exercises. Following these results, a video was compiled of four five minute programs of simple upper limb, lower limb and breathing control exercises. This is available to be viewed by all in-patients at intervals throughout the day through a free hospital channel. **Results:** This exercise video was launched at Addenbrooke's Hospital in November 2008 and is the first program of its kind in the UK. **Conclusion:** It remains to be seen whether this program can have an effect on prevention of thromboembolism and influence activity amongst the adult in-patient population. The concept is a useful adjunct to therapeutic practice and requires audit to extrapolate direct correlation to clinical outcomes.

**PB8 324 CAN PRACTITIONERS GIVE AN AVERAGE AGE FOR FRAILTY IN THEIR PATIENTS?**

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**Introduction** Until the late nineties and the publishing of the results of the Canadian Study of Health and Aging and the Cardiovascular Health Study in the USA, frailty was mostly clinically defined. Frailty, as a syndrome, could be proved to be independent of age. Although better known now from an experimental point of view, it's still hard to find a cut off to target specific actions. Even rough clues are needed we developing insurance schemes or market model for support technologies. Age could still be an acceptable marker for regional populations with some homogeneity. Population and method We went back to the clinical appreciation of practitioner and asked them what was the average age of the typical frail elderly woman or man in their practice. We contacted the 91 members of a geriatric medical association in Toulouse, France. Results 30 answered, 20 were visiting patients in their home and 10 worked in a nursing home or hospital. Both in men and women we found two peaks of answers : a main peak at 85 and a secondary peak at 80 for women, at 80 and 75 for men. The proportion of practitioners visiting the patients at home was the same in both peaks both in women and men. Discussion We have older ages than in USA or Canada, but are close to Tuscany, this is correlating with morbidity and mortality data of which frailty is a risk factor. The two peaks could relate to the intermediate then frail states that were described in Frail-CHS; an incipient then an installed form of frailty. Conclusion Age as defined by local experts could be used as a clue to reach frail population when regional action is considered.

**PB8 325 ASYMPTOMATIC VERTEBRAL FRACTURES IN ELDERLY HOSPITALIZED PATIENTS**

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Orthogeriatrics is the term used to refer to the care of older people with fractures, of which the most significant is hip fracture. The orthogeriatric teams in Spain Hospitals see all people over 65 who are admitted with fractures. They are involved in their medical care and they manage their rehabilitation depending of the patients needs. Hip fractures are a serious health problem common among elderly men and women who fall and osteoporosis are the most frequent cause. The objective of this study has been to analyze the prevalence of asymptomatic vertebral fractures in patients entered by hip fractures in a Orthogeriatric unit and its relationship with age and gender factors. Methods. A sample was composed by 43 patients (68.9% were women and 30.2% were men) with hip fracture who entered in the Orthogeriatric unit of Joan March Hospital in Spain with an average of 79.4 years old. No of them indicated compatible clinical symptoms with vertebral fracture or have antecedents of knowing fracture. A radiological study of dorsal and lateral column was realised to them and analyzed by MORPHOPRESS by a specialist. Fracture from 20% of deformity of a vertebra was considered. Results. The 93, 4% (n=40) of the entered patients shows an asymptomatic vertebral fracture among which the 65,11% were in wedge formation, the 44,18% biconcave and the 34,88% presented crushing. The correlation study (Rho Spearman) showed a positive relationship between gender and fractures ( $p<0.05$ ) but a

relationship between age and fracture prevalence was not observed. In conclusion this study show the importance of a radiological study of column to all elderly patients who entered in the hospital orthogeriatrics units by fracture of hip.

**PB8 326 BODY COMPOSITION, LOWER EXTREMITY PHYSICAL PERFORMANCE AND LIMITATIONS IN AMBULATORY OLDER WOMEN**

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**Introduction:** The interactions among key body composition outcomes, fat mass (FM) and appendicular (legs) lean mass (aLM-Legs), and reported functional limitations (LIMITS) and lower extremity physical function (LEPF) is of public health importance due to the obesity epidemic and risk of physical disability in an aging society. The aim of this study was to determine the relative impact of FM, aLM-Legs and a novel characterization of functional body composition, aLM-Legs expressed relative to total body mass (TBM; aLM-Legs/TBM), on LIMITS and LEPF in older ambulatory women [N = 238,  $M \pm SD$ ;  $68 \pm 6$  y, (60-84 y)]. **Methods and materials:** Body composition was assessed by dual-energy X-ray absorptiometry. A FM index (FM-I) and aLM-Legs index (aLM-Legs-I) were calculated by normalizing values by height (meters squared). LIMITS were assessed using the basic lower extremity function score of the Late Life Function and Disability Instrument. LEPF was assessed via a timed up-and-go (UPGO) performance. Tertile analyses using ANCOVA (controlling for age) and Tukey post-hoc tests determined the impact of body composition status on LIMITS and UPGO. **Results:** FM-I, aLM-Legs-I and aLM-Legs/TBM were all related to LIMITS and UPGO ( $p < 0.05$ ). The middle and highest FM-I tertiles (greater adiposity) reported more LIMITS than lowest tertile ( $p < 0.05$ ) whereas highest FM-I had worst UPGO performance comparatively ( $p < 0.05$ ). Interestingly, the lowest aLM-Leg-I reported fewer LIMITS comparatively and highest aLM-Leg-I tertile had worse UPGO performance comparatively (all  $p < 0.05$ ), perhaps due to an interaction with weight status. However, no differences existed in LIMITS or UPGO across aLM-Legs/TBM tertiles ( $p > 0.05$ ). **Conclusion:** The impact of body composition on lower extremity functional limitations and physical performance is complicated due to interactions among adiposity and leg lean mass in ambulatory older women. Adiposity appears to be the key body composition variable related to risk for physical disability and should be a target for interventions. Support: NIH RO1-AG020118 (PI: McAuley); UIUC Campus Research Board (PI: Evans).

**PB8 327 VITAMIN D DEFICIENCY IN ELDERLY SERBIAN PEOPLE, SUFFERING FROM OSTEOPOROSIS**

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Vitamin D deficiency is commonly found in the elderly and is associated with osteoporosis and osteoporotic fractures. Vitamin D status of 112 female and 34 male subjects living in their own homes, were assessed. The study was conducted in Belgrade. All measurements were performed between september and december in the same year. Serum levels of 25(OH)D were measured in serum samples taken after an overnight fast. The values from 75 to 250 nM/l were optimal for the method, which was applied. Intra and interassay coefficient of variations were 5% and 8%, respectively. The values lower than 75 nM/l were accepted as vitamin D deficiency. Osteoporosis was confirmed in all subjects, included in this study, by densitometry (Hologic, Explorer). Serum osteocalcin, betacrossLaps and parathormone levels were analysed in all geriatric patients, also. We have found vitamin D deficiency in 52.4% analysed elderly (58 nM/l $\pm$ 4.8,  $X \pm SE$ , with negative linear correlation ( $r=-0.16$ ) to elevated PTH (110 pg/ml $\pm$ 6.8,  $X \pm SE$ ). The increase in serum PTH, secondary to vitamin D insufficiency, may affect bone remodeling and contribute to age related reduction in bone density. The osteocalcin serum level was diminished, but the betacrossLaps was not elevated. We found the very close relationship between low vitamin D serum concentration and bone mineral density (BMD), with rang of linear correlation of 0.78. Vitamin D deficiency is common due to the habits in nutrition,in sunlight exposure as well as in every day supplementation. Vit D is the real risk factor of very importance in geriatric patients. Management of osteoporosis in elderly people includes a modification of lifestyle risk factor, exercises, adequate nutrition and intake of calcium and vitamin D. Only optimal vitamin D serum level could to minimize the occurrence of fractures in elderly people, suffering from osteoporosis during antiresorptive therapy.

**PB8 328 EFFECTS OF AEROBIC AND RESISTANCE TRAINING AND DETRAINING ON CARDIORESPIRATORY STATUS IN ELDERLY**

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**Introduction:** The aim of this study was to examine the effects of 12 weeks of aerobic and resistance training on cardiorespiratory capacity and blood pressure in healthy elderly people. **Materials and Methods:** Eleven volunteers (70 &plusminus sign 5 years old; 8 women) performed 20 minutes of walking followed by progressive resistance training

(PRT) for lower body muscle groups, twice a week. The PRT was performed with level set at 65% of 10 repetition maximum (10-RM) for the first four weeks, 70% for the next four weeks and 75% for the last four weeks. The cardiorespiratory capacity was measured by the six minute walk test (SMWT). The blood pressure was measured through the auscultatory method before and immediately after the SMWT. The subjects were evaluated before and after 4, 8 and 12 weeks of training and after 4 weeks of detraining. The homogeneity results were compared by Wilcoxon ( $p < 0.05$ ). Results: Aerobic and resistance training increased the walking distance on SMWT when compared before training (555 ± 65m vs 514 ± 100m,  $p = 0.04$ ). The cardiorespiratory gain occurred between 8 and 12 weeks of training. Only 4 weeks of aerobic and resistance training decreased the systolic (120 ± 16mmHg vs 138 ± 20mmHg,  $p = 0.01$ ) and diastolic blood pressure (70 ± 9mmHg vs 84 ± 10mmHg,  $p = 0.007$ ) at rest and decreased the diastolic blood pressure after the SMWT (78 ± 12 mmHg vs 86 ± 9mmHg,  $p = 0.01$ ) when compared before training. Conclusion: The aerobic exercise associated to resistance training for 12 weeks improved cardiorespiratory capacity of the elderly and decreased their systolic and diastolic blood pressure at rest and their diastolic blood pressure after submaximal effort at 4 weeks. The benefits were maintained even after detraining.

#### **PB8 329 DIFFERENCE BY AGE IN THE ASSOCIATION BETWEEN BODY COMPOSITION AND BONE MINERAL DENSITY**

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Introduction Bone mineral density (BMD) is known to be affected by body composition, such as body mass index (BMI), fat mass (FM), lean body mass (LBM). However, the strength of association may vary by age group because of changes of body composition with increasing age. The aim of this study is to assess the association between body composition and BMD by age groups. Methods Data were collected from 317 volunteers aged over 40 from a Korean community, who were not taking any medication affecting bone metabolism. All subjects completed a questionnaire by interview, and body composition analysis and BMD measurements were taken. Body composition was measured using bioelectric impedance, Inbody 3.0, biospace Co., instrument. BMD value at the calcaneus was measured by dual-energy X-ray absorptiometry (DEXA) using a Lunar instrument. Spearman correlation and multiple regression were used for data analysis. Results BMD(g/cm<sup>2</sup>) were 0.56±0.11(mean±SD), 0.48±0.10, 0.43±0.12 by age group, 40-49, 50-59, and 60+, respectively. BMD was positively correlated with LBM in all groups, BMI in age 40-59 group, FM in age 40-49 group, and 60+ year groups. By multiple regression analysis, only LBM and BMI were significantly associated with BMD. Thus, for 1kg increase in LBM was associated with 0.0051g/cm<sup>2</sup> increase in BMD among 40s age group, 0.0053g/cm<sup>2</sup> among 50s age group, and 0.0117g/cm<sup>2</sup> among a group with 60. This result implies that the effect of LBM on BMD increases by age. Conclusion This study suggest that the LBM, among body composition, is most strongly associated with BMD with increasing age. With the risk for age-related loss of lean muscle mass, measures of maintenance of LBM may be important for preventing osteoporosis.

#### **PB8 330 EXPERIENCES OF OLDER ADULTS ACCEPTING OR REFUSING IMPLANT DENTURE REHABILITATION**

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Objective: This study aimed to use the International Classification of Functioning Disability and Health to help explore psychosocial perceptions of edentate elders who had either accepted or refused dental implants to assist rehabilitation with dentures. The objective was to develop hypotheses to explain quality of life perceptions relevant to the oral health of older adults with complete tooth loss. Methods and Materials: Fifty edentate adults, from 50 to 89 years of age, were interviewed individually using open-ended questions on quality of life related to their general and oral health including tooth loss and denture use. Half of the participants had accepted implant denture rehabilitation, and half had refused treatment. Themes related to psychosocial and quality of life perceptions were identified in verbatim transcripts of the interviews. Results: Various responses were revealed including satisfaction and dissatisfaction with body structure and function, activities and participation. The influence of personal beliefs was noted, such as adaptation in the face of adversity, and of environmental factors, such as financial freedom. Those accepting implants revealed expectations of improved prosthesis stability and a desire to be 'normal' despite a small risk of surgical complications including altered sensation. Those refusing implants typically viewed conventional dentures to be acceptable substitutes for natural teeth and considered implants unnecessary to improve quality of life. Some found the perceived benefits of implants did not outweigh surgical or maintenance concerns. Conclusion: Elders with or without implants can use very positive language to describe their quality of life outcomes, suggesting factors other than physical impairment may be influencing positive adaptation in the face of tooth loss. Although aging edentate adults can maintain quality of life consistent with their expectations, it remains unclear what

psychosocial factors predispose to a desire for a more extensive intervention. (Canadian Institutes of Health Research Grant #14R90998).

#### **PB8 331 THE RELATIONSHIP BETWEEN MUSCLE MASS AND PHYSICAL FUNCTION: NHANES 1999-2004**

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Introduction: Previous studies have shown a link between physical function and muscle power; however, there is a paucity of information on the relationship between muscle mass and physical function. The purpose of this study was to investigate the relationship between skeletal muscle index (SMI) and muscle power, and between SMI and various measures of self-reported physical function in a community-dwelling elderly population. Materials and Methods: Participants (>= 60 yrs of age, n = 3,799) were from the National Health and Nutrition Examination Survey (NHANES) 1999–2004. SMI [appendicular muscle mass (kg) / height (m)<sup>2</sup>] was measured by dual energy X-ray absorptiometry. Muscle power was the product of isokinetic peak leg torque and peak force velocity. Information on self-reported physical functioning was collected using 19 questions from the questionnaire portion of NHANES. These questions included activities like "walking up 10 steps" and "using a knife and fork." For each question, 3 groups were formed: no difficulty in doing the activity, difficulty in doing the activity, and unable to do. Linear regression was used to link muscle power and SMI. Multinomial logistic models with covariates (demographics, health behaviors, medical conditions) were used to explore the relationship between SMI and each area of physical function. Results: SMI showed a positive association ( $p < 0.05$ ) with muscle power. The odds ratios (95% confidence interval) for no difficulty vs. difficulty were significant ( $p < 0.05$ ) for a one unit (kg/m<sup>2</sup>) increase in SMI for some activities: walking ? mile [0.776 (0.668-0.907)], walking up 10 steps [0.801 (0.683-0.938)], stooping/crouching [0.869 (0.763-0.989)], house chores [0.793 (0.671-0.986)], and standing from an armless chair [0.791 (0.672-0.930)]. Increasing SMI was associated, although insignificantly, with decreased likelihood of difficulty in the majority of remaining activities including: getting in/out of bed, standing/sitting for long periods of time, using knife/fork, and lifting/carrying 10 lbs. Conclusions: Higher muscle mass was observed to be associated with greater muscle power. Lower muscle mass was associated with greater likelihood of difficulty in most areas of physical function in the community-dwelling elderly that had not reached the point of being unable to do those activities. However, more research needs to be done to further investigate this relationship.

#### **PB8 332 TRANSLATING AN EVIDENCE-BASED FALL RISK REDUCTION INTERVENTION INTO AN EFFECTIVE COMMUNITY-BASED PROGRAM: AN EVALUATION OF TWO TECHNIQUES FOR MAINTAINING FIDELITY.**

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INTRODUCTION: According to the National Institutes of Health Behavior Change Consortium (BCC), developing techniques aimed at retaining the fidelity of evidence-based practices are critical to the effective translation of these practices into effective community-based programs that are widely accessible to older adults. The primary purpose of this study was to evaluate the effectiveness of (a) provider training and (b) standardized treatment delivery and program evaluation strategies on the successful replication of an evidence-based fall risk reduction program in nine community-based centers. METHODS AND MATERIALS: Nine providers (e.g., exercise specialists, physical therapists) were trained to implement an evidence-based fall-risk reduction program in one or more community sites. Instructors were specifically trained in the delivery of standardized program content suitable for group-based settings. A total of 188 older adults ( $M = 77.63$ ,  $SD = 7.91$ ) identified at moderate-to-high risk for falls were recruited to participate in the eight-week fall risk reduction program. Consistent with the original studies conducted, multiple performance outcomes (previously shown to be moderately-to-strongly associated with falls) were collected at baseline and post-intervention and used to evaluate the program's efficacy across sites. Measures included balance, gait, upper and lower body strength, and balance-related self-confidence. RESULTS: A Doubly Multivariate Multiple Analysis of Variance (DM MANOVA) yielded Main Effects for Site ( $F = 2.01$ ,  $p < .001$ ) and Time ( $F = 32.03$ ,  $p < .001$ ) only. The Site X Time Interaction was not significant ( $F = 1.22$ ,  $p = .14$ ). While certain functional performance outcomes differed across sites and also improved from baseline to post-intervention, the mean level of improvement did not differ across sites. CONCLUSIONS: Developing a standardized treatment delivery protocol, in conjunction with a provider training program, constituted effective methods for maintaining the fidelity of an evidence-based program when implemented by multiple providers.

#### **PB8 333 HEALTH SERVICES UTILIZATION AND HEALTH PRACTICES AMONG THE ELDERLY IN INDIA: RESULTS FROM THE KERALA AGING SURVEY**

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Purpose The purpose of the study was to examine the patterns of health services utilization and health promotion practices of older adult population and suggest appropriate solutions

including programs and policies to address the health needs of the ageing population. Methods: The Kerala Aging Survey, conducted among more than 5,000 elderly (2271 men and 2722 women) in 14 districts using population-based epidemiological design, was the keystone of the study. The survey had detailed modules on various determinants of health developed around the World Health Organization's Determinants of Healthy Aging framework. Results: The results of the Kerala ageing survey have shown that the age of participants ranged from 60 to over 100 years of age with 54% being women. The study showed that common health problems include: diabetes, heart disease, high blood pressure, and arthritis. For medical needs, close to 40% accessed public hospitals and 56% used private hospitals. The reasons for access to private versus public varied. Most accessed public hospital for the free service provided whereas those who accessed private hospitals did so for the availability of better services, good care, and attention. In the study, only about 30% had routine medical check-up and over 80% were under regular medication. Health practices of the older adult population were also examined. The gender difference was clear in behavioural factors with men smoking cigarettes and drinking alcohol and women chewing betel leaf. Self reported participation in physical activity decreased with age. Approximately 60% of the young old (less the 70) participated in physical activities mostly in the form of household activities. Dietary patterns showed that most elderly consume three meals a day with a greater tendency for the older age groups to skip or miss meals. Also, the type of food changed from non-vegetarian to vegetarian as people aged. Approximately 30% were on special diet such as diabetic diet or low salt diet. Implications of the Results Given the aging of the population, evidence-based programs and policies are needed to address the growing health needs and issues faced by the elderly in India. In Kerala, which has the highest proportion of elderly in India, the extent of policies and programs for the elderly is limited. Given the limited resources available for the elderly, it is not surprising that there are no current programmes related to health promotion among elderly, targeting the determinants of healthy ageing.

#### **PB8 334 FALLS PREVENTION AND CORRECT USE OF CANE IN COMMUNITY-DWELLING ELDERLY PEOPLE**

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**INTRODUCTION:** The aging carries a deficit on physical capacities, between them a decrease in balance and modifications in gait, appearing as consequence the accidental falls that suppose one of the most important geriatric syndromes because of his high effect and high morbi-mortality. The use of walking sticks is indicated in an important part of this population in order to prevent some consequences like accidental falls, immobility and dependence. **OBJECTIVES:** To identify the characteristics of individuals who use a walking stick. To analyze in this group of population the gait, balance and risk of falls by different validated tests. To verify if it is possible to improve gait and balance through a program executed by a physical therapist. **MATERIAL AND METHOD:** Randomized control trial on 60 individuals with an average of age of 69,65 (SD 2,83), with record of demographic variables and evaluation of gait, balance and previous risk of falls and later to the intervention through a program of adjustment and performance of gait with walking stick executed by a physical therapist. For statistical analysis, verifying the normality and independence of the distribution by means of Kolmogorov-Smirnov Test, T-Student Test for independent samples to compare the averages of both groups previous random assignment, and T-Student Test for samples related to compare the averages pre and post of the same group with a confidence interval of 95 %. **CONCLUSIONS:** This program for adjustment and performance of gait with cane improves the balance, gait and therefore, it might be useful for the prevention of falls in not institutionalized aged people who use this kind of self-help device.

#### **PB8 335 IDENTIFICATION OF THE RISK OF FALLS AMONG THE ELDERLY BY ANALYZING THE PARAMETERS OF THE HALF TURN ON THE PLATFORM IPF 502**

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**Objectives:** The purpose of this study is to propose a method for detecting risk of falls in the elderly through the analysis of physiological parameters recorded at the completion of a half turn on the platform iPF02 ®. The results were compared with those obtained from clinical tests commonly used to detect the risk of falling. Materials and methods: - The platform includes iPF02 ® 4 sensors gauge constraint on a plateau instability damped, allowing a sampling frequency of 100 Hz, it is an extension of plates that serve as market area before reaching the platform where the tower is half done. The digital processing allows to analyze the following parameters at the half turn: number of steps carried out during the half turn, half turn length of time support monopodal, creates energy and received and correlation of phases and modes. - The population studied by 5 investigators

included 120 people aged over 75 years. A control group of 125 people under the age of 75 years was studied under the same conditions. For each of these epidemiological data: age, gender, lifestyle, diseases and treatments in progress, and fall history were collected. Four clinical trials testing the risk of falling have been made: unipodal support, get up and go test, walking and talking and pushed sternal test. The half round on the platform was done three times on each side. - The whole performance has benefited from a statistical study of the reproducibility of the parameters measured at the half turn, their agreement and their evolution with age. To determine the parameters that are most predictive of falls logistic regression was performed on the basis of the usual risk of falling. Results The results show: - A good reproducibility of criteria posturographiques (number of steps, length traveled, creates energy and received) recorded at the half turn. - A high level of correlation between different parameters measured at the half turn, in particular number of steps, time and support unipodal total. - The parameters: number of steps, support unipodal time, total time and length of the half turn are significantly associated with history of falling. - A good correlation between the clinical testing of the risk of falls and parameters of the half turn, especially the number of steps and total time. Conclusions: The results of this preliminary study show that an analysis method is reproducible turned around and found the parameters correlated with each other which helps to validate the technical review, on the other hand it allows for identify older people at risk of falling.

#### **PB8 336 FOUR QUESTIONS TO DETECT FRAIL ELDERLY PATIENTS IN EMERGENCY ROOM (ER)**

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**Introduction:** The ER visit of elderly patient is often the telltale sign of frail underlying condition. **Objectives:** to determine questions that detect frail elderly patients admitted in ER. **Methods and materials:** 118 patients aged  $\geq 75$  years old admitted in a French University Hospital ER were consistently included. The ER physicians filled out a 10-item questionnaire including the ISAR, 3 pertinent items of SEGA, and one more item: "living alone". Within the week of admission in ER, each patient was assessed (visit to patient hospitalized in acute care or telephonic interview for the others) by an experienced geriatrician in order to detect frailty (clinical evaluation). Only completed data (both ER physicians and geriatrician assessments) were submitted to analysis. **Results:** Complete data were obtained for 67 patients (mean age: 83 years old, minimum: 75 – maximum: 98; 58 % female). Number of comorbidities was (mean  $\pm$  SD)  $2.5 \pm 1.0$ , number of medications was  $5.2 \pm 3.5$ . 49 patients (74.2%) were hospitalized. According to the geriatrician assessment, 53 % of patients were frail, 35 % were fit and 12 % had polypathologies. Four items assessed by ER physicians were significantly associated to frailty determined by the geriatrician: - Do you need help on a regular basis? ( $p=0.001$ ). - Since the illness that brought you to the ER, have you needed more help than usual? ( $p=0.037$ ). - Have you problems with your memory? ( $p=0.005$ ). - Do you take more than 3 different medications daily? ( $p=0.017$ ). Conclusion: By asking 4 questions, French ER physicians can easily and quickly detect frail elderly patients that need a comprehensive geriatric assessment. These 4 questions are part of the ISAR scale regularly used in USA and Canadian ER. These results have to be confirmed by a validation study in different ED.

#### **PB8 337 SACRAL INSUFFICIENCY FRACTURE : AN OVERLOOKED CAUSE OF LOW BACK PAIN**

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**Introduction:** Sacral insufficiencies fractures (SIF) are not uncommon in geriatric population and usually occur in osteoporotic bone with minimal traumatism ; clinical diagnosis remains difficult because of atypical presentation. **Methods:** we retrospectively analysed 5 cases of SIF diagnosed in a geriatric unit between 2005-2008. **Results:** Four women and one man, mean age 88, living at home were admitted for lumbar pain or atypical sciatalgy, involving for two weeks in two of them. Pain was responsible of loss of autonomy and one patient developed a voluminous sacral pressure sore. Previous falls were absent in two cases. None of them was on corticotherapy, nor was receiving a treatment for osteoporosis ; three patients have severe renal insufficiency. Diagnosis was made by bone scintigraphy for 3, demonstrating a typical H-sign, and for 2 by computed tomography. Associated fractures were present in 2 patients. Four patients recovered after bed rest and analgesics, one died of septicemia. **Conclusion:** prevalence of ISF in the elderly is unknown, because of atypical presentation (pelvic and low back pain, mobility restriction) with non significant radiological signs. Osteoporosis is the major underlying pathology. The H sign of isotope bone scan confirms sacral fracture but is documented only in 40 %

of the cases. Computed tomography or magnetic resonance imaging may be useful to confirm diagnosis.

**PB8 338 COMPARISON OF BODY COMPOSITION, MUSCULAR STRENGTH, BALANCE, REACTION TIME AND ACTIVITY LEVEL IN COMMUNITY-DWELLING AND INSTITUTIONALIZED OLDER ADULTS**

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**Introduction:** Muscular strength, balance and reaction time are major contributing factors to enhance posture and postural stability and to promote functional activities. Some studies in the literature have shown community-dwelling older adults are more active with higher balance control than the older adults living in residential houses, although some authors have found opposite results. There is still controversy on geriatric care either could be in home based or in institution. **Aim:** The aim of this study was to determine whether there are differences in body composition, balance, reaction time, muscular strength and activity level between the older adults living in residential houses and community dwelling older adults. **Methods and Materials:** 26 older adults have been living in a residential house in Turkey (Group 1) and 26 community-dwelling older adults (Group 2) were included in the study. Their mean age was 66.773.71, aged between 60 to 73 years. All of them in both groups were assessed with the same measurement tools, then the groups were compared with each other. Older adults had serious neurological, cognitive, musculoskeletal, cardiac or psychological disorders were excluded. Body composition was calculated after taking their height, weight and skinfold measurements. Reaction time was measured by a visual reaction timer. Rhomberg test was used for assessing their balance. Activity level was measured using Activity Index scored with maximum 100 points. Strength of knee extensors and elbow flexors, handgrip strength and maximal respiratory pressure were measured as indicators of their strength. After recording all the measurements Results: There were no significant differences in body mass index, handgrip strength and strength of elbow flexors between the groups. However, percentage of body fat, strength of knee extensors and maximal respiratory pressure measurements (PI max and PE max) were higher in community-dwelling (0.05). Older adults in community showed comparable shorter-adults (p reaction time than the older adults in residential house (Group 1= 0.10 sec.). Community-dwelling older adults ± 0.22 sec., Group 2 = 0.40 ± 0.59 were capable to control their balance with eyes-open and eyes-closed < almost two times more than the adults living in residential houses (p 0.05). Activity Index score was 14.23 points for Group 1, while it was 0.05). Conclusion: This study showed that < 40.08 points for Group 2 (p community-dwelling older adults had some advantages in terms of muscular strength, activity level, balance and reaction time although their body fat was higher which could be attributed to the life-style of Turkey. These results revealed that home based geriatric care and rehabilitation is very important and could be preferable than to be institutionalized.

**PB8 339 REARRANGEMENT OF METABOLISM AND CEREBRAL HEMODYNAMICS IN ISCHEMIC STROKE PATIENTS DURING REHABILITATION: AGE PECULIARITIES**

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**Purpose:** To study correlations between metabolism and cerebral hemodynamics as a function of age in ischemic stroke patients. **Subjects and Methods:** The study included 263 patients with an ischemic stroke in the internal carotid artery (ICA) area who were divided into two age groups: middle-aged (n=198) and elderly (n=65). Cerebral hemodynamics was inferred from duplex scanning using Sonoline Elegra (Siemens) and metabolism of the brain from the *in vivo* H1 MR spectroscopic data (1.5 T Magnetom Vision Plus, Siemens). **Results:** The middle-aged post-stroke patients versus age-matched control subjects displayed more pronounced decrease of LBFV and volumetric blood flow rate in the damaged (55.3% and 19.2%, respectively) and intact ICA (32.4% and 10%, respectively) and MBA (respectively 47.7% and 39%; and 36.4% and 29.3%) and the higher frequency of hypoechoic atherosclerotic plaques (49.5% in middle-aged and 24.1% in elderly). At the same time the gray and white matter NAA content in elderly patients was statistically lower than in elderly control subjects (18.2±0.9 and 24.1±0.8 nominal units, respectively). Dissociation between degree of changes in cerebral hemodynamics and NAA metabolism level is conditioned by that in elderly patients the influence of hemodynamics on NAA content on damaged basin vessels is more pronounced. Thus NAA content of the occipital gray matter in middle-aged patients correlated with volumetric blood flow rate in intact ICA ( $K=0.74$ ) and VA ( $K=0.81$ ), while in the elderly it correlated with hemodynamics in homolateral MBA ( $K=0.69$ ). In elderly patients, changes of cerebral hemodynamics and metabolism were more marked with right hemispheric stroke localization (white matter NAA content was  $21.74\pm0.52$  from the right and  $21.50\pm0.54$  from the left; gray matter NAA contents were respectively  $21.13\pm0.62$  and  $23.58\pm0.93$ ) than with left hemispheric stroke localization (white matter NAA content was  $23.43\pm0.5$  from the right and  $23.37\pm0.57$  from the left; gray matter NAA contents were respectively  $22.78\pm0.99$  and  $24.91\pm0.87$ ). In conclusion, cerebral hemodynamics changes were more pronounced in middle-aged patients and metabolic changes were more marked in elderly post-stroke

patients. Therefore such age peculiarities should be considered while choosing proper tactics for their pharmacological rehabilitation.

**PB8 340 FULMINANT MENINGITIS IN ELDERLY**

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An 88 years old woman with a pacemaker for atrioventricular block, was admitted to the hospital because of the recent onset incoherent speaking and altered consciousness. Five days before admission diarrhea developed without fever. She did not have nausea, vomiting. On physical examination the patient was unconscious. The blood pressure was 100/50 mmHg, the pulse was 60 beats per minute, and the axillary temperature was 35°. The respiratory rate was 34 breaths per minute. The Chest was clear to auscultation. There was a 3/6 systolic ejection murmur at the left upper sternal border. The abdomen was nontender, nondistended, and soft. The tip of the liver was palpable. The remainder of the examination revealed no abnormalities. On Neurologic examination, the Score on the Glasgow coma Scale was 6 (Eye:1, Verbal: 2, Motor:3). The pupils were round; the right was 5 mm in diameter and reactive to the light, and the left was 3 mm in diameter and reactive to light. The neck was rigid, and Kerning's sign was present. The reflexes were present; the plantar responses were indifferent. An electrocardiogram revealed pacemaker rhythm. A radiograph of the chest revealed a big heart and the lungs were normal. Blood levels of electrolytes and serum levels glucose, albumin were normal. The urea and creatinine levels were high (198mg/dl and 1.41mg/dl respectively). Hematologic laboratory values were 25100 leucocytes (52% Neutrophils) hemoglobin 16.7, Platelets 300000, Quick ratio 60%. Urinalysis revealed 14-16 white cells. Computed Tomography (CT) of the head performed 1 hour after the patient's arrival in the Emergency Department, without the administration of contrast material, revealed age related parenchymal changes, no densitometric changes. Then CT, Lumbar puncture was performed, the results of cerebrospinal fluids were: proteins 74 mg/dl (normal 23 to 38 mg/dL), glucose 80 mg/dl (cerebrospinal glucose- serum ratio more less than 0.6), white cells count 47 (100% Neutrophils) and 64 red cells count. Vancomicine, Ceftriaxone and Acyclovir were begun. Two hours after, the patient remained comatose and unresponsive, and the patient died. 48 hours after culture of the cerebrospinal fluid, blood and urine that had been obtained on the Emergency department grew E. coli. **Discussion:** The Meningitis for Gram negative are often in newborn and children, it is unusual in elderly. In this case is associate to neurosurgical, traumatic brain injury, and other diseases about diabetes mellitus, cancer and steroids treatment. The presence of fever, the physical findings of meningeal irritation and perturbations of level of consciousness are often seen in patients with meningitis. The Septic Shock is an unusual complication with high mortality. The mortality for Meningitis in adults and children is around 40-80 percent. The Spontaneous Meningitis with bacteremia is often associated with high mortality equal to this clinical case.

**PB8 341 CORRELATION BETWEEN CASUAL SYSTOLIC BLOOD PRESSURE AND ARTERIAL STIFFNESS ACCORDING TO GENDER AND AGE IN NURSING HOME RESIDENTS AGED >80.THE PARTAGE STUDY**

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**Introduction:** Studies showed that there was strong positive relationship between casual Systolic Blood Pressure (SBP) and Pulse Wave Velocity (PWV). This relation could be modified in the elderly, particularly because of co-morbidities and/or multi medications that could differently influence SBP and PWV. One of the PARTAGE (blood Pressure and ARTerial stiffness in nursing home residents AGED over 80 y.o) objectives is to assess the correlation between the various measurement of SBP and PWV in this population. **Patients and methods:** 1130 nursing home residents older than 80 years, were recruited in France (Nancy, Dijon, Paris, Toulouse) and in Italy (Verona). SBP was first measured by instructed persons in a standardized manner with an automatic device with patients sitting (casual SBP) and standing (orthostatic SBP); second SBP was auto measured by patients themselves three consecutive times at the morning and at the evening for three consecutive days. Carotido-femoral PWV (c-f PWV) was measured by Pulse Pen device. These results refer to casual SBP and PWV measured at the inclusion (baseline values). **Results:** The mean age was  $87.7\pm4.8$  years and 22% of subjects were men. Mean casual SBP for men and women were 134 mmHg and 138 mmHg respectively with c-f PWV values of 14.9 m/s and 14.1 m/s respectively. For the 3 age class defined (80-84, 85-89, more than 90 years old), SBP values were 135 mmHg, 138 mmHg, 138 mmHg respectively and for c-f PWV 13.8 m/s, 14.3 m/s and 14.9 m/s respectively. Correlation between SBP and c-f PWV were stronger in women than in men ( $R=0.31$  vs 0.22) and in the lowest age group compared to highest ( $R=0.31$ , 0.31 and 0.24 respectively). **Conclusion:** In the highest age group and in men we observed an important increase in aortic stiffness and a weaker SBP/c-f PWV

relationship with a very slight increase in SBP for highest age group and a very slight decrease in SBP for men. These results may reflect different influence of co-morbidities on BP and arterial stiffness.

**PB8 342 DEMOGRAPHIC TRANSITION IN TUNISIA : SOCIO-MEDICAL AND**

ECONOMIC ASPECTS OF AGEING

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In developing countries, population ageing is occurring over an even shorter period than that observed in the developed countries. Thus this fast structural change leaves little time to adapt to the new situation. Purpose: this study aimed to evaluate and analyse geriatric epidemiology aspects in Tunisia Results: The observed population ageing in Tunisia is explained by a considerable phenomenon called the "demographic transition, it corresponds to the passage from a young population characterized by a strong fertility and a high mortality rate to an older population with low mortality and fertility rates. The population pyramid in thus transformed into a "haystack". Thus, in Tunisia, the proportion of elderly (60 years old people and more) passed from 4.1% in 1956 to 9.6% into 2004. That of the 65 years old people and more passed from 3.5% in 1966 to 6.5% into 2004. This weight will do nothing but double during the 25 next years. Indeed, the 60 years old people and more will represent, into 2030, close to the double is 17.7% of the whole of the population. In this horizon and for the first time of the history of the Tunisian population, the population of more than 60 years will be higher than that of the children from 0 to 14 years which will account for only 17.3%. The life expectancy at 65 years is today 14.2 years for the men and 15.6 years among women. The life expectancy to the birth could still increase and reach in 2030: 75 years for the men and 80 years for the women. The demographic transition is accompanied by another phenomenon called the "epidemiological transition" which is defined by a shift in the causes of death due to the reduction of infectious diseases and the progressive increase in deaths due to generative diseases such as cardiovascular and neoplastic pathologies, which are characterized by latency of several years between their onset and death. The epidemiological transition has resulted not only in a rise in the prevalence of chronic disease, but also in an increase in the number of centenarians Discussion and conclusion: The demographic transition of our country and the ever growing (medical and social) needs of the elderly is a problem of gigantic proportions. The consequences are enormous for the systems of care of health and assistance. It will be required deep reflection and a long term strategy to increase the capacity of our socio-medical system to answer the needs and waiting of the old people.

**PB8 343 GENDER DIFFERENCES IN COGNITIVE, FUNCTIONAL AND HEALTH STATUS AMONG THE VERY-OLD URBAN BRAZILIANS**

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Introduction: Brazil is one of the countries where the very-old population group is growing fastest. This age group has been understudied, especially in the developing world. We evaluated how gender is related to socioeconomic and demographic characteristics, cognitive, functional, and health status among very-old Brazilians. Methods and materials: The aleatory sample was composed by 273 south and southeast urban very-old Brazilians (80 years) living in the community. The cross-sectional, population assessment was performed at home. Evaluation included socioeconomic characteristics, presence of comorbidities, Mini-Mental State Examination (MMSE), Functional Independence Measure (FIM) and the 15-item Geriatric Depression Scale (GDS). Results: Female comprised 67% of the sample, 73.4% of them were widowed, and 22% lived alone. Among men, the majority (70.5%) were married and 16% lived alone. Mean age and years of schooling were 84.3 ( $\pm 3.5$ ) and 3.9 ( $\pm 4.3$ ) for men, and 84.9 ( $\pm 4.4$ ) and 3.5 ( $\pm 3.6$ ) for women, respectively. Time from retirement was 26.8 years for male and 13.6 years for female ( $P = 0.001$ ). Men's income was almost twice higher than among women ( $P = 0.001$ ). Mean MMSE score was 22.3 ( $\pm 5.4$ ) for men and 19.2 ( $\pm 7.3$ ) for women ( $P = 0.001$ ). Mean number of comorbidities was 5.4 ( $\pm 2.5$ ) for males and 7.3 ( $\pm 3.0$ ) for females ( $P = 0.001$ ). Females (29%) presented a 2.7 higher chance of being depressive than men (13%,  $P = 0.004$ ). Mean FIM score was 111 ( $\pm 17.8$ ) for men and 104 ( $\pm 24.3$ ) for women ( $P = 0.01$ ), indicating higher independence levels for men. Conclusion Lower time from retirement probably indicates earlier withdrawal among men due to working years contributed to the Social Welfare System, while most women became retired due to age. Unfavorable health conditions which are usually biologically associated with gender, like functional dependency and depression, might be, at least partially, attributed to gender socioeconomic inequality.

**PB8 344 LICHENSTEIN TENSION-FREE INGUINAL HERNIA REPAIR IN ELDERLY MALE PATIENTS**

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Introduction Inguinal hernia repair is currently the most commonly performed general surgical operation; it occurs with a greater frequency in men than women (12:1) especially

in elderly patients because of the abdominal wall weakness and conditions which increase intraabdominal pressure. The open tension-free Lichtenstein hernioplasty constitutes the current gold standard for the elective repair of inguinal hernia in men. The aim of this study was to evaluate the results of the Lichtenstein hernioplasty in elderly patients compared with younger patients in our department. Methods and materials A database of male patients, categorized in older (over 70 years) and younger (under 65 years) group who underwent elective Lichtenstein inguinal hernioplasty in 2008., has been established. Demography, co-morbidity, type of hernia and anaesthesia, postoperative pain and use of analgetics, complications, hospitalisation, return to normal daily activities were recorded. Results A total of 393 consecutive patients were studied, including 126 patients in the elderly and 267 patients in the younger group. Respectively for elderly versus younger group: Median age 76,14 (70-92) versus 51,4 (19-65) years; concomitant diseases 80% versus 40%; spinal anesthesia 52,3% versus 68%, local anesthesia 46% versus 23%, general anesthesia 1,7% versus 9%. Nyhus's classification, type 2 and 3 hernias were the most common in both groups. 6 patients (4,75%) developed postoperative haematomas versus 9(3,37%) and 8(6,34%) urinary retention versus 12(4,5%). There were no wound infections in both groups. Also observed were nonsignificant differences in hospitalization days (3,1 versus 2,75) ; pain scores and days of analgetics usage (3,9 versus 4,3); and return to normal daily activities 7,5 versus 8,4. Conclusion Lichtenstein inguinal hernioplasty is a simple, effective method, with prompt recovery and low complications and can be done in the elderly as safely as in younger patients. Local anesthesia is recommended whenever possible.

**PB8 345 OLDER PEOPLE'S EXPERIENCES OF HOME-BASED TECHNOLOGY IN UK- SPECIFIC EXTRA CARE HOUSING**

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Introduction Extra Care Housing (ECH) is expected to provide a supportive environment for older people as they age and become frailer, but little post-occupancy evaluation has been performed. The EVOLVE study explores the relationship between building design and quality of life in ECH. This paper reports data from one aspect of the first stage of the EVOLVE study, examining how Home-Based Technology (HBT) influences quality of life for residents of ECH. Methods and Materials Five ECH schemes were recruited through purposive sampling. Scheme managers selected residents who represented a range of demographic and health characteristics in their scheme to participate in a focus group on the design of ECH. In total thirty-five residents took part across 6 groups. As part of the focus group schedule, issues relating to HBT in the schemes were raised. Transcripts were content analysed to examine the participants' views on HBT. Results There was little discussion of HBT, and few participants could name examples of technology in their scheme without prompting. However, problems with insufficient or poorly placed lifts were commonly cited. Kitchen devices were mentioned as being inadequately designed for residents' needs, and use of laundry facilities could be problematic. Some participants had concerns about their inability to operate new technology, were reluctant to expend the amount of effort required to learn to use technology, and supposed they had no use for it. Conclusions Residents in ECH schemes rarely consider technologies as impacting on their quality of life, yet connections have emerged between the design and location of the reviewed technologies and elements of life quality. The focus group data will be used in the development of a tool to evaluate the design of ECH schemes; a survey will follow to consider residents' attitudes towards and use of technology in terms of quality of life.

**PB8 346 INTERACTIVE AND INTUITIVE MEMORY AID FOR THE ELDERLY AND PEOPLE IN THE EARLY STAGES OF ALZHEIMER**

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A lot of elderly people use some kind of low-tech memory aid(s) like post-its, paper calendars, note books, and alarm clocks, to compensate for memory loss. Many electronic memory aids are on the market today, but most of them are not adapted to the needs of the elderly population. The screen, labels and keyboards are often too small and the devices' numerous options make them complex to use. Given the potential benefits of using technology to provide elderly people with powerful memory aids, and the lack of tools specifically designed for this segment of the population, we propose the use of an interactive calendar. Because the calendar has the look-and-feel of its paper counterpart, it requires no or little adaptation and/or training on the part of the user and integrates itself seamlessly in the elderly's home. It can help recall appointments and social activities as well as help reminisce about past events such as a visit from a family member. It is also customizable in accordance to the user's needs, abilities and preferences. Testing and user input are important parts of the development process. Focus groups composed of social workers and elderly people with little or no experience with computers will help us evaluate the look and feel of various prototypes and gather information as to which functionalities are more desirable/useful. Individual testing sessions, with elderly people (mostly novice and intermediate computer users), based on scenarios followed by interviews and questionnaires will help us evaluate the usability of the calendar. Finally, evaluations in the homes of elderly participants for a period of one month each will enable us to test the reminder functions, see which functionalities of the calendar are used the

most, and validate with the participants the integration and use of the calendar in their own homes.

**PB8 347 PERCEIVED USEFULLNESS OF GEOLOCATION SYSTEM IN DEMENTIA BY GERIATRICIANS**

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**Introduction:** In elderly persons with Alzheimer's disease (AD), spatial disorientation in AD is a major problem and a source of stress for caregivers, as wandering and runaway situations can be life-threatening if the patient is not found within 24 hours. Gerontechnology is of interest for geriatricians because it may support the caring of AD patients.. Geolocation systems have been designed in order to improve patients' autonomy, limit problems related to their temporo-spatial disorientation, and avoid confinement at home. For the caregiver, the use of geolocation systems would facilitate the prevention and management of patient's runaways and wandering as well as reduce their anxiety and psychological burden. The present study addressed the issue of the geolocation system relevance for geriatricians. Methods and materials: 34 geriatricians responded to a questionnaire on the relevance of this geolocation technology for wandering patients. The questionnaire consisted in thirteen questions divided into five themes (adaptiveness, usefulness, intention to use, perceived as easy to use, ethics). This questionnaire was based on the Technology Acceptance Model (TAM) which is a key tool in the assessment of information technology. Results: Preliminary results showed that 90% of geriatricians believed that perceived adaptiveness and usefulness were satisfying, 68% of them thought that patients were ready to use the system, 60% of them thought that the system would be easy to use, and 67% believed that the system was not an obstacle to patients' freedom. Conclusion: The results reported here provide support for using geolocation technology for demented patients. The perception of geolocation system by geriatricians is very positive. The geriatricians think relevant to use such a system. This study is of wide practical importance since such geolocation system might reinforce autonomy in AD patients..Currently, the Broca team compares different geolocation systems with willing patients to find the most appropriate device.

**PB8 348 INTERGENERATIONAL TELE-MENTORING PROGRAM, LOCAL AND TRANS-ATLANTIC RESULTS**

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**Introduction:** Few conventional mentoring organizations recruit 65+ mentors (US 2005 survey "Mentoring in America"). Using accessible "gerontechnologies", PACE-2-Face®, FIAPA award 2007 (Fédération Internationale des Associations de Personnes Agées), an International Virtual Village is expanding where seniors may instantly contribute to youth and learners around the world, beyond geographic limitations and various institutional boundaries. Through the ergonomic design of information technologies for homebound seniors, senior tele-mentors connect with their paired learner, while remaining in their respective environment, be it at their office desk, in an institution or at home. Methods: The seniors friendly tele-mentoring application provides four simultaneous communication modes (verbal, non verbal, reading and writing) As part of the PACE 2000 intergenerational program, PACE-2-Face® was provided to 18 computer illiterate older adults (aged 70+- 7 years where 67% exhibiting a chronic disease) in Canada, paired with 9 unemployed youth (aged 20 to 28) in Bobigny, France, and also 9 university students in Ottawa, Canada, for the purpose of practicing a second language. Results: Compliance was highest in seniors. Seniors caused 20% while youth were the cause of 70% of cancelled sessions. A significant impact is observed in both generations. Seniors reported high degree of satisfaction in all intergenerational aspects (interacting with and aiding youth) as well as an opportunity for personal development. Youth also appreciated the intergenerational exchanges and universally appreciated the use of the technologies involved. Lastly, in as few as 2 to 4 tele-sessions behavioural changes (initial reluctance to speaking a foreign language changed into enthusiasm; increased self confidence etc.) had been observed (by the mentors and coordinators) in one third of the young persons.. Conclusions: More research is needed to understand both the quantitative results as well as the underlying factors which promote interaction and behavioural changes in vulnerable populations.

**PB8 349 THE NATURE OF PARTNERSHIP PROCESS IN NURSING CARES TO AGED PATIENT**

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**Introduction** Various authors have highlighted that care practices focused on aged patient are needed, demystifying myths and stereotypes that can lead nurses underestimating their own abilities. The objective of this study is to understand the nature of partnership process

in nursing cares to aged patient at home environments in order to assure that those practices will be more focused on patients. Methods and materials This qualitative study uses grounded theory and was performed at home environments. Ten nurses and fifteen aged patients have taken part in the study. Data collection was made through participant observation, interviews and content review of various documents types. Results Partnership process requires understanding people not only as a being with project but also as a being under project, as well as establishing a relationship of trust. Strategies for implementing a partnership process include building conjoint actions and/or take care of the other person's care when he/she does not have enough information, knowledge, physical and mental strength or motivation to do so. Thus, the so-called Care of Oneself (himself and/or other people) is promoted. Conclusion Building conjoint actions which promote the Care of Oneself, respecting people's differences, will contribute to care practices more focused on aged patient. Moreover, it will allow patients to have control on their life and health projects, as well as proceed with the course of their lives. Idalina Delfina Gomes is a lecturer at Lisbon's College of Nursing, a member of UIDE (Nursing Research and Development Unit), and a Doctoral Student in Nursing Sciences at the Portuguese Catholic University – Lisbon.

**PB8 350 PERCEIVED NEEDS AND PREFERENCES OF ELDERLY PEOPLE WITH COGNITIVE COMPLAINT TOWARDS AN ASSISTIVE ROBOTIC AGENT**

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**Introduction:** Growing old at home is desired by most of elderly people despite their decline in health and cognitive capacities, because for them home is linked to independence. Daily activities are mainly performed in the home and certain measures to help them to remain healthy and active are necessary. One solution might come in the form of Information and Communication Technology (ICT) in which robots become increasingly important as a means of supporting older people at home. The aim of this study is to explore patients' needs to stay autonomous at home on one hand and their requirements towards the idea of having a robot to assist them in home on the other hand. Methods and materials: 30 patients aged 60 and older with memory complaints were recruited at the Broca Memory Hospital. We conducted an interview-administered questionnaire that included questions about their needs to stay autonomous and requirements concerning robots' functions and modes of action. Results: In order to stay autonomous at home, the subjects reported their needs to retain their capacity to manage their daily activities (60%), maintain good health (56.7%) and stimulate their memory (53.3%). Regarding the robot functions, the cognitive stimulation programme earned the highest proportion of positive responses (83.3%), followed by the safeguarding functions, fall detection (66.7%) and the automatic help call (63.3%). Conclusion: In sum, the elderly need more practical support with everyday tasks. They would like that the robot provides daily activity support and serves as a telesurveillance system that increases the sense of safety and security in case of emergency.

**PB8 351 PATHOLOGIES, GERIATRICS SYNDROMES, FUNCTIONALITY AND COGNITION IN GERIATRICS HOSPITAL.**

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**Pathologies geriatrics syndromes functionality and cognition at Geriatric Hospital Type of study:** observational retrospective study. **Purpose:** There are few studies that make mention to the type of patients that enter the geriatric hospital for medical service. In this study, the geriatric biomedical pathologies have been analyzed, as well as the most common syndromes, the functionality and the cognition of a simple entered in a limited period of time. **Material and method** observational retrospective study this includes 107 patient, older than 60 years old, between the month October and December 2008, registering the geriatric pathologies and evaluations in agreement with the preestablished guidelines. It analyzed the type, functionality, nutrition, and cognitive state of each one of the patient. **Result:** the average age of the hospitalized patient was 79 years old of which 67.2% were women. The most frequent pathologies were the cardiovascular with a 76%, arterial hypertension, 27 % diabetics, 27% cerebral vascular accidents, and those with the least frequency were obesity with 7 %, 5 % epilepsy, and 4% Parkinson disease. Of those most frequent geriatric syndromes were polypharmacy with 45 %, 43 % of dementia, 29% of dismobilism. The least frequent syndromes were acute confusion with 7 % and 2% social cases. **Conclusion:** the evaluation of those that enter this hospital is useful to set the steps of Action that capture the fragility present in these patients and better the quality of attention.

**PB8 352 TOKYO METROPOLITAN GERIATRIC HOSPITAL AUTOPSY RESOURCE (TMGH-AR)**

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[Introduction] To collect human samples, we usually explain the purpose and expected results of planning research to the donors giving blood or other kinds of samples before taking informed consents from them. However, we seldom inform them of the consequences or results of the research. During recent decades, we have been conducting numbers of medical researches using TMGH Autopsy Resource. We have now opened its web site since this April for three reasons: disclosure of research results, proposal for new research collaboration, and communication with the bereaved families who gave us the consent of autopsy. [Methods and materials] TMGH Autopsy Resource comprises of clinicopathological database, photos, and paraffin blocks (7,500 cases, each); frozen tissues and DNA (2,000 cases); and frozen sera taken within two weeks before death (1,800 cases). The brain and spinal cord are registered to "Brain Bank for Aging Research". The average age at the time of death was 80 years, and a man to women ratio was 1.2. The Act of Autopsy Examination in Japan generally allows the use of autopsy samples for medical education and research. We follow the national guidance for use of human materials for genetic researches. [Results] The home pages comprise of several pages; introduction of research results, ethical and juristic consideration, communication with the bereaved families, characteristics of TMGH Autopsy Resource, proposal of new collaboration, rule of collaboration program, contributor and contact address, and web links. We have been showing more than 30 research results conducted in recent five years. At the page of communication with the bereaved families, we express great appreciation to them and provide a contact address if they wish to reject the continued usage of autopsy samples for medical research. [Conclusion] The new web site provides detailed information of TMGH Autopsy Resource, promotes research collaboration, and improve the ethical framework.

**PB8 353 PRELIMINARY STUDY ON MUSCLE LOAD IN THE UPPER BODY REGIONS WHILE USING A FOUR-WHEELED WALKER**  
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Introduction A four-wheeled walker is a common assistive device for older people whose muscle strength and balance deteriorate with age. According to statistics on assist devices sales, about 380,000 four-wheeled walkers were distributed to Japanese market in 2006. However, relatively a small number of studies have investigated to evaluate muscle load while using a four-wheeled walker. The purpose of study was to evaluate the effect handlebar angle of a four-wheeled walker on muscle load while walking with the walker. Methods and materials Ten women (aged 65-84) participated in this study. Four different types of handlebars (L-shaped, U-shaped with 45 degree downward angle, U-shaped with no downward angle, and straight types) were used, replacing those bars to the body of the four-wheeled walker. Participants walked on the inclined plate (inclination level was 1:20) and on the flat floor for 4m with the walker. To evaluate muscle load, surface electromyography (EMG) was derived from the right-sided extensor digitorum communis, pectoralis major, deltoideus and latissimus dorsi while walking with the walker. EMG signals were digitized at a sample frequency of 1kHz. Results A 4 (angle) ? 2 (inclination) repeated measures of ANOVAs did not reveal significant main effects for angle or inclination in muscle load. However, significant angle-by-incline interaction was found for muscle load of digitorum communis and pectoralis major. On the inclined plate, the muscle activity level of digitorum communis was greater during using the L-shaped handlebar than using the other handlebars while it did not change remarkably with the angle on the flat floor. Similar trend was found for the muscle activity level of pectoralis major with using the handlebars on the inclined plate. Conclusion Results of this study suggested the need to consider the effects of handlebar angle of the four-wheeled walker on muscle load during walking on ramps.

**PB8 354 ATTITUDES, ADAPTIVITY AND ADOPTION: THE USE OF TECHNICAL INNOVATIONS IN LATER ADULTHOOD**  
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Technical innovations provide new potentials for independent living, health, communication and mobility in aging societies. However, recent studies suggest that potential older users often do not adopt new technological solutions of everyday challenges. As a result of such observations, research has focussed recently on issues related to accessibility, usability, and utility of new assistive technology in later adulthood. We argue that products and services for seniors need to adequately account for age-related change, heterogeneity and multiplicity in later life. We propose an ecological framework of the interplay between technical innovations and potential older users. The model states that the requirements of technical solutions (e.g. complexity, user interface, functional range) need to be in line with sensory, physical, cognitive and conative capacities of older users and maximize subjective benefits of use. Regarding conative capacities, first wave results of a one year longitudinal study with older adults ( $n = 136$ ;  $M = 67.33 \pm 5.53$ ) suggest that positive attitudes ( $r = .462$ ,  $p < .000$ ) as well as distrust ( $r = -.215$ ,  $p < .05$ ) towards technical innovations relate to the use of modern technologies. Moreover, technical openness correlates with the self-reported use of adaptive strategies in terms of selection, optimization and compensation ( $r = .242$ ,  $p < .01$ ). Further examination of the subscales

underlines the impact of compensatory mechanisms ( $r = .220$ ,  $p < .01$ ). Results confirm theoretical considerations that technical openness is an important resource for the use of adaptive strategies (e.g. compensation of functional losses through the adoption of assistive devices). Further research will help to improve our understanding of the sensory, physical, cognitive and conative factors that predict the use of technical innovations.

**PB8 355 USEFULNESS OF AN ASSISTIVE ROBOT IN AGING MANAGEMENT**  
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Introduction: Aging in home becomes difficult because of physical and cognitive deficiencies. In such conditions, many old people need aides to perform daily activities. With advances in technology, robotics becomes increasingly important as a means of supporting older people at home. The goal of this study was to collect the old people's cognitive deficiencies and their opinions towards the presence of a robot which delivers specific services (appointment and drug reminder, web conference, televigilance, cognitive stimulation) in home. Methods and materials: We conducted a focus group with five persons aged from 63 to 88 years, living alone and suffering from mild cognitive impairment. Firstly, they were questioned orally about their cognitive impairment in the daily life and their strategies. Secondly, we showed them pictures with electronic devices (agenda, pills deliver, and computerized cognitive exercises). Thirdly, the robot entered in the room and they had a demonstration of the different functionalities of the robot. We collected their verbal reactions. Results: The difficulties and strategies they reported are those usually met in people with mild cognitive impairment. The more exciting observation was their reactions towards the robot. Initially, the persons rejected the robot, considered it as a source of intrusion, a loss of privacy and of human contact. Subsequently, they found it interesting with the function of cognitive stimulation and attractive on economical level (less expensive than employing part-time or full-time personnel). They recognized some usefulness later on when their health conditions will worsen. Conclusion: The way they perceive their future ageing emerged to influence their opinion about the robot. People who worry about cognitive weakening said it would be desirable to appropriate them with this kind of device before the aggravation of their cognitive impairment.

**PB8 356 ADDRESSING COGNITION NEEDS IN THREE EUROPEAN COUNTRIES WITH THE HELP OF TECHNOLOGY**  
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INTRODUCTION: HERMES is a European project aimed at providing cognitive care to healthy elderly people through an assistive technology based on intelligent audio and visual processing and reasoning. In order to study older people's needs and opinions about technology, user requirements studies were conducted. Results from questionnaires collected in Spain, Austria and Greece are presented. METHODS - MATERIALS: An ad-hoc questionnaire was developed including three areas: sociodemographics, needs about information to be reminded and experience with technology. Questionnaire combined quantitative and qualitative data and was easy to understand by elderly people. 99 older adults (23 males and 76 females) completed it: 57 from Spain; 32 from Austria and 10 from Greece. Mean age was 70.7 years old in Spain, 69.5 in Austria and 71.4 in Greece. RESULTS: The most visited socio-sanitary service was the primary care doctor in the three countries. Most of the participants reported to have moderate memory problems (72.5% in Spain, 83% in Vienna, 50% in Greece). The 75.6% of them are interested in a device to play cognitive games. The interest is minor in a device able to remind interesting places. On the characteristics of technological devices to be developed, utility is perceived as the most important feature in the three countries, followed by simplicity, and finally aesthetics. CONCLUSIONS: Healthy older adults present subjective memory complaints in daily life, represented here by a high percentage of participants reporting moderate memory problems. The majority of them would like to include memory games into a technological supportive device, to combat these issues. Main elements for acceptance are that devices are to be easy to use and based on previous experience; otherwise they would not be appreciated. Research on this topic may help to turn the challenges of technologies in an ageing population into changes in cognitive lifespan development.

**PB8 357 CHARACTERISTICS OF SOCIO DEMOGRAPHIC AND HEALTH AMONG ELDERLY WITH HYPERTENSION**  
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**Introduction:** Among the degenerative chronic diseases Hypertension is one of the most that affect the population, being its prevalence between 22% to 44% among Brazilian cities. In the elderly population this rate increase to 60%. In this perspective, knowledge of socio-demographic and health characteristics of this population contributes to the planning of actions in health. **Objective:** To compare the number of morbidities, practice of physical activity and use of medication between genders and age groups. **Methodology:** This is a cross sectional household survey, conducted with 1,603 elderly residents in the urban area of Uberaba, Minas Gerais, Brazil. Data collection was conducted through interviews in homes, selected through systematical proportional stratified sampling technique. The data were typed in double entry, in the electronic program EpiInfo3.2., and subjected to descriptive analysis and chi-square test ( $p < 0.05$ ). The Project was approved by the Research Ethics Committee. **Results:** Among the interviewees, 69.8% were female, 52.1% are aged between 60 and 69 years, 74.5% live at home with companion, 53.8% have income of 1 minimum wage and the mean of years studied was 5.23 years ( $\pm 13.6$ ). The majority (94.9%) made regular use of drugs, 36.4% have by 4 to 6 morbidities, 54.9% do not practice physical activity and 47.5% consider their health regular. The comparison between the genders showed that the use of medication, the number of morbidities and the absence of physical activity is higher among women. When comparing the age groups it was found that the elderly of 80 years and over have more morbidities and do less physical activity and that those between 70 to 79 years join better to drug treatment. **Conclusion:** From these results occurs the need to discuss health care and implementation of prevention and promotion's actions aiming at the improving treatment adherence, self-care and quality of life.

**PB8 358 TECHNOLOGY, HUMAN RELATIONSHIPS, AND PRIVACY**

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Background Emotional and physical well-being for elders and their caregivers can be supported by new technologies. Research in the U.S. suggests that older adults welcome technology perceived as useful, prefer human contact and care, and are somewhat unconcerned about privacy. A life course perspective, including psychological and sociological theories of very late life, can give insight on older adults' perceptions of technology, human relationships, and privacy. Method In a series of focus group sessions, over 75 community-residing elders with an average age of 80 were shown prototypes which support health, safety, daily activities, and social communications. They were then asked questions based on a literature-based privacy framework. Data analysis identified themes including "technology replacing personal care or self-sufficiency," "intrusions on privacy of caregivers," "trade-offs between personal privacy and independence," and "complacency and compliancy." Results Results suggest that the oldest old and women are more concerned about burdening family caregivers and doctors with unnecessary information than with invasions of their own privacy. They were complacent about most challenges to personal privacy, accepting an (unnecessary) tradeoff between personal privacy and independence. They did not want technology to replace their own self-sufficiency or human contact: "Humans give the best care." Conclusion Psychological and sociological theories of very late life suggest that the oldest old select and prioritize the most important relationships and activities. Adults in the Fourth Age of life may be more concerned about the privacy of their caregivers than their own because of the perceived value of relationships with caregivers. The oldest old and women expressed complacency and compliancy, willing to unnecessarily give up personal privacy to uninformed design. We need more contextualized, sensitive privacy designs that are informed by a life course perspective of the needs and values of individual older adults and their caregivers.

**PB8 359 DEVELOPMENT OF A HOME-BASED GRIP-FORCE MEASUREMENT SYSTEM TO MEASURE THE CAPACITY OF ELDERLY TO LIVE AUTONOMOUSLY**

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**Introduction** Recent developments in information and communication technology have enabled functional assessment of the elderly to be performed in their own homes. The use of such devices enables elderly to remain longer in their own homes, thus improving their psychological well-being, as well as delaying functional decline. One of the most useful indicators of the capacity to live autonomously is grip force, which can provide information on muscular capacity, as well as dexterity. Grip-force is a highly reproducible measure, and as such could be suitable for home-based assessment. The aim of the study was to develop a home-based grip-force tester as a means of detecting a loss of the capacity to live autonomously in the elderly. **Methods and materials** A home-based system must be autonomous, with low-energy consumption. In addition, the device must be accepted by the elderly user, and must not require the presence of anyone to operate the

device. The device must also be communicant, and, if possible, resemble an everyday object. **Results** The Grip-Ball, a home-based grip-force system was developed. The Grip-ball contains a sensor that measures the force applied by the user during the measurement protocol. The force signal is then automatically sent via wireless communication to a mobile phone, which in turn relays the signal to a distant server for subsequent analysis. The parameters obtained from the device include maximal grip-force, as well as innovative parameters related to the control strategy of the force production of the elderly user. **Conclusion** The Grip-Ball is an autonomous system that enables the capacity of elderly to live autonomously to be measured regularly, without requiring a tester to be present. The addition of other home-based measurement systems for gait and balance quality, as well as activity levels offer the perspective of a precocious detection of frail elderly.

**PB8 360 THE ROLE OF ECHOSCLEROSIS IN GERIATRIC PRACTICE.**

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Echosclerosis is one of the techniques available for the treatment of incompetence of the saphenous veins and their tributaries but it is not widely used in a geriatric environment. However, venous insufficiency and its complications are common pathologies of the elderly subjects and can become a cause of invalidism and eventually compromise patient autonomy. This technique is an effective, non invasive and low cost alternative to classical surgical methods, often contraindicated in the elderly, and is also avoids hospitalisation and immobilisation. Complications are rare (local and allergic inflammatory reactions).

**PB8 361 CROSS-CULTURAL ADAPTATION, RELIABILITY AND VALIDITY OF THE PERSIAN VERSION OF THE MODIFIED FALLS EFFICACY SCALE**

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**Introduction** Among the main psychological consequences of falls in elderly people, that can be as disabling as the fall itself, is loss of confidence and fear of new falls. To assess the self confidence, the most valid and reliable instruments are the Falls Efficacy Scale (FES) and its modified versions. The aim of this study was to translate the Swedish version of the FES, FES(S), into Persian, and to determine cross-cultural validity and reliability of the scale to be used for Persian speaking elderly persons. **Methods and Material** The 'forward-backward' procedure was applied for the translation. Then a methodological study was carried out to determine the psychometric properties of the Persian version of the FES. A quasi-experimental method was used to evaluate the validity and reliability of the scale, and the final draft of the scale was administered to a study sample, consisting of 81 community-dwelling elderly persons,  $\geq 65$  years old. **Results** Reliability and validity of the Persian FES(S) were found to be acceptable (Cronbach's Alpha= 0.75, ICC=.99 &  $p < .001$  and SEM=1.82). The results showed also significant negative correlations of the total score of the scale with the age of the participants, number of walking days per week and number of falls in the past year. There were also positive correlations between the Persian FES score and MMSE score, duration of walks and self-rated physical fitness. The groups who had a daily walk, felt healthy and had no fall in the past year rated their self-efficacy higher than their peer groups. **Conclusions** The present study verified that the Persian FES (S) is a culturally relevant, valid, and reliable tool for measuring self-perceived confidence in Iranian older adults. This was reflected in a good internal consistency of the items, high test-retest reliability and good construct validity.

**PB8 362 SHOUTS IN THE DEMENTED ARE NOT ALWAYS ANXIETY**

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**Introduction** Seizure are a common condition in late stage dementia patients but may remain unnoticed. Population and method Mrs. B., 82 years old, living in a nursing home, has a Lewy bodies disease diagnosed 7 years ago and is bedridden. She was shouting in an unpredictable way and the staff thought of some anxiety. Her bed was fitted with a quiritchromometer, it gives an automated quantification of shouting activity and physical agitation in minutes for each hour in the day. Observation Shouts would come at random, between once and three times a day, last for 2 to 3 minutes then stop. We decided to take her for a day at the out patient clinic for close monitoring; we could observe and film that, during the time she shouted, she fully lost contact, was taking her right arm from right to left swiftly before bringing it back slowly to the right in a most stereotypic way. We started a treatment for supplementary motor area of frontal lobe epilepsy and soon could register, with the quiritchromometer, the decrease and disappearance of shouts and the cognitive

status of the patient improved with better communication with the staff. Discussion The quiritachronometer helped in showing a random shouting activity but with a rather constant duration. There was none of the physical agitation that is usually associated with shouting in case of anxiety and duration was too short. On the other hand, shouts sprouts related to delirium are more varied in duration. A closer look confirmed that a different diagnosis should be considered; i.e.: epilepsy. Conclusion The quiritachronometer helped in the diagnosis of supplementary motor area of frontal lobe epilepsy and verified the efficiency of the treatment.

**PB8 363 MIRAS A ROBOTIC WALKING AID TAILORED FOR THE HANDICAPPED ELDERLY PERSON**

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Assistive robotics are developing worldwide targeting elderly handicapped people. Intelligent walkers provide both obstacle avoidance and a walking aid. Lacey's Guido was tested by the Veterans Administration in the USA; both there and in Ireland it proved very useful for elderly people with sighting and walking problems but production costs proved to high for it to be affordable. KAIST developed a robot with more carrying power that could fit people with less strength in their legs, it was clinically tested and improved but was still quite cumbersome. We developed Monimad as a walking aid with robotized handles with an haptic command that could help elderly people who could walk but needed help to stand. We could prove that it worked with patients we recruited in Charles Foix Geriatric University Hospital, Paris. But the robot was not satisfying in terms of size and stability. Miras project, funded by French Agence Nationale de la Recherche, is developing a reduced cost walking aid with a standing aid included. The modular approach will allow further developments to include at low additional cost relevant monitoring and communication devices. Man-machine interfacing aspects will be integrated from the start in the developments as well as usability. Miras will be developed using Lacey's iterative methodology in collaboration with two major geriatric university hospitals and one major walk analysis lab. We hope to prove that integrating geriatric knowledge from the conception in assistive robotics projects may provide useful and affordable aids for the handicapped elderly person.

**PB8 364 STRESS AND COPING EXPERIENCED BY OLDER ADULTS CHALLENGED BY DENTAL IMPLANT SELF-CARE**

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Objective: The provision of dental implants to replace missing teeth for older adults is increasing and we know dental implant prostheses involve substantial challenges with long-term maintenance. This study aimed to explore older adult perceptions of such challenges in the light of literature on stress and coping and the common disabilities associated with aging. Methods: Semi-structured interviews were conducted with six elderly adults over the age of 70 to explore the long-term challenges they experienced with dental implant maintenance. Each participant presented with an oral prosthesis supported by a minimum of five dental implants placed more than 5 years prior. Emerging themes were identified in verbatim transcripts of the audio-taped interviews, and theoretical constructs were used to develop a conceptual framework. Results: Overall functional and psychosocial experiences with the prosthetic rehabilitation were positive. Initially participants also perceived challenges on a physical level such as difficulty in accessing compromised areas to clean their dental implant prostheses or accessing professional care to manage urgent problems with the prostheses while traveling abroad. However, further scrutiny of these challenges identified psychological and social challenges that sometimes included feelings of embarrassment, frustration, disappointment and disillusionment. Various management or coping strategies utilized by the participants were identified, such as avoidance, disengagement, intellectualization and rationalization. Conclusion: This investigation suggests that further exploration on management or coping strategies can reveal new insights for patients, practitioners and researchers to better understand the subjective challenges experienced by the aging elderly dental implant patient.

**PB8 365 DEMENTIA IN THE ASIA PACIFIC AN INDONESIAN VIEW**

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In 2005, there were 13.7 million dementia cases and, by 2050, the number is expected to reach an enormous 64.6 million. When ADI's Director, Marc Wortman, visited Indonesia in 2008, he stated that Indonesia should be prepared for an increase of dementia cases. With a population of more than 200 million, Indonesia would face a challenging situation when the majority of its population reaches old age. Given the forecast of a global upsurge in dementia cases of nearly 500 percent as well as the challenging condition that Indonesia will face, the Indonesian Association of Alzheimer (and related Diseases) (AAZI) is trying

to anticipate the situation. This paper will present some data which was presented in Singapore at ADI's annual meeting and the latest discussion and findings in 2009.

**PB8 366 PROFILE OF ELDERLY PATIENTS HOSPITALIZED IN AN ACUTE GERIATRIC UNIT COMING FROM REANIMATION**

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In 2004, following the ministerial recommendation inciting all hospitals with emergency department to have an acute geriatric unit, the hospital Saint Antoine in Paris opened a unit of 16 beds for people over 75 years old hospitalized from emergency unit. Four hundred and twenty people have been hospitalized in 2007 in this unit among whom 34 were coming from reanimation. We wondered who these elderly patients admitted in reanimation were. Would they be the same patients that the ones that we admitted in the unit via emergency or would they be much heavier? Results: The mean age of this population was 83 y.o. [70-96] versus 87 y.o. in the unit. The mean stay in reanimation was 5.65 days [2-15]. Motive of hospitalization in reanimation: 40% a hypercapnia or a severe hypoxia, 20% had a neurologic pathology (Poisoning medicinal voluntary, crisis subintubant), 20% an acute renal failure and 20% a bacteraemic or cardiogenic shock. 30% of them needed an intubation and 15% a non-invasive ventilation. Before hospitalization, 95% were living at home, alone. They were all without disability but six of them had mild cognitive impairment. In the acute geriatric unit this population stayed an average of 15.5 days [1-40] whereas the average stay in the unit is 13.8 days. The outcome of this population was similar to the other admitted patients: 55% went to a physical rehabilitation department, 35% went back home, 9% died in the unit. Conclusion: old and very old patients are admitted in reanimation department since their functional and cognitive status is good. Once hospitalized in acute geriatric care, their outcome is no different to the other patients.

**PB8 367 MORTALITY AND PROGNOSTIC FACTORS IN ELDERLY PATIENTS ADMITTED IN A MEDICAL INTERMEDIATE CARE UNIT**

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Introduction: As a result of population ageing, there is an increasing prevalence of elderly admitted in hospital, not only in medicine wards but also in more differentiated units such as the Medical Intermediate Care Units (IntCU). Age should not be exclusively considered a prognostic factor; instead physiologic scores reflecting multiorganic failure and illness severity should be used. The aims of this study were to evaluate elderly patients mortality in a IntCU of a central hospital and identify prognostic factors, comparing with non-elderly patients. Methods and materials: During 8 months all patients admitted in a IntCU were prospectively included and categorized into 2 groups: A-elderly ( $\geq 65$  years) and B-non-elderly. The illness severity scores Acute Physiology and Chronic Health Evaluation II (APACHE), Simplified Acute Physiology Score II (SAPS) and Sequential Organ Failure Assessment (SOFA) were determined in the first 24 hours of admission. Charlson comorbidity index (CI) was also determined. Results: 92 patients were included, 53 (57.6%) in group A and 39 (42.4%) in B. The average values of APACHE II, SAPS II and SOFA were: Group A: 16.5, 39.0 and 5.5; Group B: 9.9, 21.5, 4.6, respectively. The average score of CI was 4 in group A and 2 in B. In group A, the areas under the receiver operating characteristic curves for hospital and IntCU mortality assessed through APACHE II, SAPS II, SOFA and CI were lower than 0.7. There was no statistically significant difference in IntCU and hospital mortality between 2 groups (A-7.5% vs B-5.1% and A-15.1% vs B-7.7%, respectively). Conclusion: Age  $\geq 65$  years was not a predictive factor of mortality. The validated physiologic scoring systems commonly applied in critical patients are not reliable predictors of hospital mortality in elderly patients. New severity illness and mortality scoring systems are needed to elderly patients.

**PB8 368 ELDERLY PATIENTS IN AN INTENSIVE CARE UNIT: OUTCOME BASED ON REASON FOR ADMISSION**

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Introduction Advanced age seems to be related with increased mortality in ICUs. Nevertheless, the reason for admission may influence prognosis. Methods and materials We retrospectively assessed the outcome based on the reason for admission (medical or surgical) in elderly patients (65 years or older), in a multidisciplinary ICU. As surgical, we considered post-operative conditions and multiple trauma and as medical, we considered all the other reasons for admission. We compared the outcome between 2 groups of elderly

patients, the first group was hospitalized in 1997-1998 (12 ICU beds) and the second in 2007-2008 (10 ICU beds). Results During the two years of the past decade, 252 elderly patients were admitted in the ICU, mean age ( $\pm$ SD) 73  $\pm$ 6 years, whereas during the similar time period of the recent decade, 181 elderly patients were admitted, mean age 74  $\pm$ 6 years. The reasons for admission were medical in 42.8% and surgical in 57.2% of the patients in the past decade, whereas they were medical in 32% and surgical in 68% of the patients in the recent decade. In the past decade ICU mortality amounted to 41.7% and 27.1% in the medical and surgical group correspondingly ( $p=0.015$ ). In the recent decade, ICU mortality was 46.6% and 30.1% in the medical and surgical group ( $p=0.31$ ). Conclusion ICU survival was significantly better for elderly patients with surgical reasons for admission compared to medical reasons in the past decade, but not in the recent.

**PB8 369 IMPACT OF AN ACUTE GERIATRIC CARE UNIT IN A POOR COMMUNITY HOSPITAL IN TIJUANA BAJA CALIFORNIA MEXICO.**

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Introduction Mexican elderly population has increased from 3% in 1930 to 8% in 2005, but less than 10% of hospitals have a geriatric service. There is little information on the impact of such units in developing countries community hospitals. In Tijuana's general hospital in 2007 we opened the geriatric acute care unit (GACU) in an attempt to better the quality of care of our frail elderly patients. In this study we evaluate the impact of this unit. Methods and Materials We conducted a prospective, comparative, observational study in patients over 70 years of age that were hospitalized in the internal medicine unit from March to December 2006 (group A) with patients hospitalized in the GACU from March to December 2007 (Group B). We evaluated their admission diagnosis, functional status (Katz and Lawton scales), cognitive status (MMSE Spanish version) the presence of delirium (CAM), depression (GDS), discharge diagnosis and placement, and their final outcome. We conducted descriptive and comparative statistical analysis. Results One hundred and forty two patients (52 % women) were included in group A and 236 (58% women) in group B. The mean age of the subjects was 74 years in both groups. Mortality decreased from 17.6% to 7.62% ( $p=0.003$ ), hospital length from a mean of 6.6 days to 4.3 days ( $p=0.001$ ), readmissions decreased from 5.6% to 1.27 ( $p=0.03$ ). Number of diagnosis increased from 1.8 per patient to 5.88 ( $p=0.0001$ ). There was no difference in placement after discharge between the two groups. Conclusion The GACU has had a positive effect on mortality, length of stay, diagnosis and readmissions. We have still to demonstrate its impact on functional decline and costs. We conclude that a GACU is beneficial in "poor" community hospitals in developing countries.

**PB8 370 MANAGEMENT OF VERY OLD CRITICALLY ILL PATIENTS IN A SPECIFICALLY DEDICATED INTENSIVE CARE UNIT**

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Introduction. Very old patients in critically illness are often not considered for intensive care, on the back of statement such as "he won't tolerate it" or "do not intubate" (DNI). However, old patients may support appropriate intensive treatment. We report the results observed in patients admitted in a specific geriatric intensive care unit (GICU). Methods and material We have collected the clinical history, premorbid conditions, and clinical outcome in all patients admitted in GICU during 1 year. The unit disposes of all materials necessary to treat critically ill patients, excepted for mechanical ventilation and invasive pressure monitoring. Admission criteria are one or more acute visceral failure. Results The mean age was 83.2  $\pm$  9.1 years, sex ratio 3F/2M. Symptoms presented at admission were acute respiratory failure in 44.4% of cases (COPD exacerbation 26%, severe pneumonia 18%, pulmonary embolism 4%), acute cardiopathy in 16% (congestive heart failure 8.6%, ischemic heart disease 6%), cerebrovascular disorders in 14.8% (stroke 11.6%, epilepsy 3%), acute renal failure in 9.9%, septic shock in 8.6%, digestive haemorrhagia in 6.1%. Simultaneous complications were 4.2/patients, including cardiac disorders in 80.6% of patients (rhythm abnormalities 45.1%, congestive heart failure 35.8%), respiratory failure in 53.1%, renal insufficiency in 27%, infectious complications in 19.8%, diabetes mellitus in 29%. One third of the patients had « DNI » orders and were treated with noninvasive positive pressure ventilation. Mortality rate was 15% and the length of GICU stay was 11.5 days. Conclusions Patients admitted in GICU are characterized by advanced age, by severe illness, especially acute respiratory and cardiac disorders, and by number of associated complications. Nevertheless, mortality rate remains reasonably low. These results are explained by age-related management with particular attention to nursing, drug dosage and posology, and quality of nutrition, requiring experience of clinical geriatricians.

**PB8 371 A PROGRESSIVE HYPERCAPNIC HYPOXEMIC DYSPNEA AFTER SURGERY**

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Introduction Differential diagnosis of postoperative dyspnea includes numerous disorders and rigorous diagnosis procedure is necessary to identify a lifethreatening cause. We report the case of a 88-year-old patient presenting with progressive dyspnea after a hemorrhagic surgery. Methods and material To report the case of a 88-year-old patient treated with antiplatelet for coronaropathy, who benefits from osteosynthesis for a femoral neck fracture. A postoperative extensive hematoma induces acute anemia necessitating transfusion of 17 units of red cells over 7 days. She is admitted in intensive care unit because of progressive worsening dyspnea. Results At admission, the patient presents with NYHA III dyspnea, vital parameters are normal (TA : 12/6, cardiac frequency 80/min) and clinical examination is negative. Pulmonary radiography, electrocardiogram, echocardiography and pulmonary scintigraphy are normal. Hemoglobin level is 11.4g/dl, arterial blood gas analysis (ambient air): pH 7.48, pCO<sub>2</sub> 49 mmHg, pO<sub>2</sub> 66 mmHg, bicarbonate 36 mmol/L, SaO<sub>2</sub> 95%. Biochemical analysis in blood shows: Na+ 138 mmol/L, K+ 3.6 mmol/L, Cl- 99 mmol/L, creatinin 6.6 mg/l, urea 0.58 g/L, calcium 79 mg/L. Urine analysis/24h shows: Na+ 56 mmol, K+ 27mmol, Cl- 80 mmol. This results are compatible with metabolic alkalosis. We suspected an overload in calcium citrate due to massive transfusion. Treatment with acetazolamide, 500mg/day during three days results in dramatical clinical improvement and correction of blood gas: 7.42, pCO<sub>2</sub> 44.7 mmHg, pO<sub>2</sub> 76 mmHg, bicarbonate 28, SaO<sub>2</sub> 96% Discussion Since the patient was not ventilated, respiratory acidosis compensated by bicarbonate retention can be excluded. The patient did not receive diuretics and she has no digestive trouble or hypovolemia excluding direct or indirect H+ loss. The diagnosis of metabolic alkalosis due to excessive alkaline infusion remains the only hypothesis and massive transfusion is the diagnosis key.

**PB8 372 FACTORS RELATED TO THE LEVELS OF CARE NEEDS IN LONG-TERM CARE INSURANCE PROGRAM AMONG MEMORY CLINIC PATIENTS IN JAPAN.**

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Introduction: To support the life of patients with cognitive impairment, it is important to use social services in addition to care provided by family caregivers. In Japan, long-term care insurance program (LTCIP) is implemented in April 2000 to promote socialization of care. Here we show the factors related to the levels of care needs in LTCIP among memory clinic patients. Methods: Subjects were 205 patients from outpatient memory clinic in a university hospital, including 148 AD, 22 MCI, 13 DLB. Interview was performed from their informants, consisting of living arrangement, support by family, level of care needs in LTCIP (level 1; lightest to level 7; severest), use of care services. Cognitive function was evaluated with MMSE. Physical performance was assessed with Up & Go test and grip strength. Results: Seventy patients were not applied to the certification of LTCIP (designated here as level 0). The number, age, MMSE and Up & Go of the patients in each level are as follows; level 0 (n=70, 75.3 $\pm$ 6.8, 22.0 $\pm$ 4.9, 12.2 $\pm$ 5.0), level 1 (n=7, 76.1 $\pm$ 4.4, 21.9 $\pm$ 3.2, 11.6 $\pm$ 3.8), level 2 (n=11, 82.1 $\pm$ 3.4, 23.9 $\pm$ 3.3, 14.3 $\pm$ 5.1), level 3 (n=48, 80.1 $\pm$ 6.1, 21.1 $\pm$ 4.1), level 4 (n=31, 79.6 $\pm$ 7.1, 17.4 $\pm$ 5.6, 16.4 $\pm$ 8.0), level 5 (n=22, 83.5 $\pm$ 5.8, 14.1 $\pm$ 6.6, 17.6 $\pm$ 6.8), level 6 (n=8, 81.4 $\pm$ 8.2, 9.0 $\pm$ 4.6, 19.8 $\pm$ 6.8), level 7 (n=4, 78.8 $\pm$ 8.1, 7.7 $\pm$ 3.8, 26.1 $\pm$ 8.9). The levels of LTCIP was correlated both with cognitive and physical function in patients with cognitive impairment, although the age and living arrangement are determinant of the levels from 0 to 4. Conclusions: Use of care services and relation with living arrangement will also be discussed.

**PB8 373 HEARING SENSITIVITY AND THE FUNCTIONAL CAPACITY IN LONG-TERM CARE**

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Introduction: In long-term care, where the functional decline is more advanced, the prevalence of hearing loss is even higher than in general population. Sensory impairment has been frequently associated with difficulties in daily activities, performing harmful influence in the self-perception of health condition and maintenance of social relationships. The purpose of this study was to investigate the relationship between hearing impairment and functionality among long-term care residents in São Paulo, Brazil. Materials and Methods: A total of 31 elderly subjects were submitted to Functional Independence Measure – FIM (cognitive and motor score) and audiometric examinations, during the year of 2008. The sample was composed of 24 (77,42%) female and 7 (22,58%) male, between 77-95 (86,65  $\pm$  5,33) years of age. Results: The score of cognitive FIM was significantly associated (Spearman's correlation coefficient) with: motor FIM ( $r=0,578$ ;  $p<0,001$ ) and age ( $r=0,471$ ;  $p<0,001$ ); lower cognitive scores were due to lower motor scores and higher

ages. Higher levels of hearing impairment showed great correlation (Dunn's post-hoc test;  $p<0,05$ ) with: higher ages ( $p=0,033$ ) and lower scores of cognitive FIM ( $P=0,008$ ). Conclusion: There was a strong correlation between hearing impairment and functionality in the studied group. As we know, the development of hearing loss in elderly is usually slow and sometimes it is only perceived when all frequency range is compromised. The precocious and interdisciplinary intervention in this population is extremely relevant for minimizing the impact in functional capacity.

**PB8 374 WHICH ORGANISATION AND SPACE FOR PERSONALIZED CARE? - STATISTICAL AND ERGONOMICAL ANALYSIS IN LONG-TERM CARE**

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Introduction: Prevention of depression and malnutrition among residents in nursing homes is generally based on personalized care. However, health care workers (HCWs) in long-term care are frequently dissatisfied with their opportunities to give patients the care they need. They also suffer more burnout than other HCWs do, according to the NEXT study (10 countries, 4,979 HCWs involved in long term care). Method: A participatory action research model was used, involving HCWs and ergonomists in 10 institutions, with the support of the French regional Council of Ile-de-France and Rhône-Alpes. Continuous observations of HCWs' whole work-posts were conducted by ergonomists and by trained HCWs. Time spent in the different rooms, activities undertaken, interruptions, verbal exchanges and work postures were studied. Results: Different factors influenced the possibilities for a nursing aid (NA) to adapt to resident's rhythms and requests: work organization (split shifts or continuous work schedules, floating or fixed assignment, responsibility for 8 residents by one NA or for 23 residents by 2 NA, existence or absence of shift handovers, possibility of sharing information with nurses and doctors); space constraints (lack of a sufficient number of lifts when only one dining room for 120 residents or dinning rooms for every 16 residents, space for wheel chairs, attention given to noise reduction and lighting...), and number of staff. The possibility of developing verbal exchanges with residents lasted from a mean duration of 32 sec. to 4 min., according to these interactions. Helping residents to eat differed according to whether the NA was sitting or standing and interrupted (ex.: 21 min. to help four persons eat in 12 periods). Discussion: Improvements in the quality of care, and to protect HCWs' health, can be made by improving working processes through multidisciplinary teamwork, and by developing better ward designs and equipment.

**PB8 375 ASSISTANCE TO BASIC NEEDS. WHICH CONTEXT FOR EMPATHIC CARE? - PARTICIPATORY ERGONOMICS TO IMPLEMENT CHANGES**

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Introduction: Prevention of bedsores, falls and musculoskeletal disorders (MSDs) among residents in nursing homes is a priority. However, health care workers (HCWs) in long-term care accumulate an excessive number of manual lifting and awkward postures and suffer more MSDs than other HCWs do, according to the NEXT study (10 countries, 4,979 HCWs in long-term care). It is necessary to understand the influence of organization and space constraints on the way activities are accomplished. Method: A participatory action research model was used, involving HCWs and ergonomists in 10 institutions, with the support of the French regional Council of Ile-de-France and Rhône-Alpes. Continuous observations of HCWs' whole work-posts were conducted by ergonomists and by trained HCWs. Time spent in different rooms, activities undertaken, interruptions, verbal exchanges and work postures were studied. Results: HCWs in long-term care had to choose between patients. This often meant not having the time to spend with an elderly patient to respond to his need of social contact or even to change his protection, in order to take care of another one's basic needs. All of our observations led us to wonder about interruptions: to deal with missing or failing equipment, to search for co-workers, to be faced with conflicting tasks. The mean consecutive time spent with a resident, to help him in mobilization and hygiene, varied from 3 min to 10 min, depending on access to bathrooms, supplies and even to the bed or wheelchair. HCWs sat only from 5% to 24% of their working time, and cumulated from 25 to 150 awkward postures according to architecture, equipment, number of HCWs and organization. Discussion: Data collected during the participatory ergonomic process are now being applied so as to organize space, furniture and supplies in a way that reduces preparation time, increases time spent with patients and decreases HCWs' health risks.

**PB8 376 EVALUATION OF TEN MEASURES OF COMORBIDITY AND ONE YEAR RISK OF FUNCTIONAL DECLINE OR MORTALITY IN AN ACUTE GERIATRIC WARD**

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**INTRODUCTION:** It's important to measure the complexity in the elderly patient. The objectives of this study were to compare several measures of comorbidity and to study the factors predicting functional loss and mortality. **METHODS:** Hospital-based prospective longitudinal cohort study of 131 patients over 75 years. Barthel Index was assessed on admission and 1 year later. Other variables were collected: sociodemographic, laboratory values, comorbidity measures, nutritional, cognitive and social status. Bivariate and multivariate analysis were performed. Ten different methods to measure comorbidity were used: disease count, Charlson Index and its modification according to age, Cumulative Illness Rating Scale, Index of Coexisting Disease, ASA index, Spanish Red Cross Scale, Index of Disease Severity, Geriatric Index of Comorbidity (GIC), Burden of Illness score for elderly persons and Prognostic index. **RESULTS:** Mean age of the cohort was 85.4 years (SD 5.29), 56.5% female and 55% with cognitive impairment. Mean Barthel index on admission 65.69 (SD 34.22) and 34.92 (SD 33.32) one year later. One-year mortality was 36.5%. Variables associated with functional decline in bivariate analysis were: age>85, Barthel, Karnofsky index, OARS, Red Cross and ASA scales, GIC, BISEP and Prognostic indexes, diagnosis of dementia and readmission. In multivariate analysis were: age>85, OARS scale, levels of hemoglobin and albumin, GIC, readmissions and previous Barthel index. Variables associated with mortality in bivariate analysis were: age>85, Barthel, Red Cross and ASA scales, GIC, BISEP and Prognostic indexes and diagnosis of dementia. In multivariate analysis were: age>85 and diagnosis of dementia. **CONCLUSIONS:** This study confirms several functional and mortality predictor like functional, nutritional and cognitive status, age and diagnosis of dementia and adds others like OARS scale, levels of hemoglobin, GIC and number of readmissions. The only index of comorbidity that predicts functional decline in this study is GIC after adjustment for complexity.

**PB8 377 SUPPORT TO THE HOSPITALIZED SENIOR CITIZEN GROUP DYNAMICS OF LONG-TERM HOSPITALIZED PATIENTS**

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The world's population is aging at a greater rate than ever before. In 2025, Brazil will have 31.8 million senior citizens. São Paulo State ranks first in the number of senior citizens: approximately 4 million people 60 or more years old. In this scenario there is an increase of chronic diseases, which in turn creates demand of long-term hospitalization. According to data from the Santa Catarina Hospital, in the last 4 years admissions of aged people have increased from 15% to 18%. Which 60% of the patients were admitted for clinical treatment, 20% are neoplasm, 16.40% are circulatory diseases and 8% had an average hospitalization time of more than 30 days. Due to this facts, in 2008 an interdisciplinary group was created for the identification of long-term hospitalization patients (defined as those with a hospital stay longer than 20 days), in order to take preventive action, allowing for a smooth and safe discharge. The present paper intends to show the results achieved by the group's actions in situations of long-term hospitalization. Patients and methods: This is a descriptive and prospective study carried out in a private philanthropic hospital. Starting in September 2008, 234 long-term hospitalization patients have been monitored, of which 67.52% are senior citizens. Results: The number of patient-days corresponding to long-term hospitalization showed a 23.73% decrease, during the period from July/08 to January/09, and 78.28% of the patients discharged during this period were old-age people with an average hospitalization time of 56 days. Conclusion: The group introduced a greater involvement of the medical team with the possibility of an earlier discharge. The greater integration of the multiprofessional team with the family, service providers and payment agents made this entire process feasible, contributing towards a shorter hospitalization time, greater safety in patient care as well as treatment resoluteness.

**PB8 378 PREVENTING ADMISSIONS TO HOSPITAL: A NEW APPROACH TO MANAGING CHANGE OF HEALTH STATUS IN LONG TERM CARE FACILITIES**

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In 2006-2007 almost 200,000 Canadians lived in continuing care settings such as nursing homes and chronic care facilities. Recent reports have shown that while these residents are older and more medically complex than ever before, the facilities they reside in are not often equipped to deal with their complex health care needs. Consequently, many residents have unplanned transfers to hospital care that result in long delays in the emergency department and the acquisition of iatrogenic illnesses. In a large university based veteran care facility, a unique approach was developed to prevent unnecessary transfers to emergency care and provide the staff with the process, knowledge and tools for managing change in health status. Lead by an acute care trained Specialty Practitioner, an interprofessional clinical practice guideline was developed to assist staff with risk identification, assessment, communication, treatment and monitoring interventions for residents experiencing the common illnesses and conditions that often precipitate transfers to acute care. Implementation processes included initial mass education and weekly case reviews to enhance clinical reasoning and judgement. The introduction of the Specialty Practitioner role, focused on working with the residents and their families along with the interprofessional team to assist with the interpretation of symptomatology, initiation of prompt treatment and continued monitoring. Process data for the improvement of practice

was generally positive with suggestions for continued improvement. Outcome data for the number of residents sent to emergency care also indicated a decrease in total numbers. With an increased focus on accountability for patient safety, efficiency and appropriate allocation of resources, it is important for administrators to examine options for enhancing the potential of present staffing models, funding frameworks and the approach to assessment of residents with complex care needs, in order to prevent unnecessary transfers to hospitals.

**PB8 379 THE PEONIES PROJECT: A NEW WAY TO MEASURE AND IMPROVE PERSON-CENTERED, OUTCOMES-DRIVEN LONG-TERM CARE**  
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**Introduction:** The PEONIES project of the State of Wisconsin (USA) was developed to support the provision of person-centered, outcomes-driven long-term care services. This approach begins by identifying individually important outcomes in 12 quality of life domains. Support for these outcomes is designed to include assistance from family, friends, neighbors, and community groups, as well as from the formal service providers. Cost-effectiveness is defined in relation to the specific outcomes of importance to the individual. **Methods and Materials:** The PEONIES approach was developed by researchers at the University of Wisconsin – Madison. It uses semi-structured interviews to identify the quality of life outcomes that individuals wish for themselves, the types of supports needed to help achieve and maintain those outcomes, and the quality of the supports currently being provided. Information is used to support the development of service plans, and also to create quality measures for the service organization. Inter-rater reliability was tested in 4 care organizations, for adults receiving services due to physical or developmental disability or chronic conditions associated with aging. **Results:** Inter-rater reliability was statistically significant but in a low to moderate range, for most quality of life domains. The PEONIES interview process was found to empower individuals receiving services. Care managers reported that the approach helped them to do a better job of supporting people in useful ways, but required unlearning old habits and forming new ones. **Conclusions:** The PEONIES approach to supporting individuals and measuring quality is unique in its emphasis on individually-determined outcomes. This approach, which considers personally-defined outcomes and all sources of potential support, can enhance quality of life and do so in a cost-effective manner. Inter-rater reliability can be improved with additional training.

**PB8 380 EPISODIC CRISES: CHALLENGES IN THE DELIVERY OF HOME SUPPORT SERVICES TO ELDERLY CLIENTS IN A CANADIAN CONTEXT**  
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**Introduction** Home Care is an expanding sector of health care delivery in many countries. The purpose of this paper is to explore the nature of crises from the perspective of home support workers and family members of elderly persons receiving home support in Vancouver, Canada. **Methods and Materials** Based on a previous Canadian study of episodic crises in family caregiving, Sims-Gould & Martin-Matthews (2008) developed a conceptual model for understanding episodic crises. The model classifies crises on two dimensions: predictability (predictable or not) and duration (acute or chronic). This paper examines and further refines that model through an analysis of data from in-depth interviews with home support workers (N=118) and family caregivers (N=56) who have an older relative in receipt of home support services. The research was funded by the Canadian Institutes of Health Research (CIHR). **Results** Crises were experienced by 91% of home support workers and 94% of family caregivers. Workers and family members differed in their understandings of crisis. The most common type of crisis was health related and typically involved a fall by the elderly client/relative. Non-health related crises ranged from client refusal of service, to family members brokering arguments between workers and their relative. Crises varied in predictability and duration. Home support workers and family members engaged in a variety of strategies to manage crisis incidents and required quick problem solving skills and extra time (often outside agency guidelines and practices). **Conclusion** The analysis of crisis episodes (a) from the different perspectives of care workers and family members, and (b) framed in terms of predictability and duration, enables us to better understand how agency and care policies may be more responsive to circumstances and events that challenge paid and unpaid care work in domiciliary settings.

**PB8 381 HOME CARE SERVICES TO ELDERLY CLIENTS: THE LABOUR OF CAREWORK IN CANADA**  
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**Introduction** The care of community-dwelling older people is influenced by the availability and nature of home care services, in terms of their funding and structure; the characteristics of home support workers and clients; and the ways in which paid and unpaid care intersect. **Methods and Materials** Mahmood and Martin-Matthews (2008) developed a conceptual model that locates the home support worker, elderly client, and family member (caregiver) at the intersection of the public and private spheres framed by their social, spatial, temporal and organizational features. Funded by the Canadian Institutes of Health Research (CIHR), the current study examines and further refines that model through an analysis of data from in-depth interviews with 180 home support workers (who provide 'non-professional' domiciliary care services to elderly clients) in three provinces of Canada: British Columbia, Ontario and Nova Scotia. **Results** The organizational, spatial, temporal and social aspects of the delivery and receipt of home support services vary considerably between the three jurisdictions. Training and immigrant status of workers vary considerably, with immigrant workers often more highly skilled. Workers identify key issues of scheduling, time demands and balancing client's needs and preferences against the set care plan, and their strategies for addressing these challenges. Strategies are examined with particular emphasis on behaviours outside of agency guidelines and expected scope of practice. **Conclusion** Organizational, spatial, temporal and social factors significantly impact the labour of care work by home support workers in three jurisdictions of Canada. Variations in worker training and immigrant status, and in client care plans and funding arrangements, enable us to identify policies and practices that enhance or hinder the provision of domiciliary care services to elderly people.

**PB8 382 PHYSICIANS' ETHNICITY: DOES IT AFFECT NURSING HOME PLACEMENT?**  
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**Introduction:** By 2020, 12 million elderly will need long-term care in the US. Studies have linked institutionalization with patients' ethnicity, but none have addressed the impact of physicians' ethnicity. **Methods and materials:** An anonymous survey was distributed to physicians in 5 hospitals in New York. Data were collected on the correlation between institutionalizing their patients, mothers and fathers, and 14 medical conditions. Statistical analysis used the Pearson correlation coefficient and Kruskal-Wallis test with &KAI<sup>2</sup> test for associations. **Results:** Surveys were obtained from 204 physicians (52.9% primary care/PCPs and 9.3% geriatricians, 60.9% males and 56.8% in training). Of these, 47.0% were Caucasian, 37.7% Asian, and 8.8% African-American. Overall, physicians were twice as likely to place their patients in assisted living (ALF) or skilled nursing facilities (SNF), as they would for their mother or father, for the conditions: stroke ( $p<.001$ ), end stage renal disease ( $p<.012$ ), malignancy ( $p<.001$ ), incontinence ( $p=.04$ ) and dementia ( $p=.013$ ). Furthermore, PCPs were more likely to place, when compared to geriatricians, for malignancy ( $p<.005$ ), dialysis ( $p<.007$ ), stroke ( $p<.008$ ), dementia ( $p<.01$ ) and aggressiveness ( $p<.008$ ). Male physicians were more likely to place fathers and mothers, respectively, in ALF for malignancy ( $p=.008$ ,  $p=.007$ ), dementia ( $p=.01$ ,  $p=.02$ ), stroke ( $p=.03$ ,  $p=.009$ ), and for amputation ( $p=.01$ ,  $p=.006$ ) and their mothers only for caregiver stress ( $p=0.008$ ), and in SNF for caregiver stress ( $p=.025$ ,  $p=.01$ ) and for incontinence ( $p=.035$  and  $p=.009$ ). There was also a direct correlation between increasing age of physicians and placement for incontinence ( $p=.009$ ) and stress ( $p=.002$ ). Physicians' ethnicity was never found to be a significant factor in the decision to place patients or parents. **Conclusion:** These data present a significant lack of association between physicians' ethnicity and placement of either patients or parents. It also underlines the potential impact of geriatricians in seeking alternative community resources for long term care.

**PB8 383 CHANGING PRACTICE: UNDERSTANDING THE BARRIERS TO APPROPRIATE PAIN MANAGEMENT IN RESIDENTIAL AGED CARE**  
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**Introduction:** Management of pain and the promotion of comfort in residential aged care settings, particularly for people with impaired cognition, is a challenge for clinicians and service providers. Concerns include the over use and under use of analgesia, the selection of appropriate analgesia, as well as the validity of clinical assessment. Selection of pain management strategies are influenced by local practices. The numbers of registered nurses working in Australian residential aged care is decreasing. Consequently, pain management is increasingly a role undertaken by caregivers with a mixed educational preparation. This

paper discusses a change process to understand and improve pain management practices in a 30 bed dementia specific unit. Methods: A researcher facilitated action research cyclical process of planning and implementation, data collection, analysis and reflection was conducted over ten months. Quantitative data from a chart audit of assessment and medication charts, plus qualitative data from focus groups, interviews and fieldnotes provide insight into the breadth of issues facing caregivers trying to change pain management practices. Conclusions: Through successive action cycles, the group successfully designed, implemented and evaluated a number of change strategies resulting in a decrease in the number of residents experiencing poorly managed pain. The findings of this study highlight the challenges faced by caregivers working in high-level residential aged care. The group's work revealed the need for pain management tools which reflect current understanding of pain in older people; the need for evidenced-based education for caregivers; the need to use comfort measures as an adjunct to analgesia; and the advocacy role caregivers have when medical or nursing personnel do not prescribe or administer sufficient analgesia. The process provided the participants of this study their first opportunity to participate in research and to examine their practices. The process resulted in individual as well as organisational learning.

**PB8 384 MANAGEMENT OF GERIATRIC GIANTS: PRESSURE SORES AND IMMOBILITY SYNDROME**

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**INTRODUCTION:** Elderly mobility depends on the interaction among different factors like the patient itself, motor ability, cognitive capacity, health status and external and environmental personal resources. The reduction of these capacities can lead to the already described Immobility Syndrome with important consequences, one of them being the pressure sores. Its control is established as a quality of care parameter. **AIM:** To assess and treat stage IV pressure sores in patients with especial risk factors, which eventually lead to Immobility Syndrome and pressure sore. **METHODS AND MATERIALS:** We present a 72 years old patient with a cognitive disturbance, depressive syndrome. He suffered from several strokes (2007) and since then he suffered from speech impairment, swallowing difficulties and incontinence of sphincters. Due to his long term immobility he developed an ischaemic necrosis on the heel which became a stage IV pressure sore. Due to the described situation, it was decided to carry out a surgical debridement in different sessions and daily wound care. **RESULTS:** We followed up and undertook photographic recording of the pressure sore and the care of the wound. After five months from the beginning of the treatment we could appreciate the favourable course of the ulcer. **CONCLUSION:** The assessment of an infected wound must be carried out following certain criteria, either clinical or microbiologically; that would allow us to choose and provide the adequate treatment for the lesion. The choice of dressing must be based on the assessment of the patient and the wound, as well as the potential of the dressing to achieve its purpose.

**PB8 385 IMPROVEMENT OF CARE NETWORK BETWEEN EHPADS (NURSING HOMES FOR ELDERLY DEPENDANT PATIENTS) AND HOSPITALS THROUGH THE CREATION OF A GERIATRIC CARE AND ASSISTANCE UNIT.**

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**Introduction** In most of EHPADs, no nursing paramedical care continuation exists in 24 hours a day. In the case of acute diseases, to provide appropriate treatment to their health status, old patients need hospitalisation which is often in emergency because of lack of continuous nursing surveillance. For the past 2 years, the Geriatric Care and Assistance unit has been created in the University hospital in Limoges, to priority admit patients from EHPADs in a readaptation non-acute geriatric unit at the very beginning of acute health problem and when no diagnosis was already made in the EHPAD. **Methods** The unit set up over the past two years, admitted 234 patients requiring paramedical care during the critical phase of a given pathology (dehydration, high fever, agitation, aggressiveness, treatment of worsened bed sores, pain, malnutrition, unstable diabetes, wandering...). Results Frequently encountered pathologies were: Bronchial surinfection, States of agitation, Unstable diabetes, Treatment of bed sores, States of acute malnutrition. The mean time lapse between admission to the unit and the EHPAD request is 36 hours. The mean length of stay is of 15.5 days. Once the pathology has been treated, the patients return to the EHPAD that they came from. Ninety percent of patients returned to their EHPAD; the remaining ten percent, because of the worsening health problems, needed a long-term care unit or died. This Geriatric Care and Assistance unit has avoided transfer through the emergency rooms for many elderly patients living in EHPADs. This unit also participates in optimising the geriatric care network and helps to avoid the burn-out of nursing staff in EHPADs. **Conclusion:** After a 2 years period of experimental functioning, the Geriatric Care and Assistance unit, at the beginning of 2009 has been opened officially, with a 15 beds unit.

**PB8 386 MUSIC THERAPY: MEALS IN MUSIC**

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**Introduction** How can music therapy help demented patients re-appropriate the gestures required to feed themselves? Effects of music on demented patients have been demonstrated. It brings back memories with pleasure, establishing a contact with patients and facilitating communication. It improves mood, reduces neuroleptics anxiolytics use, has analgesic effects and improves concentration. The aim of this study was to explore music effects on the return of gestures required for feeding oneself in a long-term care unit. **Methods** Since 2007, groups of 8 demented Alzheimer patients (MMS (mini mental score) < 15), at mealtimes, are installed by carers at the same table. Carers sat with them, talking quietly and capturing their attention. A song is played. Patients behaviour was assessed by a psychomotrician. Strengthened by result, in a second time, two comparative groups of patients were set up: one being fed as usual and one being fed with playing music. **Results** After the first 6-month session, people that had to be fed by carers were able to eat on their own or with lesser help; however the carer must remain nearby to prompt them. A woman who needed to be prompted verbally to drink or eat, no longer required help. Two people who no longer fed themselves enough and needed help before the study were able to feed themselves again and also during other daily meals. The second part of the study demonstrated: - improvement of implications of demented patients in their skills in eating by themselves - possibility of mobilising only one carer for six demented patients, at the same time with efficient and harmonious meal. **Conclusion** Music regularly proposed to demented patients permits them to re-appropriate gestures of eating, thus improving their autonomy and should decrease risks of malnutrition.

**PB8 387 ONE-YEAR SURVIVAL ANALYSIS OF INFIRMARY PATIENTS: WHAT CAN WE DO TO IMPROVE THE SERVICES?**

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**Introduction** Although infirmary patients are known to be associated with a short median survival, there is a wide variation in survival observed in reality. Currently there has been a limited knowledge in the prognostic information in long term care. **. Objective** To identify reversible prognostic factors associated with one-year survival in infirmary patients, with the aim to improve clinical services. **Method** This was a prospective cohort of 112 patients from a long term care hospital in Hong Kong. Patients were followed for one year and the main outcome measure was death. Information on subject demographics, social support, nutritional status, disability level, mental status, clinical data, laboratory results and medications was collected at baseline. Univariate and multiple Cox proportional hazard regression were used to identify predictors of mortality. **Result** There were 19 deaths (17.0%) during the follow-up period. 17 patients (15.2%) had been admitted to acute hospital within six months before baseline assessment, and the most common cause for admission was severe infections (47%). In univariate analysis, the following factors predicted death within one year: higher age ( $P=0.072$ ), higher Charlson morbidity index ( $P=0.076$ ), previous admission to acute hospital within 6 months ( $P=0.013$ ), tube feeding ( $P=0.058$ ), weight loss greater than 10% within six month ( $P=0.002$ ), lower Norton Score ( $P<0.001$ ) and impaired mobility ( $P=0.035$ ). Multivariate analysis revealed the following independent predictors of death: weight loss in six month greater than 10% (hazard ratio, 6.4;  $P = 0.005$ ), previous admissions to acute hospital (hazard ratio, 4.3;  $P = 0.007$ ), and impaired mobility (hazard ratio, 0.2;  $P = 0.062$ ). **Conclusion** From this study, it appears that potential interventions that may improve the one-year mortality of infirmary patients include the following: aggressive intervention to treat the reversible causes of significant weight loss, and measures to prevent severe infections in long term care.

**PB8 388 PROFILE OF INSTITUTIONALIZED ELDERLY ASSOCIATED WITH SCORES OF FUNCTIONAL INDEPENDENCE MEASURE(FIM)**

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**Introduction:** With the growth of world elderly population, the concern with functional capacity appears in focus in this segment of health estimate age. The diagnosis based only on clinical evaluation becomes inadequate to the actual condition of health of this population because, for this, the levels of functionality and independence are more relevant data than only the presence of diseases. Diagnosis of the disease remains important for the clinical treatment, however, linked to this, there must be understanding on the functional issues. They not only involve physical and mental health, but the socioeconomic conditions and self-care, which show the degrees of functional independence. An assessment of functional capacity is essential to choosing the best type of intervention and monitoring of clinical and functional status of the elderly. Purpose Assessing the existence of an

association of the scores of functional independence measure(FIM)with the classification of degree of dependence in consensus between a team of doctors,nurses,occupational therapist and leaders of caregivers. Method Held discussions with the team focusing on the level of dependence in acitivities of daily living(ADL)of each senior,was evaluated alongside the score of each one's FIM.The mean and standart deviation of total FIM and its sub-scales(cognitive and motor)for each degree of dependence(total dependent, semi-dependent and independent to ADLs) Results: Trend to higher values in FIM between residents classified as independent as between semi-dependent and remained dependents.This trend both in regard to the total amount of FIM(Independent:116 average,  $5\pm$ standart deviation7,3; semi-dependent:95average, $6\pm$ standart deviation14; dependent:average48standart deviation $\pm$ 24,3)and in the cognitive sub-scales(Independent:average:33standart deviation $\pm$  2,7; semi-dependent average:  $27,7\pm$ standart deviation5,4; dependent: average $16,1\pm$ standart deviation9 diversion,2)and motor(Independent:average:83,5standart deviation, $\pm$ 5,4; semi-dependent:average:  $68\pm$ standart deviation11,9; dependent:average:31,9 $\pm$ standart deviation $\pm$ 18,4) Conclusion: Direct association was observed between scores of FIM(total and sub-scales)and ranking in the degree of functional dependence of the consensus made by the team.

**PB8 389** HEALTH PROFILE OF ELDERLY PATIENTS IN AN ACUTE GERIATRIC UNIT FROM A BRAZILIAN TERTIARY HOSPITAL

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Introduction: The elderly constitute 8,6% of the Brazilian population and this figure will double in the next 20 years. Rio de Janeiro, a southeastern estate, has the greater proportion of elders. However, there is a lack of geriatric health care and medical centers. Therefore, it is essential to understand the epidemiology and needs of this special population. Materials and Methods: Data were prospectively collected from one hundred and forty three female patients admitted in a geriatric ward of a tertiary care hospital between October 2007 and November 2008. Information about epidemiological data, delirium occurrence, pressure ulcer incidence, and laboratory results were collected at admission and hospital discharge or death. The results are expressed as means and standard deviation. Analysis of difference in proportions used chi square test with a significance level of 0.05. Results: The mean age and APACHE II score were  $77,76\pm11,70$  years and  $14,83\pm5,91$  respectively. Patients used  $5,05\pm2,98$  medications at admission. The time spent between emergency room admission and transfer to the ward was  $3,11\pm4,41$  days. Despite longer length of stay in comparison with general wards ( $18,20\pm21,45$  vs  $11,94\pm9,91$  days), mortality rate was lower (6,1% vs 8,87%). The mean levels of albumin, hemoglobin and TSH at admission were  $3,32\pm1,25$ ;  $11,37\pm2,29$  and  $2,45\pm1,92$  respectively. Delirium occurred in 32% of the subjects. The mean Braden score was  $16,13\pm4,30$  and pressure ulcer incidence was 21%. Non-survivors had a statistically significant lower Braden score and higher delirium incidence but no difference in age, albumin and hemoglobin level. Conclusion: Mortality was less than expected. Despite lower risk as indicated by the Braden score, pressure ulcer incidence was very high. Pressure ulcer and delirium incidence seemed to confer a poor prognosis in this population.

**PB8 390** LONG TERM CARE DOCUMENTATION AND ITS EFFECT ON THE QUALITY OF CARE AND THE CLIENTS' QUALITY OF LIFE

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The effect of care documentation on the quality of care is the subject of various studies. They mostly examine the impact of new documentation procedures, care process models etc. Observed outcome measures include many aspects of documentation quality or refer to the quality of care from a professional perspective. Only very few studies consider the clients' perspective on the documentation-results. The presented findings are based on a data set, gathered in five European countries including data from home and institutional care. It allows producing indicators on documentation quality referring to care theories and care process models for 1400 clients. Additionally the data set covers information on care quality and it comprises data, collected from the clients, regarding clients' satisfaction with care and their care related quality of life. Examining the interdependency between documentation, care quality and clients' satisfaction with care and quality of life, we find three patterns of interrelation. In the first pattern, care documentation is used, to follow bureaucratic guidelines with a negative impact on care results, both from the professional and the clients' perspective. In the second pattern, the documentation is primarily used to provide and indicate the professional care quality. This focus tends to neglect the client-referring care outcomes – observable by a negative relation between documentation quality and the clients' satisfaction with care. The interrelations within the third pattern reverse those of the second. Here we find a negative implication of documentation quality on the quality of care, whereas the effect on the clients' care satisfaction and their quality of life is positive. Care is focussed here primarily on the clients' outcome and care documentation makes systematic administrative deficiencies visible. Summarising, we see the importance

of documentation together with its heterogeneous impact on the quality of care and the clients' care satisfaction and quality of life.

**PB8 391** INFORMAL CAREGIVING: EXPERIENCES OF PRIMARY CAREGIVERS TO NON DEMENTED ELDERLY.

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Due to the growth of the number of elderly people with functional incapacities, families face having to take care of their elderly relative for long periods of time. The goal of this article is to describe the meaning of caregiving felt by primary caregivers to no demented elderly people. For this study we used van Kaam's phenomenological method. After the analysis of the non structured interviews to nineteen primary caregivers, three major themes emerged: consequences on personal life; belongingness, reciprocity and structure of caregiving relationship; organization of demands and interdependency of the relationships and the tasks. The attention given to caregivers experience, either positive or negative, help construct the meaning of the experience and assure that more and better care been given. Acknowledging the importance of families taking care of their elderly is gaining a better understanding of psychosocial determinants of the caregivers' subjective well-being and health. This knowledge can be crucial in controlling negative emotions and identifying gain predictors. More specifically, this awareness can help identify needs, encourage strategies and activate and create resources able to optimize the caregivers' well-being and daily life of those that, by choice or obligation are faced with the experience of taking care of an elderly person.

**PB8 392** THE MULTI-COMPONENT TAILORED INTERVENTION IN TREATMENT OF DEMENTED RESIDENTS WITH BPSD. RANDOMIZED CONTROLLED TRIAL IN 2008-2010.

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Introduction: Alzheimer's disease and related dementias are frequently accompanied by BPSD that are common in long term care settings of elderly people. BPSD decrease the quality of life of people with dementia and cause distress in nursing staff. Objectives: To determine whether the multi-component tailored intervention is effective in treatment of BPSD. Methods: Randomized, controlled intervention study of 19 long-term care wards with 399 residents. Wards are randomly allocated to the intervention (n=11) or control group (n=8) according to the wards' and residents' several characteristics (case mix index, age and gender). The baseline data comprises of 298 residents with informed consent. Main outcome measures are (1) alleviation of BPSD (2) use of medication and (3) prevalence of BPSD in wards. Data (1) of residents' cognitive functioning, BPSD, physical functioning, nutrition, psychological well being and quality of life and (2) staff's work stressors and satisfaction are gathered at baseline and in 6 months and 12 months follow-ups. Intervention: The control wards will continue their normal work and are provided a four-hour training session about treatment of the BPSD. The intervention wards enter to a one-year predominantly psychosocial intervention program based on the holistic perspective where BPSD are seen as a person's effort to cope and adapt in the present circumstances. Intervention methods are designed to enhance the psychological well-being and mental health of each resident with BPSD. The intervention staff is supported by a mentor nurse and a consulting geriatrician to find the underlying multiple interacting causes of each resident's behavior, and to provide individually tailored, comprehensive and multi-component intervention. Staff is supported to work in collaboration with family members. Voluntary staff members are trained and encouraged to use singing, exercise therapy and reminiscence during daily practice. Preliminary results show that there are multiple potentially treatable causes for BPSD.

**PB8 393** THE ASSESSMENT OF PREALBUMIN AS AN EFFECTIVE SCREENING TOOL IN MALNUTRITION.

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Introduction: Malnutrition among the elderly population is reported to be as high as 60% (NICE, 2006). Despite its widespread prevalence and devastating consequences, malnutrition can not be diagnosed by simple physical observations and weight measurements but requires thorough nutritional assessment on admission to hospital. Prealbumin or transthyretin is emerging as one of the indicators of nutritional status and a marker for malnutrition since it correlates with patient outcomes in a wide variety of clinical conditions (Beck and Rosenthal, 2002). This aim of the current study was to investigate the effectiveness of prealbumin as a screening tool of malnutrition, compared to the use of albumin and other nutritional assessment

techniques. Methods and materials: Fifty nine patients, 65 years or older were admitted to the Royal Berkshire NHS Foundation Trust. Thirty patients (mean age 83.7±6.1years) were admitted with a fractured neck of femur (acute), and twenty nine patients (74±6.1years) were admitted for a total hip replacement (elective). Serum was analysed for the measurement of albumin and prealbumin on the VITROS 5.1 FS chemistry system and the Nutritional Risk Score (NRS) calculated. Results: Prealbumin Elective (n=26) Acute (n=29) <10mg/dl 0 0 10-17mg/dl 2(8%) 6(21%) >17mg/dl 24(92%) 23(79%) Albumin Elective (n=20) Acute(n=20) Normal 20 15 <3 0 5 (25%) <3 0 2 (10%) NRS Elective (n=27) Acute (n=30) 0-3 (low risk) 25 (93%) 25 (83%) 4-9 (mod risk) 2 (7%) 5 (17%) 10-13 (high risk) 0 0 Conclusions: Prealbumin identified more individuals who were at risk of malnutrition in both patient groups with the risk of malnutrition highest in patients who were admitted with a fractured neck of femur. The use of prealbumin should be incorporated into a patient's nutritional screening program on hospital admission. Beck F.K. and Rosenthal T.C. (2002). Prealbumin: A Marker for Nutritional Evaluation. American Family Physician, 65, 1575-1578. NICE (2006) The National Institute for Clinical Excellence [Online]. [Issued 2006 Feb 21]. [cited 2008 July 30] Available from: URL:<http://www.nice.org.uk/guidance/index.jsp?action=download&o=29985>

#### **PB8 394 SERUM 25-HYDROXYVITAMIN D AND MORTALITY IN AN OLDER BI-ETHNIC COMMUNITY-DWELLING POPULATION**

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Introduction: Serum 25-hydroxyvitamin D (25(OH)D) levels have been associated with all-cause mortality primarily in studies including persons of European origin. We compare the 25(OH)D – mortality relationship in black (n=1055) and white (n=1633) participants of the Health, Aging and Body Composition Study, a prospective study in well-functioning community dwelling older adults (age range 71-80, 51.2% women, 39.7% black). Methods and Materials: Serum 25(OH)D was measured by radioimmunoassay (DiaSorin, Stillwater, MN) at the Year 2 exam. Physician adjudicated deaths were ascertained through semi-annual contacts over the subsequent 8.5 years. The 25(OH)D – mortality relationships were analyzed using proportional hazards models adjusting for multiple covariates with 75+ nmol/L as the referent group. Results: Blacks had lower 25(OH)D levels than whites (52.2 (25.6) vs. 72.7 (27.5) nmol/L, p<0.0001). 31.8% of black and 23.1% of white participants died. After adjusting for demographics, health habits, season, physical and cognitive function, and common comorbidities, blacks had elevated mortality in all categories below the referent [HR, 95%CI (<25 nmol/L): 2.33, 1.43-3.79; (25-<50 nmol/L): 1.65, 1.15-2.35; (50-<75 nmol/L) 1.51, 1.03-2.21]. Mortality was also elevated among whites with low 25(OH)D levels [HR, 95%CI (<25 nmol/L): 1.90, 0.96-3.78; (25-<50 nmol/L): 1.53, 1.14-2.04; (50-<75 nmol/L) 1.19, 0.94-1.52]. There was no significant race x 25(OH)D interaction. Conclusions: Serum 25-hydroxyvitamin D levels <75 nmol/L are associated with elevated mortality in both black and white community-dwelling older adults. Trials are needed to show whether vitamin D supplementation can reduce mortality.

#### **PB8 395 DO OLDER MEN WITH ANDROPAUSE CARRY HIGHER METABOLIC RISK?**

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Introduction: Lower levels of total testosterone (TT) and sex hormone binding globulin (SHBG) have been linked with higher metabolic risk in men. As testosterone concentration is known to decline with increasing age (aka Andropause), we aim to study whether older men labeled as having andropause would also carry poorer metabolic characteristics compared with non-andropausal men. Methods: Cross-sectional study involving 187 consecutive non-diabetic Asian (predominantly Chinese) men aged 34-75 years who attended a Men's Health clinic. Fasting plasma glucose (FPG), TT, SHBG, total cholesterol (TC), HDL cholesterol (HDL), LDL cholesterol (LDL), triglycerides (TG) and serum albumin were assessed after an overnight fast. Waist circumference (WC), body mass index (BMI) and blood pressure (BP) were measured. Free testosterone (FT) was calculated using formula validated by Vermeulen. Sexual dysfunction and psychosomatic symptoms were scored using the 5-item International Index of Erectile Function (IIEF) and Aging Male Symptom (AMS) questionnaires, respectively. Subjects were arbitrarily labeled as andropausal (N=66; 35.3%) if they had (i) FT <300 pM and (ii) IIEF <17 or total AMS >50. Data is reported as mean +/- SEM. Results: Both groups had similar mean ages of 54.9 years. Andropausal subjects had lower levels of TT (12.4 +/- 0.4 vs 18.1 +/- 0.4 nM, P <0.001) and FT (239 +/- 5 vs 344 +/- 7 pM, P <0.001). SHBG was lower but just missed statistical significance (35.6 +/- 1.9 vs 40.5 +/- 1.6 nM, P=0.058). They also had larger WC (93.1 +/- 1.2 vs 87.1 +/- 0.9 cm, P <0.001) and BMI (26.0 +/- 0.6 vs 24.3 +/- 0.3 kg/m<sup>2</sup>, P=0.009), as well as higher total AMS (45.3 +/- 1.3 vs 39.3 +/- 1.1, P=0.001) and lower IIEF (11.5 +/- 0.6 vs 14.7 +/- 0.5, P <0.001) scores. AMS sub-scores for sexual (14.9 +/- 0.3 vs 13.4 +/- 0.3, P=0.003), psychological (12.2 +/- 0.6 vs 10.5 +/- 0.4, P=0.018) and

somatic (18.3 +/- 0.6 vs 15.5 +/- 0.5, P=0.001) symptoms were also higher in andropausal men. However, no significant differences in BP, lipid profile or FPG were noted between the 2 groups. Conclusion: Older men with relative androgen deficiency experience more sexual dysfunction and psychosomatic problems compared to those without, independently of age. Although their TT and SHBG were significantly lower, this method of classifying andropause does not identify men with higher metabolic risk, suggesting that andropause is only a quality of life issue.

#### **PB8 396 NUTRITIONAL STATUS IN A GERIATRIC LONG TERM CARE UNIT**

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Introduction: The malnutrition of elderly subjects represents a public health problem. The prevalence of malnutrition is high as well at the people living in the community as those in institution or hospital, and its effects on health are now well recognized. Our objective: was to analyze the nutritional status and the care strategy in case of a protein-energy malnutrition of patients hospitalized in a geriatric long term care unit. Methods and materials We collected, on a one day transversal study, for all the patients in the unit, the last nutritional assessment containing, the body mass index (BMI), biological data and the different type of diets. Results: 226 patients were including ( 174 women (77.0%) and 52 men (23.0%)) with a mean age of 86.5±7.5 years. The average albuminemia was of 34.1 ± 4.0 g/l but 23.9% of the patients did not had a serum albumin dosage. The nutritional status according to albuminemia, was in 41.3% a severe malnutrition, in 9.9% a moderate malnutrition, and no malnutrition in 48.8%. The last albuminemia had been carried out on an average period of 97 ± 77 days before the study, and with a significantly more longer delay in patients with a more severe malnutrition versus those without malnutrition (56.9 ± 57.0 vs 100.6 ± 79.2; p<0.03). The average BMI was of 24.5 ± 5.9 kg/m<sup>2</sup>. The nutritional status according to the BMI was, in 12.2%, a malnutrition, in 12.2% a severe malnutrition and, in 75.6% no malnutrition. The patients who profited from a hyper protein diet (68.0%) had an albuminemia significantly lower (p<0.0001) like their BMI (p=0.002). Conclusion: According to our work the assessment of malnutrition seems to be more precise using the albuminemia than using the BMI.

#### **PB8 397 CARBOXYMETHYLLYSINE AS A MARKER OF CHRONIC METABOLIC COMPLICATIONS AMONG OVERWEIGHT/OBESE PERSONS**

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Background: Carboxymethyllysine (CML) is one of the advanced glycation end products. It is proved that concentration of CML increase in hyperglycemia. Obesity and aging are the independent risks for cardiovascular diseases. Protein glycation may join and explain metabolic complications in a context of aging, obesity and leads to better treatment. The aim of the study was to analyze CML in elderly overweight/obese non-diabetic persons. Methods: Elderly overweight (n= 21) (EOV) and obese (n= 17) (EO) were compared with middle-aged overweight (n= 14) (MAOV) and obese (n=22) (MAO) persons respectively. Persons with no acute disease or severe chronic disorder were assessed BMI, percentage of body fat, blood pressure. During OGTT fasting and 2h-glycemia (bioMérieux) were determined then type 2 diabetics were excluded. After overnight fasting subjects were estimated: plasma lipids: total cholesterol, HDL-cholesterol, LDL-cholesterol, triacylglycerols (bioMérieux) and carboxymethyllysine CML (bioLogo). Statistical analysis were done by Statistica for Windows 6.0. Results: 1. Increased CML concentration were found in EOV versus MAOV group (p=0.000001) 2. Increased CML concentration were found in EO versus MAO group (p=0.0000...) 2. No correlations were found in any groups Conclusions: Advances glycated end products such as CML may be good prognostic factor for the late metabolic complications among overweight/obese elderly persons.

#### **PB8 398 CLUSTER ANALYSIS OF THE INCIDENCE OF PEG INDUCED DIARRHOEA IN ELDERLY PATIENTS**

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Introduction: PEG is an effective osmotic laxative treatment of constipation which can induce a non negligible amount of diarrhoea and therefore may impact on the nurses' burden of work. Methods and materials: Cluster observational study designed to assess the incidence of PEG induced diarrhoea when used for treating constipation in elderly patients and to compare it according the PEG dose. The clusters were defined by hospital were a PEG, with adjustable dose (unit dose <10 g) or not (unit dose>10g), was available for the treatment of constipation in elderly patient. During one week, all patients presenting a constipation requiring PEG were included in all clusters. Results 241 patients were

included respectively in 8 clusters were a PEG, with adjustable dose (PEGAD) was available and 322 in 12 clusters using a PEG with non adjustable dose (PEGNAD). These patients were comparable in age (82.9 vs 83.3 y old), sex (women 73.2% vs 70.0%), diabetes (16.7% vs 18.5%), digestive diseases (13.3v vs 8.9%), infectious syndromes (2.5% vs 5.0%). Diarrhoeas occur in 8.9% of constipation treated with PEG, and with same efficacy, they occur in 5.8% when treated with PEGAD and in 11.2% treated with PEGNAD. Logistic regression adjusted on age, sex ad heath status score, shows that the dose adjustable treatment or not is a significant independent factor of diarrhoea occurrence with an OR of diarrhoea occurrence of 0.4 [0.2;0.9] in case of use of PEGAD. Conclusion. The use of PEGAD for the treatment of constipation in elderly patient which allows an adjustment of the dose according the patient induced two times less of diarrhoea than the use of PEGNAD which has significant consequences both on patients' quality of life and nurses' burden of work.

**PB8 399 RELATION OF VALUES WITH GLYCEMIC INDEX BODYWEIGHT AND WAIST CIRCUMFERENCE**

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Introduction: Obesity represents a serious public health problem due to its magnitude and to be related to many important infirmities of clinic matter. The simultaneous occurrence of abdominal obesity and other scalable factors as diabetes, is a considerable factor risk for cardiovascular disease. This study objective was to check the blood glucose levels with anthropometric measures in postmenopausal women . Materials and methods: this is a cross-sectional descriptive - analytical study. The sample was composed of 107 women, aged between 50 and 65 years. Data collection has occurred through multidimensional, anthropometrical and biochemical interview . Results: In the characterization of the sample, the average age was  $58 \pm 4$ , 39 years. As at blood glucose was found that 86% submitted values of glicemia until 110mg /dl, 4, 7% of 110 to 200 mg / dl and 9,3% above 200 mg / dl. As the abdominal obesity 77,6% of the participants in the evaluation of the Waist Circumference had measures consistent with cardiovascular risk classification from the National Cholesterol Education program 's adult treatment Panel III. In the assessment of body mass index, 33,6% of women were overweight 98.31, 8% with obesity degree I 6,5% with obesity degree II and 4,7% with obesity degree III. Women who have presented cardiovascular risk in the CC evaluation, 4,8% presented glucose intolerance and 10,8% values of glicemia suggestive to diabetes. From the women with glucose intolerance 80% were overweight and/or obese, the same happening to 90% of women with blood glucose values compatible with diabetes. Conclusion: this study reinforces that levels of blood glucose tend to increase with the increase in body weight and the accumulation of abdominal fat. It is necessary to act with this population group to reduce cardiovascular risk through individual and collective strategies overtrade mainly by public services.

**PB8 400 MINI NUTRITIONAL ASSESSMENT: A STUDY OF ASSOCIATION AMONG ANTHROPOMETRIC AND BODY COMPOSITION MEASUREMENTS, SELF HEALTH PERCEPTION AND DIFFICULTY IN DAILY LIFE ACTIVITIES OF A GROUP OF MEXICAN 60 YEARS-OLD AND OLDER PATIENTS**

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Mini Nutritional Assessment (MNA) evaluation is a standardized instrument useful in the evaluation of nutritional status in elderly people. Objective. Describe the nutritional status of a group of 60 years-old and older patients, obtain their anthropometric body composition measurements, and to study the association among these measurements, self health perception, difficulty in daily life activities and the results of the MNA evaluation. Methods. Is a cross sectional study, it was carried out in a group of females of the Geriatric Clinic at the National Institute of Nutrition. Anthropometric and body composition evaluations were performed with standardized techniques. For the evaluation of nutritional status the MNA assessment was applied. Statistical analysis. Applying the analysis of variance, with the three groups constructed with the MNA score (well nourished, risk of malnutrition and malnutrition) comparisons were performed for the anthropometric and human body composition variables. For the qualitative variables Pearson's  $\chi^2$  test was used. Results. A total of 109 women were included; their mean age was 77.7 years-old (SD 6.58). MNS showed that only 10.1% of the patients have good nutritional status, 58.5% were in the nutritional risk category and 31.3% were in the under nutrition category. Women in the under nutrition group showed values 7.0% lower of lean body mass, also 5.0% lower for fat mass % values than the subjects in the well nourished group ( $p < 0.05$ ). The under nourished women perceived more deterioration in their health status than the elderly women in the well nourished ( $p < 0.01$ ) and showed more difficulties in performing daily life activities. Conclusion: low percent of the elderly women examined were classified in the good nutritional status group according to MNA . Conclusion: The

categories used by the MNA showed differences in the anthropometric, body composition, health perception and capacity to performed daily life activities.

**PB8 401 NUTRITIONAL RISK: AN ISSUE OF EVERYDAY LIFE IN ELDERLY WOMEN IN THE MUNICIPALITY OF GUADALAJARA, MEXICO**

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INTRODUCTION: There is a clear correlation between nutrition - health, quality of life and welfare. Also it is predictive of morbidity and mortality. Our purpose is to consider the nutritional risk of elderly women of Guadalajara and the related factors. MATERIAL/METHODS: A sample of 638 women was interviewed from October to November 2007. The Nutritional Risk was evaluated with the Nutritional Risk Screening(NRS), sociodemographic data and health. Odd Ratio(OR) and confidence interval (95%) were obtained. RESULTS: Average age  $70.9 \pm 2.7$  (60-95 years), 54,4% with low educational level (<=4 years) and 78,5% with low income <=\$4000 per month (250 E). 87,6% suffered at least one sensorial problem and chronic diseases  $2.63 \pm 2.53$ , the 94,5% are ill and 82,9% take medicines. Those who need dental prosthesis 46,9% does not use it. They present/display 13,6% cognitive deterioration and depression 27,6%. An overwhelming majority lives with NR (82,9%), the 64,2% with high risk, 17,1% without NR. About the RN, the following ORs resulted from these factors: to have depression obtained OR=5.87(IC2.8-12.39), not to use dental prosthesis and to need it OR=4.76(IC1.9-12), to have at least sensorial problem OR=1.93(IC1.1-3.3) in olfactory OR=3.85(IC1.2-12.6). To suffer at least one disease OR=3.12(IC1.5-6.4), cognitive deterioration OR=3.10(IC1.3-7.3), low income OR=1.79(IC1.1-2.8). To be  $\geq 75$  years OR=1.73(IC1.1-2.9), to take medicines OR=1.68(IC1.02-2.8) and low educational level OR=1.58(IC1.04-2.39). CONCLUSIONS: A significant nutritional risk was found in the elderly women and exists an imminent presence of modifiable factors of risk as a preventive measure to delay the disease appearance, to improve the health and life quality.

**PB8 402 DIETARY PATTERN IS ASSOCIATED WITH ALLOSTATIC LOAD AND PHYSICAL DISABILITY IN OLDER PUERTO RICAN ADULTS**

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Introduction: Puerto Ricans in the United States have disproportionately high prevalence of physical disability. Allostatic load (AL), the cumulative wear and tear of physiological responses to stressors, has been proposed as a possible mechanism for the inequalities observed in minority groups. Dietary intake may contribute to disability through effects on AL. Methods: We examined associations between dietary patterns, AL and Activities of Daily Living (ADL)in 1360 participants in the Boston Puerto Rican Health Study. The AL score was the sum of indicators of high cholesterol,waist circumference, glycosylated hemoglobin, diastolic and systolic blood pressure, urinary epinephrine, norepinephrine and cortisol; and low HDL cholesterol and DHEA-S. Dietary patterns were determined with factor analysis of food group intakes, as % energy. AL and ADL (logged) were each regressed onto quintiles of dietary factor scores, adjusting for age, sex, acculturation, income, smoking and alcohol use. Results: Three dietary dimensions emerged: 1)Meat and fast food, with negative loadings for fruit and vegetables 2) Traditional rice and beans, 3) Sweets. As in other studies, AL was significantly associated with ADL disability ( $P < 0.0001$ ). The fast food/meat dietary factor was significantly associated with AL ( $P < 0.05$ ), ranging from 3.6 for the lowest dietary pattern quintile to 4.2 for the highest ( $P = 0.0008$ ). The same dietary factor was significantly associated with ADL score ( $P < 0.05$ ), and (untransformed) ranged from 2.9 to 3.8 across extreme quintiles ( $P = 0.005$ ). Inclusion of AL in the latter model attenuated these results. Conclusions: Diets that most closely follow the healthy vs. the high fast food/meat dietary pattern may protect against disability at least in part, through effect on AL. Longitudinal studies are needed to clarify the causal pathway.

**PB8 403 LONGEVITY STUDY IN DEBRECEN IV. THE INTERACTION BETWEEN THE PHYSICAL / NUTRITIONAL CULTURE AND THE GENERAL HEALTH STATUS IN THE LONG-LIVED ELDERLY.**

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Introduction: There is a new conception of healthy aging, that is the interaction between health condition and physical/nutritional culture. This interaction was studied in the long-lived elderly (over 90 years old) in Debrecen city, the east of Hungary. Methods: 228 subjects (169 women, 59 men) randomly selected from the total number of the long-lived elderly were examined and interviewed by means of a questionnaire which contained 159

questions regarding their status of health, nutrition, and physical activity. Results: Based on a self-evaluation, 67% of them had good, very good or excellent and 10% of them had bad health conditions. The hypertension (81%), arthrosis, spondylosis (76%), and the hypacusis (74%) are manifested as the major complaints among their sicknesses. The rates of the dementia and NIDDM were 31% and 16%, respectively. The incidence rate of the full urine incontinence was 34% in old people's homes, but it was only seen in 19% of the people living in their own houses. 36% of them do gymnastics regularly (69.5% daily). 50.5% of them have free play, 40.5% barely move in their flats while 9% are bedridden. Most of the elderly who were examined consume fruits (52.6%) and butter/margarine (46.2%) daily. Vegetable (50%) and fowl (65.4%) are consumed several times weekly. 68.4% of them eat 3 times a day. 96.2% of them consume soup daily. 40.2% drink a cup of coffee daily, 31.1% drink tea a couple of times a day, 8.3% consume a glass of wine. 13.2% of them are on a diet [because of bile (51.8%), diabetes (24.1%)]. We found only 2.6% smoking rate. Conclusion: Significant correlations were found between parameters of the health condition and the physical / nutritional culture. These results support a new conception of the healthy aging.

#### **PB8 404 THE ACUTE EFFECTS OF GLUCOSE ON DIVIDED ATTENTION IN OLDER ADULTS: A NEAR-INFRARED SPECTROSCOPY (NIRS) STUDY**

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Introduction. A growing body of literature suggests that what we eat and how we metabolize food can momentarily influence cognition. This is not a trivial issue relatively to older adults, where the proportion of individuals with dysfunctional metabolism, such as type 2 diabetes, is constantly rising. For example, small rises in blood glucose levels can momentarily improve cognition in healthy seniors (Kaplan et al., 2000). However, very few studies have investigated the effects of glucose on brain activation. Moreover, in studies that have done so, the results are contradictory: one study observed increased brain activation (Stone et al., 2005), whereas another observed decreased brain activation following glucose ingestion, compared to a placebo condition (Riby et al., 2008). This study aims at determining the effects of glucose ingestion on divided attention in healthy older adults and determining its effect on cerebral activation. Method. We conducted a between-subject behavioural study (1) in which we validated that 50g glucose ingestion (compared to placebo) influenced divided attention performances in older adults, and a within-subject study (2) in which we recorded brain activation using near infrared spectroscopy (NIRS) during dual-task execution. In both studies, participants performed two visual discrimination tasks alone and concurrently. Results. Both studies showed better dual-task performances when participants were in the glucose condition, compared to the placebo condition ( $p < .05$ ). This effect was specific to the dual-task condition and was observed for speed (study 1) and accuracy (study 2). Preliminary analyses on brain activation data showed that activation patterns tended to differ between glucose and placebo conditions with a greater activation in frontal regions in the placebo condition. Conclusion. Behavioural and brain activation results from our studies suggest that glucose ingestion can momentarily improve dual-task performances in healthy older adults.

#### **PB8 405 FOOD INGESTION AND ANTHROPOMETRIC STATUS OF ELDERLY PEOPLE**

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Introduction: we had the aim to investigate some aspects of nutritional status in elderly individuals. Methods and materials: we studied 136 individuals above 60 years old- 117 women (87.5%) and 17 men (12.5%) from São Paulo- Brazil. Evaluated variables: a-) 24-food recall analyzed from: energy, macronutrients, calcium and iron; frequency and number of servings of each food group, number of meals per day; b-) energy expenditure from a physical activity diary, calculated from METs and after converted to kilocalories; c-) anthropometric analysis: - weight and height (to calculate body mass index- BMI), arm (AC), calf (CC) and waist (WC) circumferences. Also, individuals above 70 years old were compared with individuals under 70y by t-student test. Main results: BMI values (mean=28.3±4kg/m<sup>2</sup>) pointed, in most of the individuals, overweight and obesity; waist circumference (mean= 99±9cm) indicated that most individuals presented risk for chronic diseases; calf circumference (mean =36.2±3.9cm) did not point any signal of deficiency; energy balance from these individuals was negative (mean energy ingested =1193 ± 415Kcal; energy expenditure= 2051± 865Kcal; energy balance= -858 ± 726Kcal). Consumption of cereals (median= 3.0 servings), vegetables (median= 1.0 serving), fruits (median=1.0 serving) and dairy (median=1.2 servings) were under the suggested by Brazilian guide. There were not any difference in food ingestion and anthropometric values when comparing individual under and above 70y. The mean number of meals was 3.0, and the older persons (>70y) ingested lower number of meals than younger ones (<70y). All the anthropometric variables correlated significantly with energy balance, with  $p<0.05$ . Conclusions: observing energy balance and anthropometric values, we can conclude that

elderly tended to underestimate their food ingestion; it is necessary to look for the appropriate methods to investigate food ingestion by elderly people. Nutrition education programs could be a good strategy to enhance the food behavior of these individuals.

#### **PB8 406 COMPREHENSIVE GERIATRIC ASSESSMENT OF ELDERLY HIGHLANDERS IN QINGHAI, CHINA ; FOOD DIVERSITY AND HEALTH OF HAN AND TIBETAN ELDERLY**

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Introduction: In highland, with harsh natural environment, it seems to have been insufficient to get various foods because of the limitation of food resources. However, in recent years, food availability has changed with transition to market economy and this change might have been effected food diversity. With this background, this study aim to examine the association between food diversity and health status of the Han and Tibetan elderly highlanders conducting the Comprehensive Geriatric Assessment in Qinghai plateau, China. Methods: The study population consisted of 240 community-dwelling elderly subjects aged 60 years or more (176 Han elderly subjects, 64 Tibetan ones). Food diversity was determined using an 11-item Food Diversity Score Kyoto (FDSK-11). Health status including activities of daily living (ADL), screening-based depression and quality of life (QOL) were interviewed. Blood chemical investigation was carried out in association with food diversity. Results: ADL was significantly lower both in the Han and Tibetan elderly with lower food diversity than those with higher diversity. In Han elderly with lower food diversity, QOL were significantly lower in the items of subjective sense of health, relationship with family and subjective happiness, but not significant in Tibetan elderly. A close association was found between lower food diversity and lower financial satisfaction in both Han and Tibetan ones. No association was found between food diversity and age as well as BMI. Higher food diversity was associated with lower blood glucose level in Han elderly subjects, but opposite association was found in Tibetan ones. Conclusion: Food diversity was associated with ADL and QOL even in highlanders in Qinghai, China. Food assessment is very important as a useful indicator to know the actual condition of diet and its relation to health status of the community-dwelling elderly as well as the change of economical background in Qinghai highland.

#### **PB8 407 ELEVATED ENDOGENOUS DEHYDROEPIANDROSTERONE SULFATE LEVEL CORRELATES WITH INCREASED RISK OF METABOLIC SYNDROME IN ELDER TAIWANESE MEN**

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Introduction: In the past studies, the result of the relationship between endogenous Dehydroepiandrosterone Sulfate (DHEA-S) level and metabolic syndrome in the aging population has been inconsistent. This study is aimed to evaluate the relationship between DHEA-S level and metabolic syndrome in elder Taiwanese men. Methods and materials: Our cross-sectional study enrolled 585 men above 54 years of age. It was part of the Social Environment and Biomarkers of Aging Study (SEBAS) which was performed in 2000. Study participants were healthy community-dwelling elder men who lived in 10 different townships in Taiwan. For each participant, we collected serum concentrations of DHEA-S, fasting glucose, lipid profiles, liver function test and albumin. Body mass index (BMI), waist-hip circumference, blood pressure, physical activities were assessed. Metabolic syndrome was defined according to the America Heart Association/National Heart Lung Blood Institute definition (AHA/NHLBI). Results: After adjustment for age, smoking, alcohol, physical activities, and albumin, multivariate logistic regression showed positive relationship between DHEA-S value and metabolic syndrome ( $P<0.001$ ) in elder men. When dividing into four groups according to DHEA-S level, the highest DHEA-S quartile group had strongly increased risk of metabolic syndrome comparing to the lowest quartile group ( $OR=2.31$ , 95% confidence interval: 1.36-3.91,  $P <0.01$ ). However, we didn't find significant association between DHEA-S level and lipid profile, or waist circumference. Conclusion: Our data revealed that the prevalence of metabolic syndrome increased with elevated DHEA-S level in aging Taiwanese males. Further study is required to prove the mechanism.

#### **PB8 408 PREPARATION OF MEALS WITH HIGH NUTRITIONAL VALUES**

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Introduction : Many aged persons, not only those living in nursing homes, but also some living in their private homes do not eat enough to cover their needs. We studied food intakes in several nursing homes in Auvergne: 30-40% of 287 residents, (87 y.o.), eat less than 1500 kcal/d and less than 30% reach the French RDAs. At homes, 11% do not eat 1300 kcal/d and only 50% reach RDAs, even though those 452 aged persons are younger

(79 y.o.) and less dependent. Methods: Therefore, we built a special training program for cooks. Such a program focus on: dish plan to reach day to day adapted food equilibrium for aged persons, the way to prepare enriched food of better nutrient content compared to what is on the market, and also on the quantity that needs to be served. Of course the training specially emphasize on preparation for tasty food, adapted for elderly taste, in order to increase food intakes. Before training the mixed preparation whatever routinely prepared by the home cooks, or served from commercial ready to use preparations bring 230-250 kcal and 9-16 g of protein for 200g meat-vegetable mixed dish. After training, similar size dishes bring 480-500 kcal and 17-37 g of proteins, depending of the cook investment. In addition those enriched food preparations also have higher calcium (until 360 mg) and higher fibre's contents (lower potatoes and higher vegetable contents). This was done by adding to classical recipes either condensed milk, milk, extra eggs, allowing us to prepare tasty dishes. Particular attention was also given to serve dishes in more attractive plate presentation. Results: No effect was observed 2 month after the training, neither the dish content nor for resident consumption, showing that a period is needed for the cook to follow training instructions. In contrast, 5 month later, food served at lunch had increased of 425 kcal, 19g of protein and 216 g of calcium. Food consumption was also increased in initially low eaters (< 20 kcal/d) : intakes raised of 4.4 kcal/kg/d, of 0.2 g of protein/kg/d and calcium of 242 mg/d. In big eaters (>30 kcal/kg/d), as well as in middle eaters, the progressive declining in food intakes generally observed is slowed down. In addition such effect on food intakes was correlated with lower declining in Activity of Daily Living. Conclusion: Cook training is an effective way to slow down decreased intakes in Home residents. In addition adapted regularly served enriched food, permits to increase food consumption in low eaters.

**PB8 409 ELDERLY IS ASSOCIATED WITH HIGHER PREVALENCE OF METABOLIC SYNDROME IN A TAIWANESE METROPOLITAN ADULT POPULATION**

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Introduction: The objective of this study was to assess the association between metabolic syndrome with age in a Taiwanese metropolitan adult general population. Methods and materials: We had a random sample of 1,559 Taiwanese adults aged 50 years and over who lived in a metropolitan city, Taiwan in 2004-05. Metabolic syndrome was defined according to the criteria of American Heart Association and National Heart Lung and Blood Institute (AHA/NHLBI). Results: The prevalence of metabolic syndrome in individuals aged 50-65 and >=65 years old was 43.25% and 51.18%, respectively for males, and 42.11% and 58.64%, respectively for females. Number of metabolic syndrome components was significantly higher in elderly participants (0.18 and 0.68 components higher compared to individuals aged 50-65 in males and females, respectively; p=0.057 in males and p<0.001 in females). After adjusting for smoking, alcohol drinking, and family history of DM, elderly was associated with an OR of 1.54 (95% confidence interval [CI]: 1.14, 2.07) in males and with an OR of 2.06 (95% CI: 1.48, 2.86) in females for metabolic syndrome. When we categorized age into 5-year intervals, we observed significant trend effect for age on metabolic syndrome in men and women (both p<0.001). Conclusion: Our findings show that elderly is associated with increased prevalence of metabolic syndrome. This association is consistent in men and women.

**PB8 410 EFFECT OF AGE ON RENAL FUNCTION ESTIMATED BY GLOMERULAR FILTRATION RATE IN A TAIWANESE METROPOLITAN ADULT POPULATION**

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Introduction: The objective of this study was to assess the effect of age on renal function estimated by glomerular filtration rate in a Taiwanese metropolitan adult general population. Methods and materials: We conducted a population-based cross-sectional survey in a random sample of 1,559 Taiwanese adults aged 50 years and over who lived in a metropolitan city, Taiwan in 2004-05. Renal function was assessed with estimated glomerular filtration rate (GFR) using the modified Modification of Diet in Renal Disease (MDRD) Study equation. Results: Of the participants, 999 (64.1%) were 50-65 years old and 560 (35.9%) were over 65 years. The GFR level was significantly lower among elders (-11.0 and -14.3 mL/min/1.73 m<sup>2</sup> compared to individuals of 50-65 years for males and females, respectively; both p<0.001). After adjusting for smoking, alcohol drinking, central obesity, and abnormalities of components of metabolic syndrome, elders was associated with an OR of 4.05 (95% confidence interval [CI]: 2.51, 6.52) in males and with an OR of 5.53 (95% CI: 3.08, 9.93) in females for decreased kidney function (GFR<60 mL/min/1.73 m<sup>2</sup>). When we categorized age into 5-year intervals, we observed significant trend effect for age on decreased kidney function in men and women (both p<0.001). Conclusion: Our

findings show that elderly is associated with decreased renal function estimated by GFR. This association is stronger in females than in males.

**PB8 411 LIFETIME DIET AND COGNITIVE PERFORMANCE IN AN OLDER COMMUNITY-DWELLING POPULATION**

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Introduction - Research has identified the possible role of diet in age-related cognitive decline and cognitive impairment. Epidemiological studies suggest that dietary factors are associated with the aetiology of cancer and cardiovascular disease, playing a role several years before diagnosis. However, possible long-term influences of diet on cognitive status in old age have not been investigated. Methods and Materials - A sample of 314 community-dwelling older adults (Females = 163) completed a non-quantitative food frequency questionnaire designed to assess lifetime diet. Ages ranged from 65 to 91 years (M = 72.95, SD = 5.44) with a mean of 13 years of education (SD = 4.0). Participants also undertook an extensive battery of computerised and pencil and paper cognitive tasks to assess reasoning, knowledge, perceptual speed, memory, choice-reaction time and inhibition. Principle components analysis was performed on each of the lifetime periods to determine possible dietary patterns within those periods. Relationships were then examined between dietary patterns and performance on the cognitive tasks. Factor scores derived from confirmatory factor analytic models of the cognitive domains were the dependent variables in these analyses. Co-variates included current diet, physical activity, smoking status, and relevant health and demographic variables. Results - Three common dietary patterns emerged within each life-period; they were labelled 'Traditional Australian' 'European/Mediterranean' and 'Sweets and Processed foods'. Associations between dietary patterns across different life-periods, cognitive outcomes, and demographic influences will be discussed. Conclusion - Dietary intake across the lifetime, as measured by this retrospective food frequency questionnaire, may be related to cognitive status in later life.

**PB8 412 THE NUTRITION STATUS AND EATING HABITS OF ELDERLY INHABITANTS OF KRAKOW CITY (POLAND)**

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Introduction: The excess of weight among elderly in Poland is more prevalent than its deficiency. It is highly associated with a risk of cardiovascular diseases. The aim of study was assessment of nutrition status and eating habits of persons aged 60 and more, living in the community in a large city. Methods and material: 422 patients aged 60 and more (146 men, 276 women) who visited primary care outpatient clinic were examined by family nurses. Basic anthropometric measures, BMI and circumference of the abdomen were taken according to IDF recommendations for the central obesity diagnosis (WC: M > 94 cm and F > 80 cm). MNA was applied for the risk of undernutrition. Food frequency questionnaire of select products and meals was used to test the eating habits. Statistical analysis was done with U Manna-Whitney's and Kruskal-Wallis tests. Results: Mean age of elderly was 71.91y (SD=7.07). They suffered most often from hypertension (53.4%), other cardiovascular diseases (11.8%) and diabetes (10.7%). Mean value of BMI was significantly higher among male than female (26.95kg/m<sup>2</sup> vs. 26.16kg/m<sup>2</sup>). Obesity (BMI > 30kg/m<sup>2</sup>) was diagnosed in 20.62% of all participants. The prevalence of central type of obesity (63.1%) was significantly higher among men (p< 0.03). However, about 48.8 % patients according to MNA pre-test were a risk of undernutrition. Assessment of frequency of select products and meals intake proved significantly better healthy eating behaviors among women, while men more often preferred red meat, alcohol beverages and snacks. Moreover, some demographic factors like higher education, income and younger age were related to better health status perception, lower BMI and healthy eating style. Conclusions: Coincidence of high prevalence of undernutrition with central obesity occurrence among elderly patients admitted to primary care clinic is the most striking result. Medical staff should put more attention to that.

**PB8 413 ASSOCIATION OF WAIST CIRCUMFERENCE WITH OTHER FACTORS RELATED WITH METABOLIC SYNDROME IN ELDERLY**

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**Introduction:** Little is known about what parameter is related to the pathogenesis of metabolic syndrome (MS) for elderly people. We examined correlations among aging, waist circumference and other MS-related factors including serum adiponectin concentration using the subjects of the baseline cohort of elderly people. Methods and materials: The cohort comprises of 278 elderly subjects (147 female) living in the home for aged conducted by Tokyo Metropolitan. The subjects, ranging from 65 to 99 years old, could stand by themselves on daily living. The present study used the clinical data checked on entry of the cohort study in 2006. Results: Average waist circumference was smaller in the subjects aged 80 and more (82.5cm) than that under 80 years old (84.2cm). Stepwise regression analysis of waist circumference with variable factors indicated that waist circumference associated with female sex, diastolic blood pressure, HbA1c, and negatively with systolic blood pressure, serum concentration of high-density lipoprotein cholesterol (HDL-C) and adiponectin. The stepwise regression analysis of body mass index (BMI) also exhibited the correlations with female sex, diastolic blood pressure, HbA1c, and negatively with systolic blood pressure, and HDL-C. However, serum concentration of adiponectin did not associate with BMI, but hemoglobin concentration, instead, correlated with BMI. Serum concentration of hemoglobin, albumin and total cholesterol, which were known to be indicators of nutrition status in elderly people, were smaller in the oldest age group than in the youngest group of the cohort. On the contrary, serum adiponectin showed the greatest in the oldest age group. Conclusion: Waist circumference correlated with MS-related factors including adiponectin also in elderly people. BMI suggested a better indicator for nutrition status compared to waist circumference. Greater concentration of serum adiponectin should be a factor for longevity.

**PB8 414 ACUTE EFFECT OF AEROBIC AND ANAEROBIC PHYSICAL ACTIVITY IN THE INSULIN SENSIBILITY IN SENIORS WITH TYPE 2 DIABETES**  
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**Introduction:** The objective of this study was to compare the acute effect of aerobic and anaerobic physical activities in the insulin sensibility in diabetic seniors. Methods and Materials: A clinical essay in a crossover design was held from August to December of 2008 with 20 female and 5 male diabetic seniors (60-85 years old) assisted at the Geriatric Service of the Real Portuguese Hospital of Charity of Recife, PE - Brazil. They performed an aerobic exercise (20 minutes walk in an electric treadmill at 40% of the individual maximum capacity), and after an interval of one week, they performed an anaerobic exercise session (3 sets of 6 resisted exercises for the whole body at 70-80 % of the individual maximum capacity) during 20 minutes. It was collected samples of blood for dosage of the glycemic levels and fast insulin 24 hours before the exercise interventions and after each one of them. To determine the insulin sensibility degree it was used the model of homeostatic evaluation (HOMA-IR) that is calculated from the glucose dosage and the fast insulin. In this research, it was defined 3,0 as the value of HOMA-IR as cutoff level. The comparisons of HOMA-IR among the two types of exercise were accomplished through the Wilcoxon test for parity samples, since they presented a pronounced positive asymmetry distribution. Results and Conclusions: It was obtained as result the indication of a significant reduction of the values of HOMA-IR after the anaerobic exercise in relation to the aerobic exercise ( $p=0.001$ ). The median of the reduction in the values of HOMA-IR was estimated in 0,43 (IC 95%:0,25 to 1,06). Although the medical community, in general, priorly stimulate the aerobic physical activity for diabetic elders, this study revealed a better acute effect of the resisted exercises in the insulin sensibility.

**PB8 415 A STUDY ON RELATED FACTORS OF METABOLIC SYNDROME OF THE ELDERLY LIVING IN TAIWAN RURAL AREA**

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**Introduction:** To examine the prevalence of metabolic syndrome (MS) in a rural area of Taiwan and associated risk factors to document emerging problems as a basis for preventive and/or therapeutic interventions in the elderly. Methods and materials: Using the Adult Preventive Care under National Health Insurance System data (2007) to analyze the prevalence rates and its associated factors for MS. A sample of 638 noninstitutionalized Taiwanese aged  $>= 40$  were collected. Fruit/vegetable intake, daily physical activity, and smoking behaviors; biochemistry and demographic variables were recorded. Diagnosis

of MS was based on the National Cholesterol Education Program (ATP III), waist circumference modified by the Taiwan Health Bureau criteria (male  $> 90$  cm, female  $> 80$  cm). Prevalence, chi-square, and regression analyses were done. Results: From 638 subjects, 293 were aged more than 65, among these 139 (47.4%) were males. The MS prevalence was 16.7% and 20.4% for age  $< 65$  and  $> 65$ , respectively. For the group of age  $< 65$ , 24.2% in males and 14.6% in females; 19.4% in males and 20.6% in females for the age  $> 65$ . Of the five risk factors, central obesity, hypertension, and elevated triglyceride were the most prevalent in the elderly. Body mass index  $> 27$  kg/m<sup>2</sup> was the least prevalent component. Using multiple regression analyses, among the MS components, triglyceride  $> 150$  mg/dl, waist circumference  $> 90$  in female and 80 cm in female, and systolic blood pressure  $> 130$  mmHg were predictors ( $p < .001$ ). In addition, elevated GPT and decrease physical activity were also predictors of MS in elderly ( $p < .001$ ). Conclusion: prevalence of MS for the elderly living in Taiwan rural area was high, similar to that in urban area. These findings reveal that MS screening should be emphasized for waist circumference, blood pressure monitoring and laboratory exam. Population-wide management strategies are apparently needed.

**PB8 416 SELF-REPORT ADHERENCE IN DIABETIC ELDERLY PATIENTS AND ASSOCIATED FACTORS**

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**Introduction** The quality of life of older people depends directly on his health. The control of chronic diseases is crucial in the prevention of its complications, particularly diabetes mellitus (DM), which affects a quarter of the population above 60 years old from Porto Alegre. The objective of this work was to verify adherence to drug treatment in elderly diabetics, and its association with the feeding habits and demographics. Methods and materials We studied 109 elderly patients with diagnosis of DM in the municipality of Porto Alegre, derived from a population-based cross-sectional study. All the elderly were evaluated by a pharmacist and a nutritionist. The Morinsky's questionnaire was used to assess the adherence, and a questioning of the usual diet to verify the total and proportional consumption of carbohydrates. Results 28.6% were high adherent, 58.2% were medium adherent and 13.3% are low adherent. The consumption of carbohydrates was  $56 \pm 9\%$  and was significantly higher in medium adherents. The average of medicines used was  $4.3 \pm 3.0$ . There was a trend to greater age and greater number of drugs used in the more adherent elderly. Conclusion Only 28% of elderly patients reported closely follow the prescription. A pharmaceutical intervention based on education about the disease could perhaps improve the degree of adherence of these elderly. We believe that populational educative measures can provide an early diagnosis and a better awareness of the importance of its control to avoid complications and hence a better quality of life.

**PB8 417 OVERZEALOUS THERAPY OF TYPE 2 DIABETES IN GERIATRIC PATIENTS**

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**Introduction.** Type 2 diabetes is frequent in elderly patients ( $\geq 75$  years) and its control - reflected by glycated hemoglobin (HbA1C) - is based on glucose-lowering drugs. The lower the HbA1C, the higher the risk of hypoglycaemia and its complications (e.g. cognitive dysfunctions, falls). In frail elderly diabetic patients, HbA1C target value should range from 7.5% to 8.5% according to the EUGMS guidelines. Methods. Retrospective analytic study of consecutive frail elderly type 2 diabetes patients whose HbA1c was measured upon admission in our hospital geriatric division (2005-2008). Following the EUGMS guidelines, we defined (and excluded) patients without frailty criteria (ADL dependency, cognitive disorders, co-morbidity and nursing home residency) and defined low HbA1C ( $< 7.5\%$ ). Results. Of 189 elderly frail type 2 diabetic patients (mean age  $83 \pm 5$  yrs; 52% female), 144 (76 %) had low HbA1C. This feature was more frequent in patients aged  $\geq 85$  yrs (OR 1.97) and in men (OR 1.74), although not statistically significant. Low HbA1C was not associated with any of the four frailty criteria. Among home-residing patients (n=138), low HbA1C was much less frequent in those living alone (31vs.61%; OR 0.29, 95%CI 0.13-0.66; p<0.01). Low HbA1C prevalence was not significantly lower in the presence of insulin resistance features (e.g. hypertension OR 0.75; obesity OR 0.53), but was much less present in patients on insulin (19vs.69%; OR 0.11, 95%CI 0.04-0.29, p<0.001). Conclusions. HbA1C was too low in a large majority of elderly frail diabetic patients. Two protective factors against chronic low glycaemic levels were insulin treatment and living alone at home. This latter puzzling observation raises the question of low - and thereby safer - adherence with glucose-lowering drugs. HbA1C should be monitored in elderly frail diabetic patients on oral anti-diabetic drugs - especially in old old ones - and dosage reduced accordingly.

**PB8 418 WOUND HEALING & PERIPHERAL PARENTERAL NUTRITION: A CASE REPORT**

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Introduction: Pressure ulcers cause considerable suffering for patients and high financial burden for the health care system, particularly of the geriatric patient and persons who was immobilized. Nutritional status may dramatically influence the healing process. The use of peripheral parenteral nutrition (PPN) is worthwhile for severe pressure sores refractory to conventional treatment. This may reduce costs from lengthy hospital stay, dressing materials and manpower. In addition, PPN is more acceptable than total parenteral nutrition(TPN) by :1) obviating the need for central line, 2) infusion of less hypertonic solutions ,3) reducing chance of metabolic complications, and 4) increasing calorie source along with fat emulsion . Aim: To report the use of PPN improved wound healing of refractory pressure sores. Methods: A patients with grade IV severe pressure were managed with surgical debridement. Their nutrition status was assessed by dietian and geriatricians clinically and biochemically. PPN was commenced for 21 days. The wound was regular by wound charting and serial taking digital photography. Result: An 86-years-old lady has of Alzheimer disease. She was progressively worsen despite the use of medications of Rivastigmine. Her mobility and appetite were decreased in recent three months resulting in a severe grade IV bedsore 7x6 cm in size. Despite intense community nurse wound dressing cares, oral antibiotics,her wound was getting severe. She was admitted to Her first blood test result of white cell count, WCC is  $5.5 \times 10^9/L$  and lymphocyte count is  $0.6 \times 10^9/L$ , albumin (alb) is 31g/L, total cholesterol (TC) is 4.7 mmol/l, Triglycerides (TG) is 1.3mmol/l and C reactive protein (CRP) is 37.5mg/L.Surgical debridement was done. After geriatricians and dietian assessment, peripheral parenteral nutrition was commenced for 21 days. Her wound is markedly improved as 4x5.5 cm grade II. Her Body weight was increased 2Kg e.g 5 % increase of her usual body weight. Her blood test of lymphocyte count is increased to  $1 \times 10^9/L$ , alb is increased to 37g/L, TC was increased to 4.7mmol/l and TG is increased to 1.4 mmol/l. CRP is decreased to 4.8 mg/l Conclusion: PPN is not yet regarded as a form of nutritional management for pressure sore healing. Oral dietary intervention on pressure ulcer healing is not effective. PPN offers aggressive nutritional augmentation which enhances wound healing, saves cost and reduce physical suffering.

**PB8 419 METABOLIC SYNDROME IN THE PREDICTION OF ALL-CAUSE MORTALITY AMONG OLDEST OLD INSTITUTIONALIZED CHINESE MEN IN TAIWAN**

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**ABSTRACT INTRODUCTION:** The metabolic syndrome (MS) is associated with increased cardiovascular morbidity and mortality. But the data between metabolic syndrome and all cause mortality in elderly people are lacking. **METHODS AND MATERIALS:** A longitudinal study was performed in Chung-Wha self pay assistant daily living, Taiwan. All data are collected in 2002, and follow up the conditions of residents in that assistant daily living till 2008. **RESULTS:** A total of 369 residents were enrolled (mean age:  $78.92 \pm 4.00$  years, 100% males). During following period, 97 residents died (mean age:  $79.02 \pm 3.79$  years) and 176 residents (mean age:  $78.3 \pm 3.72$  years) still live in that assistant daily living. There are no significant difference among Waist, HDL, Blood pressure and Fasting blood sugar in those 2 groups, but the TG is significant ( $P=0.038$ ). The prevalence of metabolic syndrome in 2 groups are the same. **CONCLUSIONS:** metabolic syndrome can not predict the all-cause mortality among oldest old institutionalized Chinese men in Taiwan

**PB8 420 CLINICAL DESCRIPTION OF SLEEP APNEA SYNDROME IN THE ELDERLY**

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Introduction The sleep apnea syndrome (SAS) is a frequent and severe pathology. The aim of this study was to describe the semiology of SAS in the elderly, which has not been done so far. Methods and materials Sixty-one community-dwelling patients aged 60 years or more, suspect of SAS, had polygraphy or polysomnography. Several data were collected: gender, age, body mass index (BMI), diurnal [among which sleepiness (Epworth scale)] and nocturnal symptoms, and vigilance [Oxford sleep resistance test (OSleR)]. The results were compared between gender and to the literature. Results The data of 59 patients were available (men: 78%, mean age = 70 years for the men and the women). SAS was confirmed [apnea-hypopnea index (AHI) = 10/h or more] for 83%. 78% were men. 63% were severe (AHI = 30 or more). In the severe SAS group, BMI was 35 or more for 21% of men and 50% of women. The sleepiness was not high (Epworth < 10) for 75% of severe SAS and for 63% of non-SAS patients. The vigilance was altered in 74% of SAS and 50% of non-SAS patients. Morning headaches existed in 23% of men with or without SAS.

Snoring and nocturia were reported by 50% of non-SAS- and 100% of SAS-women and 83 and 88% of all men. Memory complaint was expressed by 75% of non-SAS men, 41% of SAS men and 88% of severe SAS women. There was no memory complaint for 81% of men and 14% of women with both severe SAS and altered vigilance. Conclusion In the elderly, SAS is frequent even for women, or without obesity or sleepiness; headache have no diagnostic value in men; snoring, memory complaint and nocturia in women, altered vigilance in both sexes suggest SAS; and lack of memory complaint suggests associated cognitive impairment.

**PB8 421 GERIATRIC DIABETIC PATIENTS IN AN INTERNAL MEDICINA WARD**

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Diabetes is a prevalent disease with important morbidity and mortality in particular in the elderly. This study aims to document and contribute towards the better knowledge,of the specific characteristics,of this population. The authors made a retrospective study of all the diabetic patients admitted to an internal medicine ward during 2 years (1january2007 to 31december2008). The patients were divided in two groups: grpA<65years and grpB>65years, and characterised according to age, sex, admission, comorbidities, complications, mortality and medication at discharge. Of the 3296patients admitted, 849(25.8%)were diabetic, had an average age of 72,27years and 436(51.4%)were female. There were 188(22,1%)patients in grpA, of which 14(7,4%) were Diabetic type1, and 661(77,9%) in grpB. The average length of stay was grpA9,2, grpB8,9days and diabetes was the cause of admission in grpA14(7,4%),grpB39(5,9%)patients. The n° of comorbidities was grpA5,34,grpB5,5, of which: Hypertension grpA129(68,6%),grpB519(78,52%), Atrial fibrillation grpA4(2,1%),grpB127(19,2%), Dislipidemia grpA56(29,8%),grpB146(22,1%), Obesity grpA19(10,1%),grpB24(3,63%). Urinary and Respiratory infection were present in grpA71(51,6%),grpB332(50,2%). Concerning micro and macrovascular complications: ischaemic cardiopathy grpA73(38,3%),grpB219(33,1%), stroke grpA45(23,9%),grpB126(19,1%), myocardial infarction grpA12(6,38%),grpB21(3,18%). The mortality was grpA15(7,9%), grpB73(11,04%). Despite the limitations of the study, we clearly witness the enormous prevalence of diabetes, (25% of all the patients) and the inherent complications it brings and costs it implies. Diabetics were mainly elderly patients, with an average length of stay (9,02daysVS10,7days) and mortality(10,4%VS12,2%), below the ward average and diabetes was rarely the cause of admission. This study is the basis of a prospective study, which aims to complement the information obtained.and to evaluate whether our present actions could eventually be modified to diminish admissions and prevent complications.

**PB8 422 FREQUENCY OF POLYMORPHISM OF VNTR IN PER3 IN BRAZILIAN ELDERLY WITH METABOLIC DISEASES.**

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Introduction: The response to luminous entry in the retina, involves the expression of many genes, some of which, are the "watch genes" that regulate the circadian rhythm. A particularity of the circadian rhythm of the sleep-vigilance cycle is that the elderly are described as matinee people. Aging modifies the quantity and quality of sleep, due to the alterations of the intrinsic arquitecture of the sleep and the dislocation of the matinee/vespertine difference to the matinee side. Objective: To study the frequency of polymorphism of VNTR in per3 in Brazilian elderly with metabolic diseases - preliminary data. Population and methods: We evaluated elderly above the age of sixty, from the Federal University of São Paulo Metabolic Diseases ambulatory. The elderly answered to the Horne and Ostberg questionnaire, had biochemical exams and had a global geriatric evaluation. The elderly were divided in: matinee (naturally wake up early, apt to perform any activity) and vespertine (tend to wake up and go to sleep later, preferring to have activities in the evening or at night). Results: Of the 70 evaluated elderly, 72.9% are women, 27.1% are men, and they're about 77.02 years old. The frequency of elderly with the 4/4 genotype was of 21(30%-vespertine); of the 5/5 genotype was of 11(15.7%-matinee); and of the 4/5 genotype was of 38(54.3%). Discussion and Conclusion: The rhythmic interaction between organisms and the environment occurs by the "biological clock", a self-sustainable timer that continuously oscillates. The circadian clock may work autonomously, without a necessity of stimulation, but can be adjusted by external conditions, particularly, the light-dark cycle. Although there may be individual differences between the timing preference of activity and sleep, we do not know how much genetic interaction itself might influence in this behavior and in metabolic disease control.

**PB8 423 INFLUENCE OF HDL CHOLESTEROL IN POSTPRANDIAL TRIGLYCERIDEMIA IN ELDERLY.**

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HDL-cholesterol (HDL)> 50 for women reduces the risk for cardiovascular disease. The aim of this study was to relate the HDL, triglycerides (TRL) and postprandial dietary habits in elderly women. We included 18 elderly (age 72+5.5 years) for assessment of fasting lipids and TRL in postprandial (PP) at 2 (PPt2), 4 (PPt4) and 6 (PPt6) hours. Each elderly received a shake with 19g fat/m2 body surface area and filled the food records in the same week of the test. The participants were divided into 2 groups, HDL>60 (n = 7) and HDL<60 (n = 11). Employed in the analysis: T-Test and Pearson's correlation- p<0.05. Between the groups there was no difference in average age, weight, BMI, waist circumference, blood glucose, LDL-cholesterol. In HDL>60 group, the average obtained in the TRL of fasting (87+32mg/dL) and the PP (PPt2 =129.8+50mg/dL; PPt4 =115.6+45mg/dL and PPt6 = 84+28mg/dL) were different from the average found in HDL<60 group (fasting = 132+37mg/dL; p<0.019, PPt2 =179+36mg/dL; p<0.029, PPt4 = 214.4+70mg/dL; p<0.005, PPt6 =160.8+51mg/dL; p<0.002). Although the average of the fasting TRL of both groups were less than 150mg/dL, within 6 hours the HDL<60 group did not achieve satisfactory levels of TRL. We found inverse correlation between fasting TRL and HDL ( $r = -0.51$ ;  $p < 0.030$ ), TGL PPt4 ( $r = -0.61$ ;  $p < 0.007$ ), TGL PPt6 ( $r = -0.79$ ;  $p < 0.000$ ). The HDL<60 group consumed more saturated fatty acids (SFA) in percentage (%) of the diet ( $p < 0.006$ ) and less fiber ( $p < 0.006$ ) than the HDL>60 group and there was an inverse relationship between HDL and consumption of SFA % ( $r = -0.64$ ;  $p < 0.017$ ). In this sample of elderly women have low HDL seems to relate to a profile of atherogenic risk in postprandial, slow clearance, and inadequacy of food habits (high intake of SFA and low consumption of fiber) even when the fasting TRL is <150mg/dL.

**PB8 424 DEVELOPMENT OF A HELP DECISION TOOL FOR ENTERAL NUTRITION IN ELDERLY HOSPITALIZED PATIENTS**

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Introduction: Up to 64% of elderly hospitalized patients suffer of malnutrition and are exposed to adverse complications. In case of severe denutrition, enteral nutrition may be justified. The percutaneous endoscopic gastrostomy (PEG) tube placement gives medical and ethical issues. The decision on whether to offer and recommend PEG tube placement to patients can cause significant confusion among healthcare team, patients and caregivers. Some contraindications have been published: severe dementia, opposition to treatment, palliative care. Methods: We have developed an algorithm to provide the group with appropriate indications for PEG placement in this patient population. This algorithm has been developed by a multidisciplinary healthcare team (physician, nurse, dietitian, physiotherapist, and psychologist). It is filled during a multidisciplinary meeting of the unit. According to the literature and after an audit among the geriatric staff, we have proposed relevant items for feeding tube placement. We validated the work with the local nutritional board and presented it to the national nutritional board. Results: The tool is composed of clinical and biological nutrition data, cognitive evaluation, and functional evaluation. We notified the etiology of the malnutrition and the aim of an eventual PEG. We collected patient or family agreement. The result of the algorithm leads to: either a clear indication of PEG tube placement, a contraindication, or a situation in between that needs to be argued (ethic, quality of life, demand of the patient). During one year, we have used this tool for twenty patients: 8 benefited from the enteral nutrition and 12 were denied. Conclusion: This tool helped the healthcare team in the decision to place a PEG tube. Validation by confronting the decision of the algorithm to the decision of two nutritional experts in geriatric is the second step of our study.

**PB8 425 EFFECT OF DIABETES ON THE ENDOTHELIAL DYSFUNCTION ASSOCIATED WITH AGING. PRELIMINARY RESULTS.**

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Among the factors involved in the development of vascular disease, the endothelium seems to play a central role in the onset of vascular damage associated with multiple pathological (like diabetes) or physiological entities(such as aging). In recent years there have published data suggesting that the endothelium plays a central role in the changes to both the aging process and diabetes in the vascular system. This is extremely important because endothelial dysfunction precedes in years the clinically evident vascular damage, which indeed predict, thus allowing for preventive interventions before the establishment of vascular structural damage and, in particular, before it is expressed clinically. MATERIAL AND METHODS The aim of this study was to evaluate endothelial function in elderly people with regard to persons (non-elderly adults and elderly) without diabetes. We have conducted an observational study, cross in elderly ( $\geq 65$  years) non-institutionalized Health Area 10 in Madrid, who came to the clinics of endocrinology and geriatrics. The problem

group consists of 27 problem subjects 65 years or older, diagnosed with diabetes. The control group had trained 40 non-diabetic subjects over 18 years, of which 16 are over 65 years. The variable result is endothelial function measured by Echo-Doppler, following the protocol recommended by the International Brachial Artery Reactivity Task Force (Guidelines for the ultrasound assessment of endothelial-dependent flow-mediated vasodilation of the brachial artery: a report of the International Brachial Artery Reactivity Task Force. *J Am Coll Cardiol.* 2002; 39:257-65). RESULTS In assessing the endothelium-dependent vasodilation (measured as the percentage change in the diameter of the brachial artery after inducing ischemia), we see that is greater in young subjects (3.7%) than in healthy elderly subjects (3.4%) such as diabetics (3.1%), but did not reach statistically significant differences between any of the three groups ( $p > 0.05$ ). However, when exploring the non-endothelial dependent vasodilation (measured as the percentage change in the diameter of the brachial artery after oral administration of nitrates), there are statistically significant differences between young and elderly healthy subjects ( $p < 0.009$ ) and among young people and the elderly diabetics ( $p < 0.002$ ). However, among healthy elderly and diabetic patients has no statistically significant difference. CONCLUSION In a control group of subjects age is accompanied by a impairment of the non-endothelium dependent vasodilation, which is unchanged by diabetes.

**PB8 426 CORRELATION OF TRUNK FAT BY DXA AND VISCERAL FAT BEFORE AND AFTER A WEIGHT LOSS PROGRAM: A MONET STUDY**

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Introduction Visceral fat (VAT) is associated with several health risks. The direct measurement of VAT, such as CT scan or MRI, are expensive, limited in availability, and expose subjects to high radiation doses. On the other hand, abdominal fat mass, as measured by whole body dual energy X-ray absorptiometry (DXA), was shown to be significantly correlated with VAT obtained with the use of CT scans. This method requires to select regions of interest manually and was not validated to measure variations of VAT following a weight loss program. The objective of this study is to determine if abdominal fat by DXA is still significantly correlated with VAT obtained from a CT scan after weight loss among overweight and obese sedentary postmenopausal women. Methods and materials One-hundred and one non-diabetic, sedentary overweight and obese (4.73 yrs) were randomized in two weight $\pm$ post-menopausal women (58.1 loss program groups: caloric restriction ( $n=68$ ) and caloric restriction combined with resistance training ( $n=33$ ). Abdominal fat was measured using DXA, and visceral fat with a CT scanner LightSpeed 16 was used to measure VAT. The position of the scan was established at the L4-L5 vertebral disc using a scout image of the body. Results No difference was observed between abdominal fat and VAT in any groups pre and post intervention. All data were pooled to calculate the correlation between abdominal fat and VAT. Correlations were significant and found to be equivalent before and after the intervention (pre  $r = 0.606$ ; post  $r = 0.692$ ;  $p < 0.01$ ). Conclusion Our results show that correlations obtained between abdominal fat and VAT remained stable after a weight loss program (with or without exercise) in overweight and obese post-menopausal women. These thus suggest that the use of DXA-measured abdominal fat to estimate losses in VAT after a weight loss intervention would be reliable.

**PB8 427 IS VITAMIN B12 DEFICIENCY MASKED BY FOLIC ACID FORTIFICATION IN CHILEAN ELDERS?**

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Introduction The great demographic epidemiologic and nutritional changes experienced by Latin America in recent decades has meant a continuous growth of the population 60 years and over with a speed of aging which has been estimated at least double that in North America and Western Europe. An aging population with its consequent increase in health-associated problems, highlight the need to identify modifiable risk factors for disease and disability in the elderly as VitaminB12 deficiency. Subjects and Methods: We studied 923 community living subjects (61-87 years), 283 men and 623 women from Santiago, Chile. The values of plasma vitamin B12 and folate were determined by radioassay techniques, using Abbot AXSYM assays. Cut points for plasma Folates deficit was <14 nmol/L, for vitaminB12 (B12)deficiency <148 pmol/L and for marginal vitamin B12 deficit 148-221 pmol/L. Results: The median concentrations and interquartile range (IQR) values of plasma vitamins were: B12 (357.9pmol/L, IQR352.3) and folate (38.6nmol/L; IQR11.1). The prevalence of Folate deficiency was only 0.34%, while prevalence of B12 deficiency was 9.26% (95% CI:7.4-11.3) and marginal B12 deficit reached 12.9% (95% IC:10.8-

15.2). B12 deficit was higher in men than in women (31.4% vs 17.9%, p<0.01). An increasing risk of having deficit with age 70-79y was observed (gender adjusted OR:3.96,95%CI 2.82-5.57). The prevalence of Anemia was 8.2% with no association with B12 deficiency(p=0.43). Conclusions: The results of this study evince a high prevalence of B12 deficiency or marginal deficit affecting 22.2% of older adults without the hematologic disorders –probably solved by folic acid fortification- that have been traditionally used as biomarkers of B12 deficiency. Whereas the deficiency of Vitamin B12 is associated with cognitive and neurologic disorders in this age group, there is a need of permanent surveillance and evaluation of nutrition interventions to correct these deficits. Supported by Fondecyt grants 1070592 and 1080589.

**PB8 428 OBESITY, GLUCOSE PROFILE AND COGNITION IN A INTERDISCIPLINARY PROGRAM TO TREAT AGED WOMEN OBESITY**

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Background: There is correlation between memory decline , insulin resistance and obesity owing to several distinct mechanisms. Objectives: To compare memory performance and the profile of insulin resistance in obese women over 60 years before and after intervention for obesity treatment. Methods: This clinical study was conducted with 22 women with mean age of 65,5 ± 4,0 years (mean ± standard deviation), with body mass index (BMI) 36,92 ± 5,1 kg/m<sup>2</sup> from june to september of 2006. The intervention consisted in a monthly individual medical assessment, weekly nutritional groups, supervised physical activity twice a week (aerobic and localized exercises without the use of equipments). We compared the group before and after the intervention with memory tests (Brief Cognitive Screening Battery DR-BCSB, MMSE, Semantic Verbal Fluency and Clock Drawing Test) and the glicemic profile, insulin resistance (fasting glucose, basal insulin and HOMA IR) and theirs weight loss in the period. For statistical analysis we used Student T test, Pearson linear correlation, considering a 95% confidence interval and statistical significance with p < 0,05. Results: The participants lost 6,6 ± 3,0 % of the weight post intervention. The fasting glucose, basal insulin and HOMA IR decreased (-23,1g/dl; -3,41μU/mL; -1,62 and p = 0,05; 0,043 and 0,009 respectively) which were correlated with significant improvement in Recognition score in DR-BCSB (difference final - inicial = 0,18 and p = 0,042) and there was positive correlation between the immediate memory improvement and the percentage of weight loss achieved (r = 0,539, p= 0,01). Conclusion: The multidisciplinary intervention for weight loss in women over 60 years was effective in the improvement of the glicemic profile and followed by a betterment in the performance of the humour and learning. The explanation over the effect of the weight loss in the cognitive performance must be better studied.

**PB8 429 ALCOHOL CONSUMPTION OF AN ELDERLY EUROPEAN POPULATION: DAILY AND WEEKLY CONSUMPTION**

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Introduction: The aim of this study was to identify differences between countries on patterns of alcohol consumption per day and to study the type of meals and days of the week when alcoholic beverages are consumed. Methods and materials: This project was carried out within the European Project “Food in Later Life”, under the leadership of the University of Surrey and with financial support of the 5th EU Framework Programme. 644 European citizens aged 65+ years from 8 EU countries were interviewed face-to-face; the sample was stratified by groups: sex (male/female), age (65 – 74; ? 75 years) and living circumstances (living alone/with others). Data was collected by 7 days food diaries. Analysis was performed using SPSS 14.0 by the Kruskal-Wallis test with post-hoc Mann-Whitney test with Bonferroni correction; and Friedman test with post-hoc Wilcoxon test with Bonferroni correction. Results: The mean average number ± Standard Deviation (SD) of alcohol events per day were higher for Italy (0,88 ± 0,87) and lower for Poland (0,12 ± 0,22); Poland was statistically different from all other countries except from Portugal (0,68 ± 1,00); United Kingdom (0,78 ± 0,71) was statistically different from Sweden (0,36 ± 0,35) and Spain (0,41 ± 0,53). Alcohol consumption was statistically different for all type of meals (elaborate, cold and hot main or light meals). The higher differences were found between the alcohol events in hot main meals and the cold main meals, with mean values ± SD of 1,72 ± 2,64 and 0,11 ± 0,35, respectively. Based on similarity of number of alcohol events on the days of the week, two groups were identified based on similarity: (1) Monday to Thursday (lower) and (2) Friday to Sunday (higher), with statistical differences between them. Conclusion: Differences were found on the average number of alcoholic beverages consumed per day between countries, daily and weekly routines for its

consumption. We can conclude that alcohol consumption is a phenomenon perceived by older people as a social act that is still culturally linked.

**PB8 430 NUTRITIONAL EVALUATION AND COMPARISON USING MINI NUTRITIONAL ASSESSMENT (MNA) AND BODY MASS INDEX(BMI). NOVOMET STUDY. PRELIMINARY RESULTS.**

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Introduction Information about the epidemiology of undernutrition and risk of undernutrition for older Spanish citizens, particularly those living institutionalized, must be a priority for our Health System. In NOVOMET study, we evaluated as secondary objective the prevalence of malnutrition. Objective To compare MNA with other way to classify nutritional status determined by anthropometric measurements of BMI (corresponding question F-screening in MNA) (MNA-SF). Material and methods Multicenter, cross observational, descriptive, randomized, conducted in November-December 2007 in nursing home(NH) in all the autonomous regions of Spain. 45 NH participated. Criteria include: People over 65 years(N=410). Nutritional status was assessed from anthropometric variables: BMI and MNA. The distribution of variables were analyzed with the Kolmogorov-Smirnov test. Quantitative variables were analyzed with t-Student test and the qualitative test of chi-square Results Comparing the values of question F of MNA-SF (corresponding to BMI) with the total MNA scores we obtained : punctuation 0 MNA-SF matches 15.8 +/- 5,3 MNA(N=65), punctuation 1 MNA-SF matches 15.5 +/- 4.2 MNA(N=50), punctuation 2 MNA-SF matches 18.2 +/- 3,1 MNA(N=77), punctuation 3 MNA-SF matches 21.1 +/- 3.5 MNA(N=218). For all these values p<0,001. If we group the scores of 0 and 1 MNA-SF 115 patients are malnourished. A total of 295 patients at risk of malnutrition (scores 2 and 3 MNA-SF) Conclusions MNA grows significantly with the increase BMI , especially if we compare malnutrition, underweight compared to normal-risk of overweight. It is necessary to make a full nutritional assessment in elderly, not sufficient anthropometrical valuation, because although there is significant correlation between BMI and MNA, many patients with adequate value in BMI, may present a risk of malnutrition.

**PB8 431 OMEGA-3 POLYUNSATURATED FATTY ACIDS, APOE GENOTYPE, AND COGNITIVE FUNCTIONING IN COMMUNITY-DWELLING OLDER ADULTS**

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Introduction - The omega-3 (n-3) long-chain polyunsaturated fatty acids (PUFA) eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are crucial to normal brain functioning. Evidence in human studies suggests a link between n-3 PUFA and cognition in ageing; lower plasma and erythrocyte levels of n-3 have been associated with the presence of dementia, greater risk of developing dementia, cognitive decline, and lower cognitive function in older age. However, results from such observational studies are still inconclusive. The objective is to examine relationships between erythrocyte membrane levels of n-3 PUFAs and cognitive functioning, comprehensively assessed, in a sample of cognitively-healthy (MMSE > 23) older participants. Methods and materials – Results are from the baseline data of the EPOCH (older people, omega-3, and cognitive health) trial: An 18-month parallel, randomised, double-blind, placebo-controlled trial with repeated measures every 6 months, examining the effect of fish-oil (DHA-rich) on age-related cognitive decline. Participants were 391 (46.3% male) community-dwelling adults, aged 65-90 years (M = 73.1, SD = 5.5), with a mean of 12.9 years of education (SD = 3.8). An extensive battery of cognitive tasks were administered to assess the following cognitive constructs; working memory, reasoning, short-term memory, long-term memory and retrieval, inhibition, processing speed and perceptual speed. Erythrocyte levels of n-3 fatty acids were measured and APOE genotype was also assessed. Results - Factor scores from confirmatory factor analytic models of the cognitive domains constitute the dependant variables used in analyses. Multiple regression was used to examine relationships between erythrocyte membrane levels of n-3 PUFA and the cognitive constructs, controlling for possible confounding factors including physical activity, smoking status, age, and years of education. Analyses were conducted for the whole sample as well as sub-samples defined by APOE genotype. Conclusion - Associations between erythrocyte levels of n-3 PUFA, cognitive functioning, and APOE genotype will be discussed.

**PB8 432 ZINC STATUS AND DNA REPAIR IN ELDERLY: RELATIONSHIP WITH LIFE STYLE AND PSYCHOLOGICAL CONDITIONS**

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**Introduction:** Impaired DNA repair is considered as one of signs of ageing. On the other hand, the level of zinc, one of the essential trace elements playing a central role in a wide range of biochemical reactions as well as physiological and psychological processes, drops also progressively with ageing. The aim of our study was to examine the relationship between zinc status and the efficacy of DNA repair in elderly Polish volunteers recruited for the ZINCAGE project (EC VI FP), in relationship with life style and psychological conditions. Methods and materials: Thirty healthy old subjects with zinc deficiency (16 women and 14 men), age range 60-85 years old (median  $70.4 \pm 7.8$  for women and  $74.5 \pm 7.3$  for men), were recruited to this study. The healthy status was assessed through a medical examination and by routinely clinical laboratory analysis. The efficacy of DNA repair was determined in each subject using the alkaline comet assay. This was performed at the beginning of the experiment and after six weeks of their diet supplementation with zinc. Moreover, the relationship between DNA damage/repair and respectively age, gender, zinc status and psychological dimensions (cognitive functions, mood, perceived stress) were assessed. Results: We observed an increase in the efficacy of DNA repair after six-weeks supplementation with zinc in 75% men and 65% women. Interestingly, among women who responded positively to the supplementation increasing efficiency of DNA repair the majority constitutes the eldest (over 85 years). In Poland old people showed impaired psychological conditions in relation to zinc deficiency. A low zinc level was associated also with unpaired psychological factors (low MMSE, high PSS and GDS). Conclusion: The results obtained suggest that zinc may play an important role in the reaction of cells to DNA damaging agents and this reaction may be age-and zinc status-dependent.

#### PB8 433 DIETARY PATTERNS AND SURVIVAL OF OLDER ADULTS

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**Introduction:** The objective of this study was to determine the dietary patterns of a cohort of older adults, and to explore associations of these dietary patterns with survival over a 10-year period. A secondary goal was to evaluate participants' quality of life and nutritional status according to their dietary patterns. Methods and materials: The Health, Aging and Body Composition (Health ABC) Study is a prospective cohort study of 3075 older adults. In Health ABC, all-cause mortality was assessed from baseline through year 10. Food intake was estimated with a modified Block food frequency questionnaire (FFQ), and dietary patterns of 2582 participants with complete data were derived by cluster analysis. Results: Six clusters were identified, including a 'Healthy foods' cluster, characterized by higher intake of lowfat dairy products, fruit, whole grains, poultry, fish and vegetables. The 'Healthy foods' cluster had a significantly lower risk of mortality than both the 'High-fat dairy products' and 'Sweets and desserts' clusters after adjusting for potential confounders. The 'Healthy foods' cluster also had significantly more years of healthy life and more favorable levels of selected nutritional biomarkers than the other clusters. Conclusion: A dietary pattern consistent with current guidelines to consume relatively high amounts of vegetables, fruit, whole grains, poultry, fish and lowfat dairy products may improve the nutritional status and quality of life and reduce the risk of mortality in older adults.

#### PB8 434 THE IMPACT OF HIGHER ALANINE AMINOTRANSFERASE LEVELS WITHIN THE NORMAL RANGE ON INCIDENT DIABETES

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**Background/Aims:** Elevated ALT levels might be associated with type 2 diabetes but whether higher ALT levels within the normal range predict the risk is unknown. Methods: We followed a community-based cohort of 3,446 individuals  $\geq 35$  years old without diabetes and hepatitis B or C in southern Taiwan for 8 years (1997-2004) to study the risk for type 2 diabetes with different normal ALT levels. Results: Three hundred thirty-seven participants developed type 2 diabetes. Among the incident diabetes cases, 16.0% were from those with ALT levels  $< 10$ , 44.5% with ALT levels 10-19, 30.0% with ALT levels 20-39, and only 9.5% with ALT levels  $\geq 40$ . A cumulative hazard function test showed that the higher the ALT levels, the greater the cumulative incidence rate of diabetes ( $P < 0.001$ , log-rank test). A multiple Cox proportional hazards analysis showed that increasing age, lower educational levels, higher BMI, and higher ALT levels, from hazard ratio (HR) = 1.8, [95% confidence interval (CI): 1.3, 2.5] for ALT = 10-19, (HR = 3.7, 95% CI: 2.6, 5.1)

for ALT = 20-39, to (HR = 4.5, 95% CI: 2.9, 7.0) for ALT  $\geq 40$ , were significant for developing diabetes ( $P < 0.001$ ). After adjusting for BMI levels, the HR of ALT levels was markedly higher for those with a BMI  $< 25$  than those with a BMI  $\geq 25$ . Conclusions: Higher ALT levels, even within the normal range, are strong predictors of type 2 diabetes independently of BMI levels with a dose-response relationship.

#### PB8 435 BIOMARKERS OF AGING STUDY:

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**Background & Objective:** An evidence-based policy is needed for fast growing elderly population in South Korea. Korean Longitudinal Study of Ageing(KLoSA) was initiated with representative samples of the middle aged and elderly population aged 45+ in 2006, modeled on previously launched aging cohorts such as The Health and Retirement Study (HRS) in the USA and The English Longitudinal Study of Aging (ELSA) in England. The current Biomarker Pilot study was conducted for developing comprehensive aging biomarkers for the Korean elderly and for testing the feasibility in a community setting, aiming for international comparability. Methods: The Biomarker Pilot was embedded in the 2nd wave of KLoSA field work targeting 10,254 participants. A representative sampling scheme plus extra samples included 527 subjects nationwide in Korea. The first step involved trained KLoSA interviewers collecting informed consents for recruiting Biomarker participants. Secondly, a confirmation of home visits in response to recruited participants was arranged by trained nurses. Collected biospecimens were transported by express mail service to a collaborating lab test company in Seoul within 2-3 days. Biomarkers we tested are as follows: Physical measures(blood pressure, pulse, height, sitting height, leg length, weight, waist, hip, eyesight, hearing, number of teeth, EKG, body composition-BIA and bone density for selective sample); Functional /performance test(lung function, balance-full/semi/stand, maximum step strength, uni-pedal stance, chair rises, timed walks); Lab test(total, HDL, LDL, TG cholesterol, creatinine, CBC, urine). In-depth health questionnaire was also implemented by KLoSA interviewers: quality of life (SF 36, EQ 5D), fatigue (BFI-K), physical activity (IPAQ-SF), family function (APGAR), genitourinary problems (IPSS, ICIQ-SF), mobility (LSM) and nicotine dependency (FTND-K). Most samples were basically collected by home visit nurses with about 50 cases from a fixed-center model. Sample enrollments began in September and concluded in December 2008.

#### PB8 436 COMPARISON OF OBESITY INDICES IN ASSOCIATION WITH DYSLIPIDEMIA AMONG MIDDLE AGED AND ELDERLY KOREANS

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**Introduction** Body-mass index(BMI), waist circumference(WC), and body fat percentage are common indices for obesity. However, these are only surrogate measures, and the utility is often variable in older population. We compared these three obesity indices to predict adverse serum lipid profile among middle-aged and elderly Koreans. Methods and Materials In 2008, serum lipid levels(Total Cholesterol, Triglyceride, LDL Cholesterol, HDL Cholesterol) and Obesity indices(BMI, WC and Body fat percentage) were measured in 219 men and 291 women aged 47-95 (mean 63.7) years in Korea, as a part of KLoSA Biomarker Pilot study. Asian- or Korean-specific criteria were used to define obesity for BMI( $\geq 25$ ), WC (male  $\geq 90$ cm, female  $\geq 85$ cm), and body fat percentage (male  $\geq 20\%$ , female  $\geq 30\%$ :measured by HBF-359). NCEP-ATP III classification was used for serum lipid level (High Total Cholesterol: $\geq 240$ mg/dL, High Triglyceride: $\geq 200$ mg/dL, High LDL Cholesterol: $\geq 160$  mg/dL, Low HDL Cholesterol: $< 40$  mg/dL). Spearman rank correlation and logistic regression were used for statistical analyses. Results Spearman correlation adjusted for age, sex, smoking, drinking, and exercise showed that triglyceride level was positively correlated with BMI, WC and body fat percentage( $< 0.001$ ), and HDL cholesterol level was negatively correlated with WC( $< 0.001$ ). After adjusting for age, sex, smoking, drinking, and exercise, odds ratios of high triglyceride were 2.2(95% CI: 1.5,3.3) for BMI( $\geq 25$ ) and 1.8(95% CI: 1.2,2.7) for WC(male  $\geq 90$ , female  $\geq 85$ ). Odds ratios of low HDL cholesterol were 1.6(95% CI: 1.0,2.4) for BMI( $\geq 25$ ), 3.1(95% CI: 1.1,9.2) for body fat percentage(male  $\geq 20$ , female  $\geq 30$ ). Area under curve from ROC curve range was 0.62-0.70 for all significant associations. Conclusion In this study, high triglyceride was associated with BMI and WC, while low HDL cholesterol was associated with BMI and body fat percentage. Despite the limitations of BMI as obesity index in older population, it

remains a consistent predictor for dyslipidemia as a major risk factor of CVD among middle aged and elderly Koreans.

**PB8 437 THE PIEDMONT HOME RADIOLOGY PROJECT (RADHOME)**

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**Introduction** The Piedmont Regional Agency for Health Services (AReSS) has funded a research on a public domiciliary radiography program for frail elderly and immobile patients in order to evaluate the benefits and the cost-effectiveness of this service. A randomized controlled study is ongoing at the Geriatric Hospital at Home Service (GHHS) of San Giovanni Battista Hospital of Torino, a big University teaching and tertiary-care hospital. The GHHS provides substitutive hospital-at-home care in a "physician-led clinical unit" model. It has been in operation since more than 20 years with a multidisciplinary team (geriatricians, nurses, physiotherapists, social workers, counselors) caring for patients mostly affected by cardiopulmonary, cerebrovascular, metabolic and neoplastic diseases. Methods and materials Eligible patients are acutely ill patients treated at home by the GHHS between June 2008 and December 2009. Patients in need of a radiological assessment are randomly assigned to perform diagnostic imaging at home or in hospital. At home, the radiological examinations are carried out using a portable high frequency X-ray tube and a mobile radiological station (Computed Radiography POC 260, Carestream) with visualization and real-time processing of acquired images. Currently, examinations suitable for domiciliary radiography are chest, pelvis/hips, joints, upper and lower limbs, hands and feet. All patients are examined using a standardized protocol which includes multidimensional assessment (e.g., socio-demographic data, clinical characteristics, functional and cognitive status, mood), reasons for needing the domiciliary radiography service, customer satisfaction, cost analysis and radiological quality of imaging. Conclusion This project is very innovative in the outline of international literature. Domiciliary radiography may be of great value to the patients, family, consultants and general practitioners.

**PB8 438 WORKPLACE-BASED MASTERS' LEVEL TRAINING IN GERIATRIC MEDICINE**

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**Introduction** Successive changes with the Calman reforms, European Working Time Directive and Modernising Medical Careers have shortened training time and heightened tensions between training and service. The traditional apprenticeship has disappeared. Generic skills training (research, teaching, communication, management, law, ethics) remain vital, but is patchy, not assessed and of variable quality. Scholarship, research and publishing are commended by the medical Royal Colleges. Trainees need to understand, evaluate and implement evidence-based practice. During and upon completing training, most doctors are likely to focus on maintaining their clinical competence amidst rapidly evolving medical knowledge. We set out to train in the 'softer' yet vital. Methods Colleagues with good will, talent and commitment are vital. We established structured curricula combining real-life consultant-level generic practice, with technical medical skills. Academic writing and practical assignments are assessed. We linked with a farsighted academic institution for expertise in education administration and accreditation of learning. Results The course is more cost-effective than traditional study leave activities. Running part-time over 4 years fits with Higher Specialist Training. Structured programmes, over 9 month 'terms', fit with clinical rotations. Module leaders run yearly clinical modules alongside continuous generic modules. Clinical units are signed up to releasing trainees to attend. Evaluation is external to faculty, with highly favourable feedback. Conclusions The masters' programme was motivated by the need to train in a changing environment. It provides a cohesive, coherent structure ensuring integration of theory with practice, enabling formal qualifications alongside their professional development. Clinical training and course running in parallel allows academic training from existing resources. In essence, the Masters' programme provides a more cohesive and coherent structure for the trainees' normal teaching programme. Our teaching has become professional.

**PB8 439 APPROPRIATE DAYS IN FRENCH GERIATRIC DAY HOSPITALS: A PILOT STUDY**

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Until 2006, geriatric day hospitals (GDH) were not well-defined in France, because of the lack of official text or definition notebook. Two recent ministerial texts in 2007 and 2008 have defined the content of the stay in GDH and its place in the geriatric care network. The aim of this study was to evaluate the relevant of stays in GDH regarding to these two new reference texts. We built a referential table from criterions included in the two texts, and made it validated by French professionals (day hospital geriatric practitioners, quality specialists, public health managers). Each of 496 following days of two GDH (short-stay price setting) was compared to this referential table. The geriatrician in charge of the stay, as an expert, was secondly allowed to criticize the result of this comparison. The table contains 10 criterions about the way of admission (medical or non medical), the indication (EGS, memory, falls, chemotherapy, transfusion, ...), the delivered care (nurse evaluation, complementary exams, information-action, specialized advices) and quality items (multidisciplinary conclusion report in the chart, same-day report given to the patient, therapeutic recommendations). The day was classified as appropriate if all of the 10 criterions were presents. Results: 322 (65%) of the days were classified as appropriate. Among the 174 (35%) classified as inappropriate, about half of them (84, 17%) were judged justified by the geriatrician in charge of the stay. Most frequent factors of inappropriateness were the lack of same-day report given to the patient, the lack of multidisciplinary conclusion, the too low number of exams passed or the lack of therapeutic information delivered. According to the new texts, 65% of days in both French GDH studied are appropriate, and this rate reaches 82% with the geriatricians' judgment. We expect this pilot study to be confirmed by an oncoming French ten-centre study evaluating about 5000 days in GDH.

**PB8 440 CHARACTERISTICS OF GERIATRIC PATIENTS AT THE TEACHING HOSPITAL OF LILLE FROM THE ADMINISTRATIVE DATA**

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**Introduction.** - Few data are available on geriatric patient in French hospitals. In order to describe the population, we took into account general features, identify comorbidities and clinical pathways Method and materials. - Retrospective study from Administrative diagnosis-related groups database of Lille teaching hospital. All patients over 75 years polypathological (>4 comorbidities) during period 2004-2005 are compared to patient at same age non polypathological, with younger patients (60-75 years old) polypathological and with the same group during 1999-2000 Results. - Geriatric patients are 43% of elders are geriatric patients. They are more likely women and are older (81.12 years vs 81.11 years; p<0.00001). Often admitted through Emergency Care (44% vs 31% and 28%; p<0.00001) most of them are from Lille health zone. Their length of hospital stay is the highest (12 days vs 6 and 10; p<0.00001). The most frequent discharge destination is home (92.6%). Readmissions decrease between 1999 and 2005. As comorbidities: Cardiovascular disease (39%), neurological disease (17.51%), pulmonary disease (14.68%), iatrogenic disorders (13.5%), geriatric syndromes (8.90%) and cancers (4.03%). Two clinical pathways are identified: neurology department for cerebrovascular disease and geriatric syndrome for geriatric department. Conclusion. - Geriatric patient care is characterized by a combination of age and polyopathy.

**PB8 441 VITALITY: IMPROVING OUTCOMES FOR HOSPITALIZED OLDER ADULTS**

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**Introduction:** The VITALiTY (Vancouver Initiative To Add Life To Years) initiative recognizes the high-risk environment of the acute care hospital setting to all persons age 65 and older. This population accounts for 36% of hospital admissions and 50% of expenditures. Most importantly, one in three of every hospitalized older person will experience significant disability. We propose that these events are often catastrophic in terms of the decline in functional ability, but at the same time, preventable. Methods: Five problems that were predicted to complicate a hospital admission and prolong the length of hospital stay in older adults including catheter use, medications, nutrition and hydration, delirium, and mobility, were identified. Using the Vancouver Coastal Health regional database, Case Mix Groups (CMGs) were identified based on outcomes that could be linked to these five problems and the actual length of hospital stay / expected length of stay (ALOS/ELOS) was calculated. Results and Conclusions: Based on a 50% reduction in the acute days that exceeded the ELOS that had been accomplished on our older adult care hospital units, and the prevention of 20% of cases from waiting nursing home placement from hospital, we calculated that 12,300 acute care days could be saved in the region. We

have developed evidence-informed Practice Statements targeting five key areas for care improvement strategies including catheter use, medications, nutrition and hydration, delirium, and mobility, to improve quality of care for older adults, reduce the risk for disability and decrease hospital length of stay across all medical and surgical units. Across a Canadian network, we propose to implement these Practice Statements in a five-step process to develop a common vision for an integrated service delivery model, analyze existing models of care, and select preferred models of delivery that includes Interprofessional Collaborative Practice to prevent disability in hospitalized older adults.

**PB8 442 AUTONOMY OR SECURITY? NURSES' ATTITUDES TOWARDS THE USE OF ELECTRONIC SURVEILLANCE IN NURSING HOMES**

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Introduction Electronic surveillance technologies are increasingly used in geriatric care to prevent falls or wandering especially in persons with dementia. These systems include tracking devices to locate a person's position, electronic tagging systems to detect a person passing a distinct line, and bed-alarm systems that intend to give a signal when a person is leaving the bed. Currently, there is no convincing evidence for the effectiveness of electronic surveillance. Ethical, legal and technical problems remain a major concern. Little is known about nurses' attitudes towards electronic surveillance in nursing homes residents although nurses' attitudes might be an important factor determining the use of the systems. Therefore, we investigated nursing staff of nursing homes in Hamburg, Germany. Methods and materials Qualitative interviews ( $n=3$ ) with geriatric nurses were performed to explore their subjective experiences and understandings towards electronic surveillance. Hypotheses were generated and a 6-item questionnaire on nurses' attitudes and nurses' emotional burden concerning the use of electronic surveillance was developed and pre-tested. The answers were rated on a 4-point Likert- scale and descriptive data analysis was performed. Results The sample consisted of 258 nurses from 18 nursing homes. In general, nursing staff rated the use of electronic surveillance rather neutral. Most nurses assessed the use as an appropriate measure to avoid accidents (74%). Two-thirds (66 %) believe that electronic surveillance potentially restricts residents' freedom, but most of the nurses do not consider them as a form of physical restraint. The majority (58 %) of nurses' do not feel emotionally burdened using electronic surveillance systems. Conclusion Nurses' opinions concerning the influence of electronic surveillance on residents' freedom and autonomy are heterogeneous. However, the majority considers the use of electronic surveillance as feasible for nursing home residents.

**PB8 443 REDUCTION OF CHALLENGING BEHAVIOURS IN PEOPLE WITH DEMENTIA: GERMAN VERSION OF THE SERIAL TRIAL INTERVENTION (STI-D)**

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Introduction: Challenging behaviours are frequent in patients with dementia and constitute a major burden for the patient as well as for carers. Based on the Need-Driven Dementia Compromised Behaviour (NDB) Model it is thought that challenging behaviours arise from unmet needs, which the patient can neither communicate adequately nor fulfil for himself. Developed in the USA, the Serial Trial Intervention constitutes a structured framework for the process of assessment and intervention regarding unmet needs when challenging behaviours occur. STI proved to be advantageous in the reduction of challenging behaviours compared to standard care. Furthermore pain was reduced, less psychotropic drugs were prescribed as well as more non-pharmacological interventions performed. Methods and materials: For this study an adapted German version of the STI was developed with experts in the field. In a cluster randomized controlled trial (ISRCTN 6139 7797) with three measurements it will be investigated whether the STI-D is more effective in reducing challenging behaviours in nursing home patients with dementia than standard care. Calculated sample size is  $n = 365$ . The primary outcome variable under investigation is the occurrence of challenging behaviours, measured with the NPI-NH, secondary outcome variables include quality of life, pain, prescriptions of analgesics and psychotropic medications, frequency of assessments and interventions performed. Results: Adaptations to the STI concept were necessary to match German nurses' scope of professional practice. Emphasis was put on the process of communication between nurses, physicians and other health professionals. It is expected that the application of the STI-D will reduce challenging behaviours to a significantly greater extent in nursing home patients with dementia compared to standard care. First study results will be presented.

**PB8 444 ORGANIZATIONAL CONTEXT AND THE UPTAKE OF BEST PRACTICES IN LONG-TERM CARE FACILITIES**

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Introduction: In Canadian long-term care (LTC) facilities (e.g., nursing homes) the majority of care is provided by unregulated direct care providers or health care aides (HCAs). Quality of care and quality of life among residents are associated with the use of best practices. Previous research among regulated health professionals working in acute care has identified associations between contextual factors such as leadership, access to resources, organizational culture, and use of audit and feedback reports with research uptake. In the longitudinal, multi-level Translating Research in Elder Care (TREC) program we are studying contextual factors associations with the uptake of best practices. Methods: One component of TREC is a cross sectional survey administered annually that measures, among other things, eight dimensions of organizational context using the Alberta Context Tool (ACT) with a series of Likert like scales. Use of best practices is measured using a single item (5-point scale) assessing overall research use. For this analysis data descriptive and correlational statistics were used. Results: Of 320 HCAs (in nine LTC facilities) who completed the first quarter survey, 87% had completed high school, 63% had English as first language, and the majority (55%) was older than 44 years. Overall, the HCAs reported supportive care managers ( $m=3.8/5$ ), strong positive cultures ( $m=3.9/5$ ), and moderate use of audit and feedback (evaluation  $m=3.5/5$ ). They reported strong use of best practices ( $m=4.3/5$ ). Supportive leadership was positively associated with higher self-reported use of best practices ( $p=0.04$ ). Conclusion: Strategic allocation of resources to modifiable contextual factors may facilitate the uptake of best practices. Managers in LTC facilities have an important role for increasing the quality of care. Future waves of data collection will enable the identification of causal associations between contextual factors and the research uptake by HCA, as well as, multi-level analyses and the inclusion of resident outcomes.

**PB8 445 THE ROLE OF TREATMENT CULTURE ON PRESCRIBING IN NURSING HOMES FOR OLDER PEOPLE**

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Introduction Prescribing of psychoactive medications in nursing homes is often poor in quality. One factor that may influence prescribing of these drugs is the treatment culture of the nursing home. This project sought to categorise a sample of nursing homes into one of three treatment cultures i.e. resident-centred, traditional or ambiguous by using a validated questionnaire. Methods and materials After obtaining ethical approval, questionnaires were mailed to the nursing home manager in a stratified random sample of nursing homes ( $n=149$ ) in Northern Ireland, who distributed them to all nurses working in the home. Data were collected in relation to the staffing characteristics, staff turnover and size of each home, demographic and professional characteristics, along with a descriptive account of staff's views on psychoactive prescribing. Treatment culture (resident-centred, traditional or ambiguous) was measured from questions in three domains: medication use; pharmacist involvement; and the involvement of the psychiatry of old age team. Results The response rate was 47% ( $n=70$  homes). Nine nursing homes were classified as resident centred, 57 were classified as having an ambiguous culture and the remaining four homes were classified as being traditional. Most of the nurses (94.5%) and nurse managers (98%) either agreed or strongly agreed that psychoactive medication should only be initiated for behavioural problems after alternative interventions have been tried and evaluated. Conclusion The data suggest that a minority of homes possess a resident centred treatment culture with the majority having an ambiguous culture. However, most nursing home staff agreed that psychoactive medication should only be initiated when other approaches had failed. These results suggest that assessment of treatment culture by a quantitative questionnaire may lead to conflicting findings. Therefore, treatment culture may need to be assessed using qualitative methods to uncover unconscious and embedded beliefs and values that the staff hold about psychoactive prescribing.

**PB8 446 HEALTH OF HEALTH CARE AIDES IN RESIDENTIAL LONG-TERM CARE**

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Introduction: The world-wide shortage of health care aides (HCAs) in residential long-term care (LTC) is in part affected by their health and well-being in relation to their work context. There is evidence to suggest that work factors predict sickness absence and turnover of HCAs. The objective of this study was to examine the association between organizational context and HCAs' well-being in the three western Canadian provinces. Methods: A cross-sectional survey is one component of the longitudinal and multi-level Translating Research in Elder Care (TREC) research program examining the role of

organizational context on resident, provider, and system outcomes in long-term care facilities of three Canadian provinces. Three organizational context variables (e.g., leadership, culture, evaluation) and three HCA well-being measures (Health Status Short Form-8TM (SF-8), and the Maslach Burnout Inventory (MBI), job satisfaction) were collected as part of a larger survey of health care providers. Data were analyzed using descriptive and correlational statistics. Results: Of the 320 HCAs from 9 not-for-profit facilities who responded to the first quarterly survey in 2008, 37% spoke English as a second language and 87% completed high school. Over half (55%) were older than 44 years. Leadership, culture and evaluation were positively correlated with job satisfaction ( $p < 0.001$ ) and SF-8 ( $p = 0.001$  to 0.1), but were variably and negatively correlated with the three MBI components – exhaustion, cynicism and efficacy (p-values range: 0.01 to 0.79). Conclusion: Modifiable contextual factors associated with the self-reported well-being of HCAs in LTC can be used to guide managers to improve HCA work environments and thereby reduce staff turnover. All three context variables look promising as modifiable conditions of the work place. Future waves of longitudinal data may identify causal associations between contextual factors and HCA well-being.

**PB8 447 MEDICATION USE IN NURSING HOMES IN ICELAND. THREE YEAR RETROSPECTIVE OBSERVATION STUDY**

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Objectives: To describe medication use in nursing homes in Iceland over 3 years. Methods: A pharmacy database over 3 years was used from 2002 to end of 2004. Data on constant use, periodic use and prn prescription were gathered. Results: Data from 10 nursing homes was gathered on 1408 individuals, 909 women and 499 men comprising 60% of registered nursing home beds in Iceland. Average age was 83 years. Total prescription rate was 8,88 ( $\pm 4,0$ ) increasing to 9,91 ( $\pm 4,3$ ) on average, not including PRN prescription. Women used on average 1 more total prescription than men (8,24 vs 9,23  $p < 0,001$ ). Use of psychiatric medications is high overall with only 12,2% men and 6,4% women who never got prescribed any psychiatric drug ( $p < 0,01$ ). Antipsychotics, antidepressants and anxiolytics/hypnotics were prescribed more often for women than men (39,1% vs 31,7%  $p < 0,01$ ; 70% vs 61,5%  $p < 0,01$ ; 86,6% vs 80,2%  $p < 0,05$  respectively). Women were prescribed significantly more often drugs for acid related disorders (46,9% vs 38,1%  $p > 0,01$ ), vitamin D (72,3% vs 59,1%  $p < 0,00$ ), calcium supplements (47,8% vs 15,2%  $p < 0,00$ ), diuretics (64% vs 52,3%  $p < 0,00$ ), thyroid supplements (22,4 vs 8%  $p < 0,02$ ), opiates (32,1% vs 27,7%  $p < 0,00$ ), and paracetamol (72,3% vs 61,3%  $p < 0,00$ ). Men were prescribed more often drugs for diabetes (14% vs 5%  $p < 0,00$ ); warfarin (10,6% vs 5,1%  $p < 0,00$ ); cholesterol lowering agents (7,8% vs 4%  $p < 0,01$ ); anti parkinsons agents (13,8% vs 8,4%  $p < 0,05$ ). There was no significant difference between men and women for prescriptions for platelet inhibitors (30,5%), digoxin/amidarone (15,8%), antihypertensives (35,4%), beta blockers (37,1%); NSAID (17,1%), coxibs (13,7%), antiastmatics (16,1%) or antiglaucoma medications (15%). Conclusion: Medication use in Icelandic nursing homes is high and rising. Women use more medications than men, especially for psychiatric conditions.

**PB8 448 TRADITIONAL VERSUS POD-STYLE: AN EXPLORATION OF THE EFFECTS OF ARCHITECTURE ON QUALITY OF CARE IN NURSING HOMES**

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Introduction: Although pod-style nursing homes are designed to minimize depersonalized care, little is known about the impact of their architectural features on quality of care when compared to traditional homes. This study seeks to address this gap in knowledge by investigating care provision in both types of homes. Methods: Data were collected from a pod-style and traditional home through observations of care routines and interviews with a care aide from each home. Results: Several architectural features were identified as decreasing quality of life in the traditional home. Multi-occupant bedrooms had limited bathroom space, resulting in toileting taking place at the bedside. This resulted in a loss of dignity that was compounded by an irregular use of privacy curtains. Activities took place in areas designed for quick access and efficient monitoring of residents. The dining room and lounge were located at opposite ends of the home, which made residents dependent on the availability of care aides for transportation. The care aide in this home recognized the negative effects of these features but appreciated the ways in which they facilitated the efficient delivery of care to frail residents. By contrast, the pod-style home had a home-like feel. Features included carpeted hallways, individual bedrooms, and a lounge and dining room in close proximity with laminate flooring and comfortable chairs. The private bedrooms were equipped with an electronic monitoring system that alerted care aides when residents woke up and tried to get out of bed. This allowed the aides to schedule care around the residents' own routines. The care aide from this home felt that these features increased the level of personalized interactions with residents, thus improving their quality of life. Conclusion: Overall, this study offers valuable insights into the impact of architectural design on the provision of long-term care to nursing home residents.

**PB8 449 ASSESSMENT TOOLS, STANDARD PRACTICES AND INTERVENTION PROGRAMS IN RESIDENTIAL SETTINGS: A SPANISH STUDY.**

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Introduction. In order to introduce in the SERA (Sistema de Evaluación de Residencias de Ancianos), a new scale for assessing standards protocols in residential settings, standard assessment tools, protocols and intervention programs were analyzed in Residential settings for the elderly in Spain. Methods and Materials. We assess a total of 30 residential settings (26 privates, 4 publics; 26 mixed, 4 assisted living centres). Average of residents was 110 residents by residence (with a range of 24 elderly in smallest residence to 370 residents biggest one). For every residence, we collected records, like forms and registers, and finally any other material that could be considered remarkable. 22 residences were able to provide materials for assessment. Results. Protocols were classified in three categories: 1) Assessment instruments, scales used were the following: Barthel Index (13), Lawton Scale (6), Mini-Mental State Examination (8), Geriatric Depression Scale (7) and the Mini Examen Cognoscitivo (5), finally, in 11 residences realized a complete geriatric assessment; 2) Standardized Practices, protocols more used were entry rules (13), rules and regulations (13), falls (8), pressure sores (7); 3) Intervention programs, programs more used were group animation (8), cognitive stimulation (7) and Activities of Daily Living (5). Conclusions. Although 8 centres on 30 didn't provide materials useful to the goals of assessment, we found a general consensus with standard protocols used in residential settings.

**PB8 450 THE ACTIVIST MEDICAL DIRECTOR: IMPROVING QUALITY CARE IN THE NURSING HOME VIA CQI PROCESS. EXPERIENCE FROM THE USA.**

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Introduction: In the United States, federal legislation stipulates the presence of Physician Medical Directors in Skilled Nursing Facilities. This role has recently been more extensively delineated and gives the Medical Director the opportunity to positively influence care delivery for nursing home patients. While there is longstanding experience of Skilled Nursing Homes in Western Europe and North America, significant demographic and cultural changes in other parts of the world are leading to rapid and newly emerging needs for skilled nursing facilities. This presentation introduces the important role of the Medical Director in improving patient care and outcomes in Skilled Nursing Facilities. Methods and Materials: Setting: Multiple Skilled Nursing Facilities in Seattle, Washington, USA. Content: The federal regulations in the United States regarding the role of the Medical Director will be described. The active role of the Nursing Home Medical Director in applying Continuous Quality Improvement theory and methods to commonly encountered challenges and indicators of care will be outlined.. Results: The Medical Director has the unique opportunity to initiate and guide CQI processes on the indicators of quality. Special focus will be on the process the Medical Director employs to change outcomes of nursing home care: i.e. Pressure sores, physical and chemical restraints, infection surveillance, including catheter associated infections, weight loss, adverse outcomes of medications, pain management and physician supervision, resulting in significant improvement in outcomes as measured by Facility and Medicare Data (Facility QI Data). Conclusion: The actively involved Medical Director of Skilled Nursing Facilities in the United States enhances care delivery and quality outcomes in Skilled Nursing Home settings and may be a good model to emulate in other countries, especially those with evolving nursing home populations.

**PB8 451 WHAT PREDICTS PSYCHOTROPIC USE IN RESIDENTIAL CARE: PRESCRIBER AND ORGANISATIONAL CHARACTERISTICS**

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BACKGROUND: In residential care facilities, the attitudes of staff and adoption of certain organizational cultures seems to relate to quality of care. The objective was to establish associations between the attitudes of staff, organisational characteristics of residential care facilities and psychotropic medication use of the residents. METHODS: The study population included residents aged 65+ years in residential care who were not terminally ill along with health care assistants, registered nurses (RN), nursing managers and General Practitioners (GPs) working in these facilities. From the resident files individual demographic data: number of diagnoses, medications, falls and functional status data were collected. Organisational characteristics were established by interview with the managers. Treatment culture (attitudes to prescribing) were gauged by administering a treatment culture survey to RNs and GPs in all facilities. Logistic regression models were built to determine the relationship between organisational characteristics and medication use whilst controlling for individual resident health and demographic factors. RESULTS: The study population included 533 residents, 147 health care assistants, 57 nurses and nursing managers and 14 GPs. Preliminary results suggest that psychotropic medication use was associated with age and presence of disruptive behaviour of the resident. Being a dementia unit, a commercial chain ownership type of facility, staffing levels and length of time the GP had been at the facility contributed to the model. Neither treatment culture of the GP nor the nurses were independently related to psychotropic medication use. CONCLUSIONS: This study provided preliminary evidence to suggest that the organisational structure had an impact on the level of psychotropic medication used eve

when controlling for individual resident characteristics. Knowledge of and attitudes to psychotropic medication was not associated with use of psychotropics in this case.

**PB8 452 DIETARY INTAKES IN NURSING HOME RESIDENTS**

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Introduction: Undernutrition is a frequent disease in nursing homes and is a prognosis factor for residents. This study was designed to obtain exact measurements of food intakes and nutritional status of all residents of 4 nursing homes. Methods: Food intakes were quantified in 195 residents, ( $85.3 \pm 8.2$  y.o.) using left over quantification for 3 consecutive days. Nutritional status, eating difficulties, gerontological status, pathologies and drug intakes were simultaneously quantified. Results: Average food intakes were  $27.0 \pm 6.7$  kcal/kg/d with  $0.89 \pm 0.3$  g of proteins/kg/d. Lipids represent  $37.3 \pm 5.4\%$ , carbohydrates  $45.9 \pm 6.9\%$  and protein  $16.2 \pm 2.0\%$  of total energy intakes. Only 28.2% of residents eat at least 30 kcal/kg/d which represent the French RDAs for elderly and 13.3% eats less than 2/3 of these RDAs. Using the MNA as an index of nutritional risk, 94.8% of the residents are at risk of undernutrition (MNA<24/30). The following table indicates nutritional status in residents eating RDAs or more or less than 2/3 of it. Conclusion: In nursing homes 2/3 of the residents do not cover their nutritional needs, in spite of sufficient food provided. Whatever the weight, resident consumption is almost similar. Lower consumption is associated with number of diseases and/or drugs but not to ADLs.

**PB8 453 SAFETY AND MOBILITY OF CLIENTS WITH DEMENTIA IN INSTITUTIONAL CARE. IMPLEMENTATION OF A MULTIPROFESSIONAL GUIDELINE**

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Care for clients with dementia in institutional long term care is the common product of many different stakeholders and professions: Internal professions such as care persons, care management and social work etc. contribute to care as well as external stakeholders like informal care-givers, doctors and therapists etc. An indispensable multi-professional cooperation is characteristic to many health- and social-services. The recommendation Rec(2001)13, approved by the Committee of Ministers of the Council of Europe claims: While developing and implementing medical guidelines, all relevant professions need to be integrated. The "BUKO-QS Qualitätsniveau I", an evidence based provisional-standard dealing with "Mobility and Safety of cognitively impaired Persons in Institutional Long Term Care", progressively follows this recommendation. This guideline is presently implemented by 20 German care institutions. In accordance to the European Council recommendation, different strategies of implementation are combined: The Break-Through-Method is applied to allow cooperative learning among the protagonists of the different institutions. This allows a fruitful exchange of found solutions. To assist the implementation, the institutions' quality circles are provided with the research results obtained by qualitative and quantitative instruments. These instruments show beneficial and hindering factor during the implementation. Questionings and group discussions are carried out on the quality management and audits of the client-specific care process are accomplished. Assignments and the level of implementation are shown systematically. We find a broad variety among the participating institutions concerning the pre-existing procedures regarding the object of the guideline and regarding the quality management in general. We also find big differences in the use of quality assuring instruments and we see how the Break-Through-Method helps to implement the guideline creatively and efficiently. Rather challenging tasks of the guideline are related to the attitude of the care persons to mobility and safety and to the willingness of physicians for cooperation.

**PB8 454 OBESITY IN NURSING HOME RESIDENTS – FUNCTIONALITY AND MORTALITY**

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Background: Studies on the relevance of obesity in nursing home residents are rare. Aim: The present study analysed the influence of obesity on functional parameters and mortality in nursing home residents. Method: 200 residents of two Nuremberg nursing homes (f 147, m 53, age  $85.6 \pm 7.8$  y, BMI  $26.2 \pm 5.3$  kg/m<sup>2</sup>) were included in the present study. BMI, waist circumference, handgrip strength, the timed up and go test and mortality were recorded at baseline and during a one year follow-up. Results: Prevalence of obesity (at least 30 kg/m<sup>2</sup>) was 23.5%. Undernutrition (<20 kg/m<sup>2</sup>) was present in 8.5% of the residents. A significant correlation existed between BMI and handgrip strength ( $0.327^{**}$ ), whereas the correlation between BMI and the timed up and go test was not significant. The odds ratios for mortality, comparing the lowest and the highest quartile, was for BMI 4.7

for men, respectively 3.1 for woman, for waist circumference 2.4, respectively 6.3, for triceps skin fold thickness 1.1, respectively 2.9 and for calf circumference 8.8, respectively 6.6. One-year mortality was lowest in obese residents >30 kg/m<sup>2</sup> (12.8 %), highest in the undernourished group (<20 kg/m<sup>2</sup>) (58.8%). None of the very obese elderly BMI >35 kg/m<sup>2</sup> (12 residents) died during follow-up. Conclusion: Obesity may be seen as an indicator of better survival among nursing home residents in addition higher weight may not always be associated with decreased functionality.

**PB8 455 COMPARING PREVALENCE OF MALNUTRITION AND NUTRITIONAL CARE IN CARE HOMES IN GERMANY, AUSTRIA AND THE NETHERLANDS**

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Introduction Malnutrition is a major problem in care homes all over the world. However, no information on international level is available about the prevalence and quality of nutritional care within long term care settings for the elderly. We carried out a prevalence measurement in Germany (G), Austria (A) and the Netherlands (NL). Method and materials In this cross-sectional multi centre international prevalence study, malnutrition was measured in 3446 patients of 49 care homes (G=2444, A= 221, NL= 781). A standardised questionnaire was used, divided in three levels: on institutional level and ward level relevant aspects of nutritional care were assessed, on patient level demographic data, care dependency, nutritional screening as well as treatment interventions for malnutrition were assessed. To measure malnutrition prevalence, nutritional status of patients was assessed using Body Mass Index, undesired weight loss and nutritional intake. Results Nutritional screening at admission occurred more frequent in Germany (99.1%) than in the Netherlands (95.5%) and Austria (77.8%). In care homes in Austria the prevalence of malnutrition (28%) was higher than in the Netherlands (27%) and in Germany (26%). In all countries in less than 50% of all malnourished patients nutritional interventions were undertaken (G= 46%, A= 40%, NL= 46%). In Germany and in Austria in less than 50% of the malnourished patients a dietitian was consulted (G=17%, A=29%) In the Netherlands a dietitian was consulted in 66.5% of all malnourished patients. Conclusion Malnutrition is a problem in approximately one in every four care home patients in each country. Despite the fact that nutritional screening is rather frequently performed, nutritional interventions are carried out in less than 50% of the malnourished patients. This multi-centre large scale international study is unique since a standardized method has been used to compare results between countries. In the future this international measurement will be carried out annually and expanded to more countries.

**PB8 456 DESIGN OF A STUDY ON THE QUALITY PERCEIVED BY PATIENTS HOSPITALIZED AT HOME**

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Introduction The term "hospital at home" commonly refer to a unit administering clinical care and technology normally delivered in hospital, so the essence of hospital at home is to substitute for treatment in an acute care hospital. A Geriatric Hospital at Home Service (GHHS) is carried out, since 1985 ,by the University Division of Geriatrics of San Giovanni Battista Hospital of Torino. The GHHS team is multidisciplinary and involved in the care of frail elderly patients mostly affected by cardiopulmonary, cerebrovascular, metabolic and neoplastic diseases. The purpose of the study is to assess the satisfaction of home hospitalized patients undergoing instrumental examinations (e.g., X-ray, ultrasound,...) at their home in order to identify critical issues and areas for improvement. The caregivers will be also included in the survey. Materials and Methods Eligible subjects are acutely ill elderly patients treated by the GHHS from June 2009 to December 2009, and their caregivers. The project is divided into three phases. 1) Construction of the instrument of detection. Using SERQUAL as a benchmark system, the following dimensions of quality have been identified: tangible aspects, reliability, responsiveness and empathy. The measurement instrument is a questionnaire which will be properly submitted to validate the content. 2) Survey. All GHHS patients undergoing instrumental examinations at home, and that have recently performed instrumental procedures by transport to hospital, are included in the study. 3) Analysis of data. A qualitative method will be used, considering positive the results with satisfaction increased by 80% (gold standard). Conclusions Due to the frailty of patients involved in the study positive results are expected either direct (e.g., greater satisfaction related to the comfort of a domiciliary provision of instrumental

examinations) or indirect (e.g., greater satisfaction related to a better quality of life depending on the avoided trauma of "abandonment" of the home).

**PB8 457 COMORBIDITY, AGE AND DRUG PHARMACEUTICAL LIQUID FORMS IN INSTITUTIONALIZED ELDERLY PEOPLE WITH DYSPHAGIA**

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**Introduction:** Dysphagia (swallowing difficulties) is relatively common in the nursing home population, but the prevalence increases with age and poses particular problems in the older patient, potentially compromising nutritional status, complicating the administration of solid medications, increasing the risk of aspiration pneumonia and undermining the quality of life. The aim of this study was to evaluate the relationship between co-morbidity, age and drug pharmaceutical forms in institutionalized elderly people with dysphagia. **METHODS and materials:** Cross-sectional multicenter study of ten Spanish geriatric centers. One hundred and twenty-four elderly nursing home patients with dysphagia (female 75.6%; mean age 84; SD 7 years) were selected for investigation treatments and drug pharmaceutical forms. Logistic model was adjusted to evaluate the likelihood of use a drug pharmaceutical liquid form, in oral administration. We show adjOR "adjusted odds ratios" and its 95% confidence interval (CI). SPSS ver 15 was used as statistical software. **RESULTS:** Of the 652 drugs administered to 124 patients, 93.8% were oral administration. Solid presentations were 76.8% and 17.0% liquid. 17.1% of these were pain drugs. El 47.6% had dementia and 46.0% cerebrovascular disease's sequelae. 33/124 patients taking an analgesic drugs and 29/33 patients these was administrated as liquid. Variables introduced into the model were comorbidities, age and sex. Only neurological diseases (adjOR 2.7; 95%CI 0.8-9.0;p=0.09) and depression (adjOR 4.2; 95%CI 1.1-15.4; p=0.03) were associated to the likelihood of use a drug pharmaceutical liquid form in these patients. It was noted an increased use 5.0% for each lineal increment one years of age (adjOR 1.05; 95%CI 0.9-1.1;p=0.13) adjusted by comorbidity. **CONCLUSION:** Only comorbidity, neurological diseases and depression, were significant associated with the use of liquid drugs in patients with dysphagia. Awareness of dysphagia in the elderly, the diagnostic procedures, and treatment options available should be increased among the medical profession.

**PB8 458 GROWING OLD HEALTHY IN WITTEN, GERMANY**

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The study is a project of the Interdisciplinary Center of Health Care Research (IZVF) at the Witten/Herdecke University. In the study are involved the Institute of Nursing Science and the Faculty of Dental and Oral Medicine. The study focuses on oral health and nutritional status of residents living in nursing homes. It is conceptualized as a pilot study investigating the feasibility of design and methods. The oral health care for elderly people living in nursing homes has been described as inadequate during the last years. It also turned out that they often have a poor nutritional status. The causal reasons for this situation have not been analyzed satisfactorily yet. Oral health state and a lack of masticatory function have an influence on the nutritional status. Over a period of one year basic data about the association between oral health and nutritional status will be collected. Research questions are: • Can oral health be improved after a special training of the nurses? • Does the training lead to a better cooperation between dentists, physicians and nurses? • Does the treatment after this special training improve the nutrition state of residents in Nursing homes? This study uses a Pre-Post Design with Control Group. The intervention is a special training programme for nurses in nursing homes. Period: September 2008 until August 2009 Oral health and the Nutritional status is assessed by a dentist and nurses both using standardized instruments. The residents will be interviewed using the GOHAI (Hassel et al.2008) an instrument assessing oral health. Nurses caring for these people have to answer a questionnaire, developed during this project. The Kayser-Jones Brief Oral Health Status Examination's (1995) will be used to evaluate the oral health status by nurses. The first results are expected in April 2009 and will be presented during the conference.

**PB8 459 CONTRACTURE: THE NEED FOR A CLEAR DEFINITION**

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**Introduction:** The reported prevalence of contractures ranges between 15 and 70%. The wide variation might be explained by different definitions and diagnostic criteria, settings and participants' characteristics. In Germany, contracture risk assessment and prevention

has recently been defined as a quality indicator of nursing home care regularly to be monitored by expert raters of the medical service of the statutory health insurance system. We reviewed international clinical trials dealing with contractures in order to find out if there is clear definition of contracture. **Methods and Materials:** A systematic literature search on clinical trials investigating contracture as primary, secondary or adverse outcome was conducted enfolding the databases PubMed, CINAHL, Embase, and Cochrane Library. The search was limited to articles published after 1985 and German and English language. Publications were excluded if they had investigated animals or children and scar contracture. Two reviewers independently screened the abstracts and the full publications. Disagreement was solved by consensus. **Results:** Initially, 544 publications were identified; 63 were included. A total of 51 studies investigated contracture as primary outcome, seven as secondary outcome, and five as adverse outcome. Ten studies clearly define the term contracture. However, all these definitions are different, but most often the functional arc of the investigated joint implicated as degree in range of motion is integral part of the definition. In 48 studies only the diagnostic criteria are mentioned and five studies neither mention a definition nor specific diagnostic criteria. **Conclusion:** The majority of clinical trials investigating contractures as outcome parameter do not clearly give a definition. However, the success of contractures' prevention and treatment in clinical trials and practice could only be judged in the presence of a solid definition. Thus, consensus on an accepted definition of contracture remains a challenge.

**PB8 460 HOW EFFECTIVE CAN A 500 &MICROG ORAL SUPPLEMENT OF VITAMIN B<sub>12</sub> FOR JUST 28 DAYS BE FOR INSTITUTIONALIZED ELDERLY**

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**Introduction** Because of increasing life expectancy in developed countries the percentage of elderly living in nursing homes is permanently rising. Between 5-40% per cent suffer from cobalamin (Cbl) deficiency mostly due to food Cbl malabsorption or drug interactions. This could lead to consideration of routine supplementation among this population. Some studies were performed on the effectiveness of oral Cbl as an alternative to intramuscular treatment, but the minimal effective dose has not yet been established. **Methods and materials** The aim of this study was to prove the effect of a 500 µg daily oral supplement of cyanocobalamin (Vitasprint®right) for 28 days on improvement of Cbl status, total Homocysteine (tHcy) reduction, and also to include functional and cognitive parameters. Vitamin B<sub>12</sub> status was determined by means of serum Cbl and active B<sub>12</sub> (Holotranscobalamin) status in 64 institutionalized elderly from Madrid, Spain (24 men, 40 women, mean age 82 ± plus minus 7 years). Statistical analyses used were: paired t-test or Wilcoxon test as normal distribution was given and One-Way-Anova to compare the mean values among the quartiles. Results SCbl like its more sensitive marker active B<sub>12</sub> increased whereas tHcy decreased (all p<0.001) in the total group as well as in each quartile with the greatest effect in the lowest quartile (101% per cent, 172% per cent and -14% per cent, respectively). MMSE scores did not change significantly in any of the quartiles neither did hand grip strength. Conclusion A 500 µg Cbl supplementation during 28 days was effective in increasing Cbl and in decreasing tHcy levels. An outright control of Cbl status, including biomarkers as well as functional and mental parameters, should be considered to maintain a healthier status in the elderly. Routine supplementation could be necessary in this population group. Financial support: Axis-Shield Diagnostics Ltd (Oslo, Norway), Abbott Científica S.A. (Spain), Asociacion de Familiares de Enfermos de Alzheimer (AFAL)

**PB8 461 MY ELDER CARE (MEC): HOW TO ENSURE THE CARE AND CONTINUOUS IMPROVEMENT IN THE CENTERS MAPFRE QUAVITAE**

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**Introduction:** The software in which the Company MAPFRE QUAVITAE supports management processes at its residential centers, My Elder Care, comes as a result of the need to monitor, review and improve the management and care for people in a situation of dependency that is being provided in our residential care centers. The software MEC allows to share information on assessments and interventions by the different areas (medical, nursing, physiotherapy, occupational therapy, psychology, ...) in a quick and easy way, and cross data, providing professionals advance in their findings and draw new plans of care for users, thus providing better planning of care as well as treatments on users. **Methods and Results:** We show some features of the software by images of screens which show how information is integrated (multicenter study of Spanish geriatric centers). The software stands out for its interdisciplinarity, the integration of those baseline data on the evolution of users and promoting comprehensive care. **Conclusion:** MEC allows instant

access to all validated assessment tools and validated scales (Barthel, Norton, Mini Mental, ...), to display relevant information for health care, adjust the care plan automatically, know the Geriatric Syndromes and vital sing development of the person and the overall population. MEC helps maintain updated all the treatments, control the Center pharmacy and the stock of drugs per user, or automatically generate orders, also improving the processes of economic management. The management of time working professionals is also facilitated by professional agendas which can be customized sessions and intervention groups. In addition to these welfare benefits, high turnover of professionals in the care centers for elderly people in Spain, among other reasons justifying the need for a software like this to ensure continuity of care and standardization processes and protocols.

**PB8 462 PREVENTIVE TRAINING IN GERIATRIC NURSING HOMES: MULTILEVEL DEVELOPMENT AND RE-AIM BASED EVALUATION.**

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Problem Consistent with other social discrimination, there are few opportunities of preventive exercise for highly aged people in need of care. For example, highly aged people would not be able to easily go to training facilities; standard exercises may be too intensive and so be harmful to them; the increased prevalence and incidence of orientational disorders like dementia will exacerbate individuals and groups in following instructions and keeping exercises going on. Approach Interventions on the individual, social, institutional and policy-cultural level were conducted during 2 years. For evaluation, the RE-AIM framework of Glasgow (2002) was used. Results Reach: In 5 politically predefined areas of the state Northrhine Westfalia in Germany, 9 model nursing homes were chosen through quality criteria. The programme reached 11% of potential residents, with an overall drop-out of 54% after one year. Effects: Strength and flexibility improved clearly after months. The participants' expectations referring to well-being were superimposed. Adoption: After the end of the project, all institutions adopted the programme at their own expense. Some started additional training groups. Implementation: A certain quality management made sure that even non-professional trainers were able to lead the training groups. Maintenance: Long term effects showed stable motor skills. A 16 month follow up on the institutional level is also carried out. Diskussion / Perspectives Exemplarily, preventive exercise has been established for a neglected target population. On one hand, there were positive evaluations on the individual and institutional level. On the other hand, on the political level, there is an incentive scheme for German care providers, that rewards care demands more than care prevention.

**PB8 463 AN IRT-BASED ASSESSMENT OF PACSLAC**

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Introduction: Previous research showed that the PACSLAC observational checklist is very useful to measure pain in nursing home residents with dementia. PACSLAC was translated into Dutch and the number of items was reduced by applying classical test theory to pain ratings of a researcher (PACSLAC-D). The aim of this study is to reduce the number of items in PACSLAC on the basis of the ratings of nursing personnel by applying more advanced analysis techniques, namely item response theory and confirmatory robust maximum likelihood factor analysis. Methods and materials: Nursing personnel observed 128 nursing home residents during rest, the influenza vaccination and a patient-specific moment of potential pain. Item response theory was used to test the psychometric properties of the items in PACSLAC and to detect biased items by testing for differential item functioning (DIF). Confirmatory factor analysis was applied to determine the factor structure of the selected items. Results: Of the items that nursing personnel frequently registered, 2 items showed DIF when comparing pain scores of residents with mild dementia to pain scores of residents with severe dementia. One item showed DIF when comparing ratings of registered nurses to those of enrolled nurses and nurses' aides. Ultimately, 18 valid and reliable items remained, of which 14 items were also selected for PACSLAC-D. This finding confirms that these items are valid and reliable indicators of pain in older people with dementia. Confirmatory factor analysis showed that the data could not be ascribed to pain as a general factor, but rather to 3 components of pain: 'Negative reactions to pain', 'facial/ vocal/ emotional expressions of pain' and 'resistance to pain'. Conclusion: A refined version of PACSLAC was created that nursing personnel with different educational backgrounds might use to assess pain in older people with varying degrees of dementia.

**PB8 464 ELDERLY PEOPLE AND OPIODS: THREE METHODS OF ADMINISTRATION**

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Introduction: Many elderly people suffer from nociceptive pain (even today some 70% of subjects in institutions). Opioids are relatively often necessary, and their use becomes more frequent. Often there is a lack of knowledge of administration modes, however, hindering an effective and secure handling. Method: More than 5800 specific consultations of a mobile team with 1560 elderly patients were carried out during 10 years in rehabilitation and long term care departments in a geriatric hospital (average age 85 years). Misappreciations persist, which explain the difficulty in taking charge of pains : -the essential prerequisites to initiate an opioid treatment (tolerance, secondary effects, monitoring) aren't known to the medical personnel -the three ways to administer the opioids according to the time critical aspects of pain aren't still well mastered. Results and discussion: A technical fact sheet that is easy to understand has been worked out, defining and synthetizing the following notions: 1. Steps to be taken before initializing a morphine treatment among the elderly subjects (sheet "assessments before morphine") 2. The three methods of use: - continous treatment - pre-medication - interdose (sheet "methods of use of morphine"). Conclusions: If the lack of knowledge and of methodology prevail over the bad use of morphine, one should not forget that the fears linked to the prescription and administration of this medicine are still deep-rooted. This explains for a good part the difficulties in handling morphine in geriatrics. This precise sheet, for nurses and physicians, is intended to structure the reasoning and to avoid the drifts based on fears and ignorance.

**PB8 465 TARGETING PAIN IN OLDER PEOPLE IN THE ACUTE CARE SETTING**

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Introduction Research shows that hospitalised patients experience unacceptable levels of pain. Assessment of pain by healthcare staff is rarely documented and may contribute to poor pain management. Pain may hinder recovery and prolong hospitalization. Unrelieved pain is associated with depression, anxiety, cognitive impairment, decreased appetite and weight loss, disturbance to sleep, gait, general activity, mood and relationships with other people. The aims of the project reported here were to: improve the comfort and safety of older people in the acute care setting in relation to pain; facilitate practice change by use of media promotion, clinical protocol and multidisciplinary team education; and to determine whether "Targeting" pain media and multidisciplinary education improves the detection and management of pain in older people. Methods A pre post test evaluation design was used for this pilot study including audit mechanisms; patient and staff interviews to determine experience and satisfaction with pain and the "Targeting" pain project respectively. Results There was an increase in the assessment of pain by nurses and an increase in the use of analgesics. Nurses noted the effectiveness of pain badges. Conclusion Whilst the findings from the study showed a shift towards improved pain assessment and management of older people there were many challenges associated with the study including engaging the multidisciplinary staff in the education process and the absence of guidelines for managing pain in this group.

**PB8 466 USE OF BUPRENORPHINE PATCH FOR PAIN CONTROL IN ELDERLY PATIENTS WITH PUBIC RAMI FRACTURE - AN OBSERVATIONAL CASE SERIES**

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Introduction Achieving adequate pain control is a major limiting step for rehabilitation and mobilisation in elderly patients with pubic rami fracture. Use of traditional pain control drugs such as codeine containing compounds can be associated with significant side effects in elderly patients. We describe an observational study using Buprenorphine patch for pain control in these cohort of patients in an Acute rehabilitation unit. Method Assessment of pain before and after introduction of Buprenorphine patch was done by Visual Analogue Scale (0-10, with 0=no pain and 10 being maximal pain)(VAS). The weekly patch dose used was either '5' or '10' releasing 5 micrograms/hour or 10 micrograms/hour respectively. Once pain control was achieved, rehabilitation was started by the physiotherapists and goals and objectives established. Barthel ADL index was used to monitor progress. Results 10 patients with pubic rami fractures were observed. Dosage of patch to achieve pain control – Patch '5' in 6 patients and '10' in 4 patients Mean age 85(Range 82-90) Mean pain score on VAS 1. before patch 7.6(range 6-9) 2. at discharge 1.4 (range 1-2) Average ADL on discharge 16(Range 12-18) Mobilisation after patch administration – average 5.2 days(Range 2 -14) All patients received treatment for osteoporosis. No untoward side effects including respiratory depression, confusion or constipation were observed in any patient. Patients were followed between four to six weeks after discharge from hospital. Conclusion Buprenorphine patch was found to be very helpful in achieving pain control in patients with pubic rami fracture. Adequate rehabilitation potential was achieved and led to shorter inpatient stay in the rehabilitation unit. As a patch was used, the complications from use of codeine containing drugs and their associated side effects were avoided and compliance from patients was excellent.

**PB8 467 STUDY OF TEMPOROMANDIBULAR JOINT DISORDER IN THE ELDERLY PATIENTS BY MAGNETIC RESONANCE IMAGING**

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**Introduction.** The aim of this study was to compare characteristics of elderly patients in the sample of general population of the patients with temporomandibular joint disorders. **Methods and materials.** A prospective study was done between January 2001 and December 2008 and it included 141 patients with TMJD. The whole sample of patients was divided in two groups: 31 patients aged over 60 (median age 67.9, ranging from 60-82) and the remaining 110 patients (median age 36.3, ranging from 12-59) who were seeking treatment. Diagnostics was based on clinical examination and it was confirmed by magnetic resonance imaging of all patients TMJs. Pain intensity was rated on a visual-analogue scale (AVS 1-10). The psychological assessment was carried out by Spielberger's State-Trait Anxiety Inventory (STAI). Data were analyzed by t-test. **Results.** There is no statistical difference between average pain in elderly patients (6.2) and patient aged up to 59 (5.7) evaluated by AVS ( $p=0.900$ ). Higher values of anxiety in both examined populations were shown as well as higher values in elderly patients, however without statistically significant difference: the mean scores in STAI 1 (anxiety as subjective state) were 39.7 for elderly and 44.5 for patients aged up to 59 ( $p=0.547$ ). In STAI 2 (anxiety as relatively stable individual characteristic) the scores were 40.3 for elderly and 45.7 for patients aged up to 59 ( $p=0.376$ ). There was a statistically significant difference ( $p=0.002$ ) in pain duration: elderly reported shorter duration of experienced pain (7.8 months) than patients aged up to 59 (12.2 months). **Conclusion.** Incidence of TMDs is the most frequent between 18 and 40 years of age, however in this study it was found that 22% were elderly patients. A higher level of anxiety was shown in both patients' group, regardless of shorter pain experience in the elderly patients.

**PB8 468 TREATMENT OF PERSISTENT NON-ONCOLOGIC PAIN IN ELDERLY**  
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**Introduction:** Non-cancer pain is a common condition among the elderly. Long-term treatment with NSAIDs, Coxibs or paracetamol is associated with several adverse effects. This has sparked renewed interest in the use of opioid analgesics for the management of chronic non-cancer pain. The purpose of this study was to compare the efficacy and tolerability of NSAIDs-based treatment with an innovative formulation of rapid-release oxycodone, in a cohort of elderly patients suffering from persistent non-cancer pain. **Methods and materials:** We conducted a preliminary analysis in 70 patients enrolled in the study "SIGG-Progetto Anziani Doloro" in 5 centers (Ferrara, Florence, Genoa, Rome, San Giovanni Rotondo). These patients were 70-year-old or older, with persistent non-cancer pain from moderate to severe intensity assessed by the Brief Pain Inventory scale. Patients were randomized to receive open-label either NSAIDs or oxycodone+paracetamol. Primary outcome was to evaluate the safety and tolerability during 6 months of follow-up. The intensity of pain, pain-related ADL impairment, pain relief and functional status were used to evaluate treatment effectiveness. **Results:** Patients had a median age of  $78 \pm 6$  years and women were 80%. Fifty-three percent of the participants received NSAIDs, primarily ibuprofen ( $n = 44$ ), nimesulide ( $n = 10$ ), diclofenac ( $n = 18$ ). Participants randomized to oxycodone+paracetamol were 47%, of whom 65% were given a daily dose of 15 mg of oxycodone in t.i.d. Forty percent ( $n = 56$ ) of the participants withheld from the study, mainly because of the development of side effects nausea, vomit, epigastric pain, confusion. Drop-out rates were no significant different between NSAIDs and oxycodone+paracetamol. **Conclusion:** Our data indicate that the use of low-dosage of oxycodone+paracetamol may be a safe and effective option for the treatment of persistent non-cancer pain in elderly patients.

**PB8 469 FACTORS RELATED TO INCOMPLETE FLEXIBLE SIGMOIDOSCOPY AMONG ELDERLY TAIWANESE**  
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**Introduction:** Flexible sigmoidoscopy is effective in the screening of colorectal cancer, but incomplete examinations may overlook colonic pathologies and delay diagnosis. The aim of this study was to explore risk factors for incomplete flexible sigmoidoscopy among elderly Taiwanese. **Methods and Materials:** Healthy elderly participating in the health check-up in a tertiary medical center were invited for study. Subjects were recruited when they had fully consented and agreed to participate. Factors related to incomplete flexible sigmoidoscopy were evaluated and multivariate logistic regression was used to determine independent risk factors. **Results:** In total, 245 subjects (mean age  $73.5 \pm 5.5$  years, range 65-87 years, male/female =176/69) were enrolled and 70 (28.6%) incomplete examinations

were recorded. Univariate analysis showed that habitual exercise (odds ratio [OR]: 0.55; 95% confidence interval [CI]: 0.31-0.96,  $p = 0.036$ ), history of previous pelvic or abdominal surgery (OR: 13.3; 95% CI: 1.07-165.6,  $p = 0.044$ ), and body mass index (BMI)  $< 25 \text{ kg/m}^2$  (OR: 2.28; 95% CI: 1.19-4.35,  $p = 0.013$ ) were related to the incomplete examinations significantly. Using a multiple logistic regression model, we showed that habitual exercise (OR: 0.53; 95% CI: 0.30-0.94,  $p = 0.031$ ) and BMI  $< 25 \text{ kg/m}^2$  (OR: 2.48; 95% CI: 1.27-4.83,  $p = 0.008$ ) were independent risk factors for incomplete flexible sigmoidoscopy. **Conclusion:** The habitual exercise and BMI  $< 25 \text{ kg/m}^2$  were independent risk factors for incomplete examinations of flexible sigmoidoscopy. Elderly with risk factors may consider the alternative modalities for colonic examination.

**PB8 470 PREDICTORS AND CORRELATES OF GERIATRIC TRAUMATIC BRAIN INJURY**

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**Introduction:** Preexisting comorbidities are risk factors for gerotrauma and negative health outcomes. The goal of this study was to examine risk factors of older adults for developing traumatic brain injury (TBI), and to determine which comorbidities influence functional outcome [functional independence measure (FIM)] at hospital discharge controlling for initial injury severity (Injury Severity Score, Glasgow Coma Scale), age and gender. **Methods:** Secondary data analysis was conducted and available clinical and outcome trauma registry data were obtained for subjects aged 55 and older with TBI ( $n=222$ ). Medical records were reviewed for comorbidities. Relationship between comorbidity, age and mechanism of injury were evaluated with Chi-square comparisons. Linear regression analyses were conducted to assess for the influence of comorbidities on discharge FIM. **Results:** The three most prevalent comorbidities in older adults with TBI were hypertension (41.4%), alcohol abuse (25.3%), and cardiac arrhythmias (18.9%). When age was factored in to the analyses, the oldest old (85+) with a diagnosis of CHF were more likely to have a motor vehicle crash ( $p=0.005$ ); and were more likely to experience a fall if they had a comorbid visual problem ( $p=0.042$ ). There was a trend ( $p=0.054$ ) that elderly with neurological disorders were more likely to experience falls as the mechanism of injury. Of injury-related and demographic variables, only injury severity score was predictive of discharge function ( $p=0.009$ ). Women had higher mean FIM scores than men (9.6 vs. 8.2;  $p=0.06$ ). Only alcohol abuse added significantly to the model, explaining an additional 3% of the total variance. **Conclusion:** Primary TBI prevention efforts in older adults must consider the impact of comorbidities in interventions including vision problems and CHF, particularly in the oldest old. Alcohol abuse is common in older adults with TBI; screening should be conducted on all patients and interventions developed towards at risk elderly for prevention of future injury.

**PB8 471 PRESSURE ULCER PREVALENCE AND INCIDENCE -MEASURING OUTCOMES AND EDUCATION**

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**Introduction** A baseline pressure ulcer prevalence and incidence study conducted in September 2007 identified a 34.2% prevalence and 28.9% incidence rate within a mid size western Canadian hospital. An evidence-based education program from the Canadian Association of Wound Care was introduced in 2007 to raise awareness and provide evidence-based preventative education to improve the quality of care delivered to prevent pressure ulcers. **Methods & Materials** A serial prevalence and incidence study was conducted in September 2008, with ethics and administrative approval, to measure the effect of this structured Interprofessional program. Informed patient consent was obtained with data collected from direct head to toe physical skin assessments. With a two hour educational preparation using the National Pressure Ulcer Advisory Panel staging guidelines, Interprofessional staff worked in teams to identify and stage the most severe ulcer and corresponding location. Results 184 out of 333 patients were included in this study with 44 cases of pressure ulcers identified equaling a prevalence rate of 23.9%. 10% of the cases were re-assessed determined an inter-rater reliability of 72%. Medicine/Stroke/Geriatrics demonstrated prevalence rates of 40% which are greater than the Canadian national average of 25%. The incidence study identified 9 new cases over one week for a 12.9% incidence rate. 45% of pressure ulcer patients were between the ages of 80-100 years old. Conclusion Awareness and education have decreased the prevalence and incidence of pressure ulcers. Local studies show changes in prevalence when prevention becomes a focus, but indicate that when the attention decreases, prevalence increases again. This would suggest that methods or programs for pressure ulcer prevention must focus on long term sustainability to be successful. A focus on accountability and adapting to a culture change from treatment to prevention will close the gap between intention and action in all areas from young to geriatric.

**PB8 472 TRAVELING WAVES AND PERCOLATIONS IN INFLUENZA TRANSMISSION AMONG UNITED STATES ELDERLY**

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Introduction. The origin and spread patterns of seasonal influenza are still poorly understood. Seasonal waves of influenza travel over large spaces covering many climatic zones in a relatively short period of time arriving in late fall to early winter and dissipating in spring. Annual epidemics begin abruptly, peak within two to three weeks, and last from five to ten weeks and the precise mechanism for such patterns are unknown. Methods and Materials. We explored the influenza spatio-temporal dynamics in US older adults ( $\geq 65$  years old) for thirteen seasons (1991-2004) in 2,974 US counties utilizing over fifteen million Medicare hospitalization records. We also abstracted monthly records for minimum ambient temperature from over 380 monitoring stations. Results. Comprehensive dynamic mapping of weekly influenza hospitalization rates reveals that: a) while different regions of the US can host the first outbreaks, influenza emerges predominantly in rural, aging, or highly transient communities; and b) while initial outbreaks are just as likely in the south as in the north, the intensity of northern outbreaks is associated with preceding drops in ambient temperature. We observed synchronization in influenza transmission in a unique pattern when influenza cases emerged in multiple sites, then appeared in adjacent areas or percolated within one area, and then in a period of one week resulted in a large multi-site outbreak. Conclusion. The proposed methodology for generating dynamic maps in real time on a refined spatial scale along with supporting environmental and socio-economic information provides valuable information, which has a strong potential for facilitating preparedness of public health workers to mitigate influenza outbreaks on local, regional, and national levels. Furthermore, a better understanding of influenza seasonality provides insights for many aspects of influenza including pathogenesis, viral evolution, transmissibility, vaccination efficacy, and treatment options, especially for the frailest subpopulations.

**PB8 473 TUBERCULIN SKIN TEST VERSUS BLOOD IMMUNOLOGIC DIAGNOSIS OF LATENT MYCOBACTERIUM TUBERCLOSIS INFECTION AMONG OLD SUBJECTS**

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Introduction: Among old subjects the development of a tuberculosis disease is often the result of the reactivation of latent tuberculosis. The people of more than 65 years are often infected by the pathogen. At this age, the clinical manifestations are poor and the forecast is bad with more than fifty per cent of death. The only test currently available for the diagnostic of latent tuberculosis is the tuberculin skin test(TST). New blood tests based on the immunologic response have been developed. Objectives: The purpose of this study are (1) to determinate the prevalence of positive tuberculin skin test among patients hospitalized in geriatric services and among voluntary old subjects; (2) to measure in a concomitant way the data of the immunological tests carried out at the laboratory (test QF-TB gold and Elisa); (3) to determine the predictive values of the TST and the new immunological tests, and (4) to determine the geriatric characteristics of the studied subjects and to analyze how these characteristics can influence the sensitivity of the TST and the immunological tests. Methodology: Hundred fourteen person of more than 65 years were included in the study between November 2006 and May 2007 (49 healthy volunteers and 65 in-patients). We performed on each patient a total geriatric evaluation (medical, functional, nutritional, social, and biological), a TST and a blood analysis (QF-TB gold and Elisa). Results: Only nine percent of the subjects presented a positive TST, 34% a positive test QF-TB gold, and 11% positive Elisa test. If we consider that the "gold standard" to confirm a contact with the bacillus of tuberculosis is the TST the sensitivity and the specificity of the QF-TB gold test are respectively 90% and 71%; its positive predictive value (PPV) and its negative predictive value (NPV) are respectively 24% and 99%. For the Elisa test, its sensitivity and its specificity are respectively 33% and 89%; its PPV and its NPV are respectively 15% and 86%. We did not observe a difference of prevalence of positive TST between the group of the voluntary subjects and the group of in-patients whereas a greater number of voluntary subjects presented tests QF-TB gold and Elisa positive compared to the group of in-patients. The group of in-patients is distinguished from the voluntary subjects in terms of age, Co-morbidity, functional dependence, denutrition increased. Discussion: If these new immunological tests prove to be promising, they cannot however replace the TST. Many studies on the place of these tests in the diagnosis of tuberculosis disease, latent tuberculosis and in the follow-up of the treated people must still be carried out; in particular among old people whose modifications of the

immune system and characteristics geriatric make the interpretation of the various observations more difficult.

**PB8 474 WELL ELDERLY II TRIAL RESULTS: EFFECTIVENESS AND COST-EFFECTIVENESS OF LIFESTYLE REDESIGN® IN COMMUNITY SETTINGS**

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Introduction: The original Well Elderly Study demonstrated the efficacy and cost-effectiveness of the Lifestyle Redesign® intervention in improving health in diverse elders independently living in Los Angeles. In this presentation, we will report on the results of a more comprehensive randomized clinical trial which evaluated whether the outcomes of the first study could be replicated with: 1) a more heterogeneous sample, 2) greater variability in age, ethnicity, and socio-economic status, 3) across a much larger number of community sites, and 4) across more outcome domains. Methods and materials: Ethnically diverse elders ranging in age from 60 - 95 (n = 160) and recruited from 21 sites throughout Los Angeles were assigned to the Lifestyle Redesign® group or to a no-treatment control group over a six-month experimental period. Participants in the intervention groups received the lifestyle intervention, involving weekly group meetings at one of the study sites, community outings, and up to 10 individualized in-home consultations. The goal of the intervention was to enable the elders to develop a sustainable and customized healthy lifestyle in their daily life context. Results: The intent-to-treat analysis revealed that participants evidenced more positive change on the following SF-36 (VI) scores: bodily pain, vitality, social functioning, mental health, and composite mental functioning (p values < .05) as well as greater life satisfaction (LSI-Z, p < .03) and less depression (CES-D, p < .03) than control participants. Change scores on the cognitive measures revealed no intervention effect. The cost-effectiveness analysis estimating cost per QALY indicated the intervention was cost effective. Conclusion: The Lifestyle Redesign® intervention has beneficial effects and is cost-effective for ethnically diverse older adults recruited from a wide array of community settings. Because the intervention is cost-effective and widely applicable, it has the ability to improve the health of diverse elders while reducing health care costs.

**PB8 475 HUMAN BETA-HERPESVIRUSES IN CHRONIC PERIODONTITIS IN ELDERLY AND NON-ELDERLY PATIENTS**

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Introduction: Human chronic periodontitis (HCP) becomes more prevalent and severe with increasing of age. The most frequent interpretation to correlation between HCP and aging is that occur an irreversible loss of support tissue of teeth resulted from the accumulative effects of plaque and calculus. However, not all elderly as well as not all teeth in the elderly are HCP-affected and it cannot be considered as a single causative factor. Susceptibility to infections is increased in the elderly and reasons for it include immunosenescence, malnutrition and many age-associated physiological and anatomical changes. Betaherpesviruses that include Cytomegalovirus (CMV), Human Herpesvirus-6 (HHV-6) and Human Herpesvirus-7 (HHV-7) that remain latent in the host after primary infections might play a role in the pathogenesis of HCP but this fact remains controversial. Elderly is more susceptible to virus reactivation and therefore herpesviruses might present more significant periodontopathic outcome. This study aimed to evaluate betaherpesviruses-protein-expression in periodontal tissue obtained by biopsy using immunohistochemistry (IHC) in two groups of patients: elderly and non-elderly. Methods and materials: Twelve HCP patients (20 to 40 years-old) and 8 HCP patients ( $> 65$  years-old) were included in this study. One fragment of periodontitis-affected tissue was obtained by biopsy during odontological proceedings. The fragments biopsied were fixed on buffered-formalin and prepared using standard histotechnological practices regarding specificities to IHC techniques. IHC was performed using monoclonal antibodies against CMV, HHV-6 and HHV-7 followed by immunoperoxidase staining after endogenous peroxidase blocking. Results: All samples presented periodontal tissue with lymphocytic-histiocytic infiltration without others particular characteristics. None samples were positive by IHC for any viruses studied. Conclusion: The samples obtained presented chronic inflammatory process and no viral antigen expression was observed. Considering the limited sampling, our found data do not support the involvement of betaherpesviruses in human chronic periodontitis in the both groups of patients.

**PB8 476 HEALTH LIFESTYLE AND ITS DETERMINANTS AMONG OLD PEOPLE IN HELSINKI**

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Introduction Health lifestyle consists of behaviors related to health, values, and attitudes that individuals and groups have assumed in the social, cultural, and economic

environment they live in. The most important lifestyle factors affecting health and lifespan appear to be smoking, alcohol consumption, nutrition, and physical exercise. The purpose of the study was to describe connections between different areas of health lifestyle among elderly, and to find out how health lifestyle was related to self-rated health. Material and methods A postal questionnaire was used to investigate the health lifestyle factors, education and self-rated health of 75+ residents of downtown Helsinki (456 men and 935 women). Health lifestyle factors included nutrition, smoking, alcohol consumption and physical exercise. Health status was described by self-rated health (alternatives included good, fairly good, average, fairly poor and poor). The levels of education were primary school, secondary school and high school. Results Among men 35 % and among women 38 % reported they ate vegetables daily. Alcohol consumption was more common among men (64 %) than women (47 %). There were no differences between men and women in smoking. 62 % of men and 59 % of women practised exercise (walking almost daily). Health was assessed good or fairly good more often among men (46 %) than among women (42 %). Self-rated health was connected with eating vegetables, alcohol consumption and physical exercise. Persons with better self-rated health ate more vegetables, drank more alcohol and exercised more often than persons with poor self-rated health. Education correlated with nutrition and alcohol consumption: persons with higher education ate more vegetables and consumed more alcohol. Conclusions The findings of this study indicate associations between self-rated health and many health lifestyle variables. This knowledge is important when we implement training programmes and recommendations for old people.

**PB8 477 SCREENING COGNITIVE IMPAIRMENTS BASED ON ELDERS PERFORMANCE IN LEARNING DIGITAL INSTRUMENTS**

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Introduction: Many cases of cognitive impairments progress undiagnosed because few practitioners screen patients regularly. Waiting for symptoms to become evident delays diagnosis and treatment. Learning digital instruments like personal computers and internet can include elder people in the information society and help to preserve independence, autonomy and citizenship. Difficulties in this process can be an early signal of cognitive impairments. Objective: To present a screening methodology for early cognitive impairments. Methods: Cohort prospective study in Santa Catarina and São Paulo, Brazil, to compare previously obtained mental status using Folstein's Mini Mental Status Examination (MMSE) to the performance in learning 4 basic digital instruments: "Mouse use", "Games use", "Browser use" and "e-mail use". The gold standard for cognitive impairments was MMSE up to 24 points. Workshops were developed to teach how to use the 4 digital instruments. The inclusion criteria were: community senior citizens above 55 years, not hospitalized, not in a nursing home, without previous contact and knowledge with personal computers and internet. The statistical parameters were: sensitivity, specificity and area under ROC curve, analysis in SPSS 15.0. Results: 76 individuals were included in the study, 55 women, 69 years-old average, 9.3 years of scholarship, 4.5 chronic pathologies and 4.4 continuous medications per participant. Each individual attended 20.48 workshop hours in average, the MMSE mean score was 25.23. The first task, "Mouse use" showed 100% specificity when compared to the gold standard and the last task, "e-mail use", showed 100% sensitivity. The best balance of sensitivity and specificity were found in the second task ("games use"), 87.50% and 93.33% respectively, and accuracy of 92.11%. The area under the ROC Curve was 0.95 (CI95%: 0.87-0.98). Conclusion: Personal computers and internet learning process can be used as a screening public health tool for early cognitive impairments.

**PB8 478 LOW-MOLECULAR-WEIGHT HEPARIN (LMWH): THE PROFESSIONAL PRACTICES IN GERIATRIC**

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Context: The prevalence of venous thrombo embolism diseases increase with the advanced age like the prescriptions of anticoagulant with LMWH. Few studies have explored the prescriptions of the LMWH in the elderly population. The aim of this study is to describe the practices of professionals using HBPM in a geriatric hospital in Paris. Methods: It's a transversal study on all elderly treated by HBPM in geriatrics' hospital with 3 units cares: unit of acute care, unit of re-education, and unit of long term care. The data have been collected with a questionnaire about indications, dosing, durations of treatment, biologic's monitoring, by a geriatric doctor of the hospital. The security of prescription was defined by the association of 4 criteria: good indication, good duration of treatment, good dosing and good biologic's monitoring. Results: The prescriptions of LMWH concerned 13.5 % of patients who were hospitalised this day. Thirty eight percent were in re-education unit, 31.5 % of patients were in acute care and 4% in long term care. The indications concerned

the prevention of venous thrombo embolism in 76% of patients, mainly after surgery and 76% of indications were relevant. The doses were correct in 55.5% of cases, durations of treatment respected in 51.4% of cases, biologic's monitoring was maximum for 30.5% of cases. The security of prescription existed in 10% of patients. Conclusion: The LMWH are frequently used in geriatric but the supervision must be better. It's important to distribute the recommendations who exist and to use her according to the indications.

**PB8 479 INCIDENCE OF UNDIAGNOSED SKIN CANCERS IN A GERIATRIC HOSPITAL.**

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Summary: Background: The incidence of non melanoma skin cancers is closely correlated with age. The aim of this prospective study was to evaluate the prevalence of undiagnosed skin cancers among patients hospitalized in rehabilitation and long term care units in a geriatric hospital. Patients and methods: All the patients, resident in four rehabilitation and long term care units and for whom no dermatological advice has been given, were systematically examined by a dermatologist and a resident in general medicine. Clinical data included patient age at the time of the study, gender, relevant historical information, skin phenotype and description of the cutaneous lesions. Biopsies were performed for all lesions of suspicious appearance. Results: Three hundred and six patients (79.4% women and 20.6% men aged from 55 to 103 years) were included in the study. Among all the patients, 63.9% were hospitalized for more than one year. Skin phenotype was clear for 93.5% of the patients. Thirty two out of 306 patients (10.5%) presented 42 suspicious lesions and they were diagnosed by histological examination as 16 basal cell carcinomas, 7 squamous cell carcinomas and 2 in situ melanomas. Skin cancers were localized on the head and neck in 80% of cases. The prevalence of patients with skin cancers was 5.6% in this population. Conclusion: The prevalence of skin cancers among patients hospitalized in geriatric hospitals justifies improved training of geriatricians regarding early recognition and dermatological assessment of cutaneous tumours.

**PB8 480 PREVENTION PROGRAM "EQUILIBRE" ABOUT THE RELATIONSHIPS BETWEEN FALLS AND DEPENDANCE.**

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In 1992, the Bourgogne-Franche-Comté region introduced a prevention program which then expanded all over France. Its objectives are to limit the risks, the frequency and the seriousness of falls and finally to limit fall consequences in terms of loss of autonomy of people aged 55 up to very old age. This campaign aims at improving the safety of movements and the autonomy of people in their own homes, decreasing the psychological impact of falls by learning how to get back to one's feet. The training of the stimulating staff meets precise specifications. This personnel is taught by professionals keen on prevention: Project designers, everyday-life assistants, and especially the stimulating personnel conducting a balance workshop are concerned by this training. At present, 400 people have been fully trained. The program offered may change over time depending on new scientific discoveries as well as on the ageing population. It is personalized thanks to a set of pre-and post-workshop tests. These tests make it possible to perform on-going evaluations along with a yearly final assessment. This action of prevention consists of ten one-hour long weekly sessions and individual exercises which can be performed straight from homes. 12000 people have already taken advantage of it. The profit on the quality of life is measured objectively in a forward-looking evaluation conducted by the Regional Observatory of Health. The cost price is highly competitive (1000 euros for the creation of the workshop and 700 euros for its renewal), partly financed by local authorities. The current program and its assessment have been largely financed by CRAM Bourgogne-Franche-Comté with also the creation of communication supports as posters, CDs and in 2008 a new DVD. Indeed, multiple partners have been working on this project and have brought together their own technical skills, making it a multidisciplinary approach.

**PB8 481 THE NURSING PROTOCOL DEVELOPMENT FOR OLDER ADULTS WHO NEED DAILY RHYTHM ADJUSTMENTS**

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Older adults in care facilities tend to suffer from dissonance of the daily rhythms. This is often caused by unnecessary or excessive medications because they are obliged to follow their facilities' daily schedule. Reducing unnecessary medications and providing adequate nursing care might improve older adults' quality of life, reduce the medical cost, and shorten the length of facility stay. The purpose of this study was to develop a nursing care protocol for older adults who suffer from disruptions in their daily rhythms, and to examine

the protocol's contents and its practicality. Method 1. Develop the protocol through the results from literature reviews and hearings from experts on Geriatric medicine, pharmacology, and nursing. 2. Conduct interviews with experienced nurses and care workers practicing at acute hospitals and long-term care facilities, and perform the content analysis focusing on the contents and practicality of the protocol. 3. Revise the protocol. Findings 1. The daily rhythm dissonance was categorised into four types. The protocol consisted of two parts: assessment strategies to identify the type, and care strategies for each type. 2. The attributes of the protocol voiced from nurses were: standardisation of care, an educational tool for the staff, and assurance for evidence-based care. 3. The factors that hindered practical use of the protocol were: the difference in older adults' physical status in each facility, time restraint to read and use the protocol, and the staff's resistance to the 'standards' and 'manuals'. Conclusion Although there were demands and necessity, it was indicated that the protocol needed refinement to be in use practically in a variety of settings. In order to achieve this, it was suggested that development of different versions of the protocol correspond to the different functions and characteristics of each care setting.

**PB8 482 HEALTH CONDITIONS OF ELDERLY JAPANESE RESIDENTS IN THE CITY OF SÃO PAULO, BRAZIL**

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Introduction. At the turn of the 19th to the 20th century Brazil adopted a posture receiving intensive immigrant to labour. Brazil is the country where there is the higher number of Japanese and their descendants outside of Japan. Some types of precarious conditions in childhood, associated with individual development factors, increase susceptibility to certain chronic diseases in old age. Methods and materials. In 2000, was held in São Paulo study knows – Health, Welfare and Ageing, research involving a sample of 2.143 people with 60 years, representing a sample expanded 836.223 elderly. The population of this study was composed of 43 persons who have declared was born in Japan corresponds to a sample expanded 11.854 elderly. The goal of this study is to correlate data concerning the conditions of health of older persons considered on the living conditions in childhood. Results. On the conditions of health in childhood, 100% of elderly people aged between 60 and 79 years old and 88% (80 years old and more) reported having excellent health condition before 15 years old. About the economic situation before the age of 15 years, 44,6% (60 - 79 years old) have evaluated as regular and 36,1% (80 years old and more) as good. Of all 11.854 Elderly Japanese evaluated 83,9% (60 - 79 years old) and 89% (80 years and more) have reported no childhood hunger. Approximately 50% informed that they had no diseases, 25,8% informed to have one and 26,6% two diseases. Self-reported diseases were Hypertension (43,9%), hearing impairment (29,1%), arthritis/rheumatism (15,4%), heart diseases (14%), urinary incontinency (12,7%) and diabetes (10,4%). Conclusions. There seems to be strong correlation with favorable conditions in childhood and better health conditions in old age, however, need to search more widely.

**PB8 483 PREDICTORS OF ALL CAUSE MORTALITY. – A 15-YEAR FOLLOW-UP STUDY IN THE GENERAL POPULATION**

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Introduction: Research in the predictive value of variables from domains such as socioeconomics, diseases, physiology, and general health has a long tradition in epidemiological research. Genetic determinants are believed to have a decisive impact on mortality. Few studies, however, have analyzed conjointly in a prospective cohort and compared to each other with regards to their validity and differential potential in the epidemiologic investigations of mortality. Methods and Materials: Longitudinal analyses in the Rotterdam Study, a population-based cohort of 7983 elderly persons. Information on 200 risk factors plus 100 selected genetic markers, single nucleotide polymorphisms (SNP), were related to 15-year mortality follow-up. Selection of SNPs was based on the mortality analyses of a consortium of cohort studies. Results: In total 48 variables were identified that independently predicted mortality. Genetic determinants, at least when measured by single nucleotide polymorphisms performed worst as predictors of all cause mortality. Analysis using time dependent receiver operating characteristic curves indicated social economic indicators to display constant, predictive qualities over time (C-index (5y, 10y, 15y) = 0.7898, 0.7493, 0.7159). Markers for disease history and physiology were strongly superior in predicting mortality in a shorter time frame but failed to remain strong predictors for long term mortality estimation. Measures relating to general health, e.g. measures of anthropometry, exhibited strong age dependent predictive accuracy for all cause mortality. Conclusions: Age and sex remain the strongest predictors of mortality. The selection of predictor variables of mortality in research and other applications strongly depends on the intended prediction window. Social economic status as described by income, education, and occupational status is predictive of mortality across a 15-year time period. Physiologic variables are strongly predictive for short term mortality but lose their

strength when trying to predict long term mortality. Single nucleotide polymorphism cannot be used to predict all cause mortality.

**PB8 484 OBSTIPATED ELDERLY: SYSTEMATIZATION OF INTERDISCIPLINARY TEAM INTERVENTIONS IN LONG STAY INSTITUTIONS, RESIDENCIAL ALBERT EINSTEIN. SAO PAULO-SP, BRAZIL**

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A prospective study of intervention was held aiming the improvement of the intestinal functioning of elderly in Long Stay Institution, reducing the use of invasive techniques for the relief of constipation, enabling a better quality of life. The average age was 85 years, being 100% dependents according to Katz Scale and for the mobility held by FIM. A survey was held indicating the number of Fleet Enemas® (a drug prescribed for constipation – invasive method) consumed from January to March 2007. It was verified that out of the 146 Residents at the institution 48 have been prescribed with this medication because of the constipation (every time the duration was ≥ 4days). Therefore, the "Obstipation Group" was formed by the interdisciplinary team and it was established a routine registration and forwarding of information about the constipation among the group, an adaptation of the menu, a follow up of the diet and the insertion of laxative juice at breakfast and the afternoon tea, training of the team and the introduction of laxative medication. It was noted that the action and intervention of the interdisciplinary team are of extreme importance in obstipated elderly as the use of invasive Fleet Enema method is reduced, being replaced by laxative non-invasive medication and non-pharmacological actions, such as the adequacy of diet, laxative juice and increase in hydric ingestion, improving the intestinal habit, which can reflect in a better quality of life.

**PB8 485 BENEFICIAL HEALTH EFFECTS OF DEEP BREATHING-BASED TAI CHI TRAINING IN POST-MENOPAUSAL WOMEN**

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**BACKGROUND:** Menopause and aging increase the risk of metabolic diseases related to oxidative stress. This risk is further increased with physical inactivity. Although physical activity has many health benefits, some exercises are not suitable for women with the advancing age. We hypothesized that a Tai Chi training program based on deep breathing improves lung function, antioxidant capacity, and reduces cardiovascular risks in post-menopausal women. **METHODS:** Seven pre-menopausal and 7 post-menopausal Thai women participated in an 8-week Tai Chi (TC) training program (4 sessions/week; 1 hour/session). Long-deep inhalations rhythmed by the signal of a Chinese music were combined with rotational TC postures. Dietary intakes, physical activity, functional assessments, and blood collections were analysed before and after the program. Routine biochemical measurements, total antioxidant status (TAS), erythrocyte- and plasma-glutathione peroxidase activities (GPx), erythrocyte superoxide dismutase activity (SOD), plasma malondialdehyde (MDA) and plasma homocysteine (tHcy) concentrations were determined. **RESULTS:** In both pre-and post-menopausal women, TC training significantly improved physical fitness (balance, flexibility, leg extension) and lung function (tidal volume, vital capacity). Percentage of fat mass and LDL-cholesterol were decreased. Plasma TAS and erythrocyte GPx activity were higher after the TC program while erythrocyte SOD activity and plasma MDA concentrations remained unchanged. Plasma total homocysteine concentrations - a cardiovascular risk marker - were lower (-17% in post-menopausal women) after the TC training. **CONCLUSION:** These preliminary results show that in addition to the well-known effects of Tai Chi training on balance, muscular strength and flexibility, the addition of slow and deep breathing to rotational movements of Tai Chi postures could be a suitable and acceptable physical activity design for menopausal women to improve lung function and prevent cardiovascular and other oxidative stress-related diseases.

**PB8 486 TROPICAL TUBEROUS ROOT VEGETABLES: ARE THEY SOMETIMES HARMFUL?**

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Introduction Tropical tuberous root vegetables (TRVs) used by many Caribbean and Latino Immigrants are abundantly available today in a variety of food markets in areas such as New York City. The consumption of high potassium TRVs can complicate late-stage chronic kidney disease (CKD) among those who are on hemodialysis. National databases and Tables of Food Composition (TOFC), including the U.S.D.A. Standard Reference, on which nutrient lists for the C.D.C. and the U.S. Renal Data System are based, have not kept pace with the importation of foods to the U.S. Hence, these published sources are not comprehensive and do not include some TRVs. Cross-racial data indicate that compared to their White counterparts, Black older adults in the U.S. including Caribbean immigrants

are four times more likely to develop CKD. Also, CKD is expected to quadruple in some developing Caribbean and Latin American countries. Many older adults at risk for and/or diagnosed with CKD in such countries immigrate to the U.S. Thus, the increasing prevalence of CKD in those countries negatively affects U.S. healthcare expenditures as well as the quality-of-life of affected persons. Methods and Materials The purpose of this poster is to raise the awareness of health care professionals, particularly policy makers of TRVs. This will be accomplished by: 1) picture illustrations of TRVs; 2) explaining potassium reduction methods (leaching) of TRVs; 3) comparing existing national and international tables of nutrients in foods. Conclusion Increased awareness of this issue will influence the modification of U.S. national TOFC. Comprehensive U.S. food lists will promote culturally appropriate nutrition education and therefore influence fruitful outcomes. Caribbean and Latino immigrants affected by CKD will benefit immensely. Other immigrants to the U.S. such as Vietnamese, South East Asians and Pacific Islanders will also benefit since these groups also consume TRVs.

#### **PB8 487 THE SIX MINUTES WALK TEST AFTER HIP OR KNEE SURGERY AFTER 80 YEARS OLD**

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**INTRODUCTION:** The Department of Physiotherapy in the Hospital of Aubusson (Creuse; FRANCE) receives more and more persons over 80 years old, which have had a surgery of the hip or the knee. We want to find a way to know if the length of the stay in the hospital can be predicted by the use of the test of the six minutes walk. **METHODS:** When a person over 80 years old arrives in the Department after a surgery, most of the time a prosthesis, of the hip or the knee, the physiotherapist measures the length that the person is able to walk during six minutes, with or without a technical help. An other test is done at the end of the stay. **RESULTATS:** A relation exists between the results and the length of time needed for the Physiotherapy and the stay in the Hospital. It is linked to the fragility and the other pathologies of the person. This test may help the medical and social team to prepare the return at home, with the necessary helps, a long time before the person leaves the hospital. **CONCLUSION:** Avery simple test can help to predict the length of an hospitalisation and to prepare the helps needed at home.

#### **PB8 488 CLIMATE CHANGE AND THE HEALTH OF OLDER PEOPLE**

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**INTRODUCTION.** Demographic change in Europe will see fundamental changes in the age structure of all member nations, with a clear trend towards population ageing. This trend appears to be inexorable, with all forecasts of the UN and other global authorities consistently underestimating the rate of growth. Co-incident with population ageing is the phenomenon of climate change which carries with it the increased risk of low-incident high impact events such as heat waves, episodic extreme cold, hurricanes and other disaster related incidents. Therefore Europe faces simultaneously an increase in climate change induced risks to health and an increase in the numbers of vulnerable older people. **METHOD.** A literature review was undertaken to assess (1) the extent to which models examining and quantifying the effects of climate change on public health had factored in the specific vulnerabilities of older people; (2) the preparatory and responsive measures, if any, which are in place in Europe to mitigate the effects of extreme events on the older population (3) the research which is required to provide data to underpin public responses to the effects of climate change on the health of older population **RESULTS AND CONCLUSIONS.** Studies on the effects of climate change on health of older people are few. Many models provide categories of high confidence for the prediction of health effects and for their quantification, eg WHO 2000. However, few papers collectively report on the severe high risk consequences of ageing physiology and the increased prevalence of frailty amongst the older population. Many governments, eg France, have taken steps to install Heat Health Watch systems but the effectiveness of these systems have not been systematically tested. Some other governments, eg UK, have made advances in health forecasting and more research is required to demonstrate their validity and reliability.

#### **PB8 489 COMPARISON BETWEEN SUBJECTIVE AND OBJECTIVE ASSESSMENT OF VISION AND HEARING IMPAIRMENT**

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Introduction. Vision and hearing impairments are common physical handicaps among the aged, associated with limitation to quality of life and social roles. These impairments are often assessed by subjective report without actual measurement. The aim of the present study is to evaluate the agreement between subjective and objective assessment of vision and hearing impairment. Methods. Cross-sectional study was conducted in 516 elderly

subjects (223 males, 293 females) aged 47-94 (mean 64.2) selected from nationwide sample of Korea Longitudinal Study of Ageing (KLoSA) in 2008. Trained nurses measured visual acuity with standard eye chart and hearing with pure tone audiometry (0.5, 1, 2, and 4 kHz). Impairment was defined by 0.5 or lower score in the better eye, and by failure to hear average tone of 40-dB at 0.5, 1, 2 and 4 kHz in the better ear. Corrective devices were used if needed. Subjective impairment was defined by self-rating of the lower 2 of 5 point scale. Kappa coefficient and logistic regression were used for data analyses. Results. Overall agreement was poor ( $\text{Kappa} < 0.4$ ) for both vision and hearing. Self-rated impairment tended to be less frequent than objective impairment. Disagreement increased significantly with age, but was not associated with education or poor performance in MMSE (mini-mental status examination), for both vision and hearing. Compared to the younger group (47-54), the oldest group (75+) was associated with increased odds ratio (OR) for disagreement: 4.2 (95% CI 1.9-9.3) for vision and 6.0 (1.7-21.0) for hearing, adjusting for covariates. Conclusions. There were poor agreements between self-rated and measured vision and hearing status. Disagreement was greater for the oldest old group. Older persons may adapt to the vision and hearing impairment and may become less aware. Objective measurement may reduce undetected impairments restricting quality of life.

#### **PB8 490 DESIGNING THE EVALUATION OF HEALTH PROMOTION PROGRAMMES INTENDED FOR AGING AND « HEALTHY AGING » : LEARNING FROM ONE REGIONALIZED COMPONENT OF A NATIONAL PROGRAMME IN FRANCE**

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**Context :** Like most of health promotion activities, the evaluation of « healthy aging » programmes raises challenges for performing value-added evaluation. But next to the common issue of measuring impact of health promotion in complex and multifactorial environments, the stakes for the domain of « healthy aging » may be further complicated by important time lags in expected results, by multiple interventions around aging people, by important intervening factors such as social or economic status. However, the evaluation process of such programmes is key for improving their efficiency and their relevance in a near future. In the context of a national evaluation process of a regionalized component of the 2005-2006 « healthy aging » programme in France, a dedicated project was conducted. **Methods :** In order to design a comprehensive model, a review of both the evaluation literature and the different national programmes was realized. The diversity of components of such programme required the mobilization of several approaches to cover the different issues. We finally took the option of a multilevel approach associating both qualitative et quantitative approaches. A single database was created with the 364 projects, in order to facilitate programme analysis and evaluation. A serie of interviews was conducted and analyzed with a selected list of experts and main stakeholders. Systematic field visits were organized with the totality of the 22 regions involved with a project review and rating, and additional interviews were organized with a selection of project holders in order to further assess the perceived outcomes of the programme. **Results :** The literature did not provided evidence of a single model to address the diversity of areas and concerns related to the programme. Next to the usual set of opinion-based qualitative analysis and indicators, we found that a set of semi quantitative tools derived from strategic analysis can facilitate the evaluation process and communication among stakeholders. It was also found that the necessity for project holders to perform an autoevaluation required further preliminary approaches and simpler tools. We propose a concurrent evaluation standardized approach, which may fit more closely to the context, and may provide both better project follow-up and impact measurement.

#### **PB8 491 EVALUATION OF A PROJECT-TARGETED COMPONENT OF A NATIONAL HEALTHY AGING PROGRAMME IN FRANCE: METHODOLOGICAL ISSUES, PRELIMINARY FINDINGS AND IMPLICATIONS FOR STAKEHOLDERS**

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**Context :** In the recent years, most countries have implemented national initiatives on « healthy aging », focusing on the importance of health promotion and social links in preparing and experiencing the old age. Such programmes are linked to other components of national policies on ageing. International agencies (WHO, OECD, European Commission...) advocated such commitment for member states which developed answers through various projects at the national level and/or through regional networks. In France, a national programme was initiated in 2005 and 2006, expanded in the following years through a national Plan on « Healthy Aging ». Various dimensions were selected (health, environment, intergenerational link). Based on a decentralized process, 364 projects in 22 regions were selected and funded for the years 2005 and 2006. These projects were proposed by a highly diversified set of institutions and professional bodies. **Methods:** A global evaluation project was launched and conducted in 2008, in order to assess the various components of the programme, and to optimize further national initiatives on the

matter. Various steps were completed for defining methodology and tools. After the definition of the evaluation model, a multilevel approach was conducted. Next to the procedural and descriptive components of the evaluation, several factors have been investigated such geographical variations, quality of self-evaluation, associations of themes. A review of indicators was conducted, and approaches for identifying success factors were developed. Results : Several recommandations stem from the evaluation project performed : reinforcing knowledge and training on Healthy Aging at the local level, integrating more systematically such programme in the regional public health framework, reinforcing the commitment and participation of geriatric caregivers, promote the method of concurrent evaluation. Further international comparisons projects could also foster the impact of healthy ageing programmes and their social integration in national systems.

**PB8 492 OUTBREAK OF A VAN A STRAIN OF ENTEROCCOCUS FAECIUM IN A GERIATRIC WARD : ABOUT 91 CASES.**

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Introduction : Glycopeptid resistant enterococci first emerged in the United State and more recently in Europe. Vancomycin resistant enterococci (VRE) have emerged in our hospital as a significative problem in February 2005. Outbreak of VRE colonization associated with a clonal strain of enterococcus faecium Van A affected some units like nephrology, hematology, hepatogastroenterology and our geriatric unit. An active surveillance was initiated from February 2005 to limit dissemination. Methods and materials : rectal swab surveillance cultures was performed for all patient admitted in the geriatric unit (47 beds); retrospectively, demographic and clinical data (underlying diseases, antibioticotherapy) were collected for patients from whom VRE were isolated and analyzed. Results: 91 patients were colonized (mean age 83 + or - 7 years) ; 33 % of men, 48,4 % come from community but 51,6 % were hospitalized in the last 6 months. 12 % have malignancy pathology, 29,7% chronic digestive pathology. Before colonization, 46,2 % have had antibioticotherapy in the last month ; antibiotics was préciséd in 87 patients : 19,8 % cephalosporin, 17,6 fluoroquinolone and only 3,3 % glycopeptide. In 11 %, previous multiresistant bacteria has been identified. Death occurred in 23,1 % but none was related to a VRE infection. Conclusion : Geriatrics patients are at a high risk of colonization because of multiple comorbidity, susceptibility to infections leading to use several classes of antibioticotherapy, and longer hospitalization ; overuse of antibioticotherapy, may favorise emergence of resistances and guidelines for administration of antibioticotherapy should be developed.

**PB8 493 ASSESSMENT OF PHYSICAL CONDITION IN ELDERLY AND RELATION WITH THE LEVEL OF PHYSICAL ACTIVITY.**

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Introduction With the ageing population, maintaining independent living of the elderly is a major public health concern for which physical activity can play an essential role. To meet the needs of this population it is necessary to adapt physical activity programs according to their wishes and their physical condition level. It is therefore essential for the professionals to have easily applicable tools for evaluation in the field and/or clinical practice. The objectives of this study is to measure the level of physical condition of elderly in order to establish French references values for the different "Senior Fitness Test" elaborated in the United States and to investigate the relation between the level of physical condition and the level of physical activity. Methods and Materials Between February and April 2009, 1200 men and women, aged 60 to 94 years, will be involved in the study. The subjects are recruited by the Sports for all French Federation in various counties in France among their members or during action of physical activity promotion within the general population. A questionnaire to assess the physical capacity to realize the tests and a questionnaire to assess physical activity level will be administered. The subjects will be weighed, measured and the 7 physical condition tests will be administered in a predetermined order. Results and Discussion The preliminary results will be presented. The discussion will notably concern the interest to use these tests in a physical activity promotion strategy in everyday life, both for the elderly and for the professionals. The reference values will allow determining the physical condition level of a subject with regard to subjects of the same age and the same sex and will be useful for a better counseling in the practice. A French guide of administration and interpretation of the tests has been developed and offered to the professionals of physical activity and health professionals. The development of a specific system of data collection (on-line or off-line) will allow the follow-up of the subjects.

**PB8 494 RECRUITMENT STRATEGIES IN THE MULTIDOMAIN ALZHEIMER'S DISEASE PREVENTION TRIAL (MAPT):LESSONS FROM THE ACCEPT STUDY**  
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Introduction Despite the growing number of trials conducted among older adults, recruitment remains difficult because of the specific limitations observed in this population. Recruiting elderly persons to trials involving pharmacologic agents, especially OTC drugs, is particularly problematic. Prevention trials are highly challenging because of the larger sample size required and the need to maintain elderly persons in a placebo-controlled trial for several years. Nevertheless, achieving recruitment goals is crucial to provide sufficient statistical power. The aim of this study was to compare recruitment rates of different recruitment strategies in a cognitive decline prevention trial. Material and methods The ACCEPT study, which is an ancillary study of the MAPT study, aimed to assess factors associated with acceptance or refusal to participate in a cognitive decline preventive trial. MAPT is a 3-year randomized, placebo-controlled trial assessing the efficacy of omega-3 fatty acid supplementation and a multi-domain intervention on cognitive functions. It was planned to recruit across 4 centers 1200 frail elderly subjects aged 70 years or older, living in the community. A GP network and memory clinics participated in the enrollment process. Conferences (senior centers, community centers, retirement communities) were organized. Mass media was also used (press release in newspaper and television).The main outcome measure was recruitment rates; secondary outcome was achievement of target recruitment. Results So far, among 228 subjects who agreed to participate in MAPT, 201 accepted to provide their reasons for participation. Moreover, 121 refused to participate, among whom 68 accepted to provide their reasons for refusal. The recruitment rates of each recruitment strategy will be presented, and the reasons for refusal or acceptance to participate. Conclusion This study will provide data concerning barriers to participation in a cognitive decline prevention trial, and may help to design appropriate interventions in order to improve future recruitment of elderly persons.

**PB8 495 SCREENING FOR MODIFIABLE RISKS FACTORS IN ELDERLY PEOPLE: PRELIMINARY RESULTS OF MAPT STUDY**

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Rationale: Epidemiological studies suggest that occurrence of cognitive decline and neurodegenerative diseases such as Alzheimer's disease could be modulated by lifestyle factors even in elderly people. Methodology: Multi-domain Alzheimer Prevention Trial (MAPT) study is a large intervention trial aiming to compare the efficacy of omega 3 fatty acids and/or non pharmacological intervention for preventing cognitive decline in frail elderly subjects. This study is undergone in 4 university hospitals in France and should recruit 1200 frail elderly people over 70 for a 3 years follow-up. At year 1 and year 2, a screening for modifiable risk factors is planned in the intervention group. Assessment includes visual or hearing testing, screening for mood disorders, nutritional assessment, gait and balance evaluation, and screening for vascular risk factors. We report here the results of the 30 first screening assessments made in the frame of MAPT study. Results: We examined 30 subjects, 13 men (mean age=75 years), and 17 women (mean age=77 years). We found no significant affective disorder or gait impairment. 5 of the 30 subject (17%) suffer from obesity. 1 case of uncontrolled diabetes, and 8 cases of uncontrolled hypertension were observed. 4 unknown and untreated cases of hypertension were found. Conclusions: systematic screening allows detecting some treatable conditions that represent potential risks factors for cognitive decline. This assessment could be generalized in order to increase the awareness of elderly people and their GP for lifestyle factors in prevention strategies.

**PB8 496 RETRIEVED DROPOUT VISITS: ADVANTAGES AND LIMITATIONS IN PREVENTION TRIALS FOR ALZHEIMER'S DISEASE**

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Context Prevention trials involving elderly persons are becoming increasingly common. Alzheimer's disease (AD) prevention trials are of long duration and involve large numbers of elderly subjects. Dropouts are frequent due to participant age, and the progressive nature of AD. Methods Missing data must be taken into account during analysis. LOCF is commonly used, but is unsuitable in AD prevention trials due to the underlying assumptions (missingness mechanism; no change after dropout). Other more sophisticated methods are available which do not require data to be missing completely at random, but none are perfect. It is therefore important to limit missing data. Various strategies can be

employed, but in particular due to the burdensome nature of assessments in AD prevention trials, there will always be some dropouts. A retrieved dropout visit (in person or telephone) can be proposed at the theoretical end of follow-up to try and obtain a minimum amount of relevant data, for example concerning the primary outcome (dementia conversion), vital status, and living arrangements. Results Typical attrition rates in prevention trials involving elderly participants will be presented, along with the percentage of studies reporting the use of a retrieved dropout visit. The success rate of retrieved dropout visits (% of participants accepting) will also be presented. Conclusions Retrieved dropout visits may be a useful way of minimising missing data and several authors have now highlighted the need for retrieved dropout visits in AD trials. However, there are certain limitations, as only a minimum amount of information is collected at only one time-point. Not all subjects who dropout will agree to the retrieved dropout visit, meaning that there will still be an element of selection bias. Furthermore, dropouts will occur at different stages of the trial, and so subjects will have different durations of exposure to the treatment under study.

#### **PB8 497 SECONDARY PREVENTION OF FALLS AMONG OLDER PEOPLE IN PRIMARY HEALTH CARE**

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One in three persons over 65 years of age experiences a fall at least once a year. There may be several internal and external risk factors behind the falls. External risk factors include slippery walking surfaces and poor lighting. Internal risk factors include various illnesses, the use of psychopharmaceuticals or medication affecting the central nervous system, poor muscle strength, poor balance, impaired vision, depression and alcohol use. This research is based on a study on the prevention of falls among the elderly conducted in Finland in 2003-2006. In connection with the study, a fall prevention programme aimed at risk groups and a scale for charting risk factors were developed. The feasibility of the programme is being tested in Finnish basic health care. During the first phase, a scale including the internal risk factors of falling is constructed based on previous research data. Three nurses are then trained as Fall Nurses; all patients over 65 who come to the health care centre after having a fall are referred to them. For each patient, the Fall Nurse charts the internal risk factors related to the fall and provides information based on the risks discovered. The project involves a one-year follow-up on fall risk factors, the guidance provided by the Fall Nurses and the efficacy of counselling and the measures taken. After this, the prevention programme will be re-evaluated. During the next phase, the scope of activities will be expanded to cover several municipalities. The goal is for every municipality to have a nurse, with special competence in falls working in close cooperation with other professional groups. The activities of the Fall Nurse have an impact on the prevention of falls among the elderly, working in close cooperation with other professional groups in an active manner and showing initiative.

#### **PB8 498 A NEW PATH IN GERIATRIC HOSPITALISATION : THE POST-ACUTE GERIATRIC UNIT.**

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Introduction: faced with a shortage of hospital geriatric care, new structures have been created: the post-acute geriatric units. One of these opened in 2006 at the Hospital of Pau (South-West of France). It has 12 beds and operates with a higher staff ratio than other "more classic" geriatric medicine departments. Materials and Methods: we present here the specific mode of operation and the activity of this unit during 2007 as well as the study of the readmission rate at one and six month during that year. Results: admission criteria in this unit are: an age>75, patients coming exclusively from emergency departments, patients whose "forecasted" length of stay does not exceed 4 to 5 days, and for whom a return where they used to live is favoured. In 2007, 822 patients were admitted, their mean age was 86. The most frequent pathologies were: falls(27%), lung diseases(16%), gastroenterology(14%), neurology(11.5%), cardiology(10.5%). The mean length of stay is 4.4 days and the occupation rate is 82 %. 75 % of patients return where they used to live before their hospitalisation. The readmission rate at 1 month is 11.5 %, at 6 month 30.4%. Conclusion: post-acute geriatric units offer a new orientation path and geriatric care. They allow, in spite of a short length of stay and a return at the patient's usual home in three-quarters of cases, to obtain readmission rates similar to those seen in classic geriatric medicine units. However a number of readmissions remain avoidable and in future other medico-social structures such as geriatric Hospital at Home care or autonomy homes will probably have to be developed. This will enable us to act earlier for frail older people who are at risk of physical or mental decompensation.

#### **PB8 499 POLYMBODIDY IN ELDERLY: CONTRIBUTION OF PREVIOUS SURGICAL PROCEDURES**

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**INTRODUCTION:** Polymorbidity is generally considered as a typical geriatric phenomenon. Unfortunately only scarce data on true polymorbidity are published. Almost no data are available on the contribution of previous surgical interventions (PSIs) to the cumulative polymorbidity in later age. At the same time many patients require further close follow-up, pharmacological substitution, rehabilitation and/or psychological support after PSIs. **METHODS:** In a retrospective open study polymorbidity was evaluated in patients being discharged during one year from acute geriatric department in a university hospital. We assessed 1028 pts., 65 – 102 yrs. old (average/median age 78.2/78 yrs.), M/F 36.4/63.6%. All diagnostic data were extrapolated from the discharge reports manually. **RESULTS:** The average number of PSIs in one patient was 1.69 (SD 1.4; range 0 - 7), median number was 2. More PSIs were documented in women (M/F 1.6/1.8, p 0.02). Only 21.9 % of patients had no previous surgery, but 23.5 % of patients had 3 or more surgeries. PSIs represented 8.1 % of all diagnoses at discharge. During one year 168 different PSIs were present. There were eight PSIs with prevalence higher than 5 % (highest: cholecystectomy – in 26.7 % pts.), representing 56.2 % of all PSIs. Most frequent PSIs were those concerning the gastrointestinal tract (41 % of all PSIs). There was no significant correlation between age and number of PSIs, but the age-dependent rate was visible in some surgeries. Higher than average mortality was observed in patients with previous hip replacement. **CONCLUSION:** The contribution of PSIs to the polymorbidity of elderly is remarkable. Physician in an acute geriatric department is confronted with a wide range of PSIs in his patients. Our data could be of importance not only for gerontology, but especially for practical clinical approach and health care management.

#### **PB8 500 THE IMPORTANCE OF THERAPEUTIC CLASSIFICATION ON DRUG COMPLIANCE IN THE ELDERLY.**

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Introduction: Aging process presents many features that can interfere in the efficacy of drugs in the elderly patients. Since elderly patients are the most prescription-drug consumer aged group, drug compliance is a great concern for health professionals, particularly for the pharmacists. This study aimed to understand if different therapeutic class of the medication interferes in the compliance of the drugs in the elderly. Methods and materials: Using the data from a population based study in Porto Alegre, Brazil, participants answered a questionnaire assessing drug consumption and compliance. Using the Anatomical-Therapeutic-Chemical Classification System to classify the most consumed drugs we measured the risk of each classification group of been compliant to the drugs. Number of drugs (polipharmacy), age and gender were confounders used in the models. Results: 438 participants (355 women, 159 men), mean age 70.2 (range 60 to 96 yo), answered the questionnaires. Only 36.3% of the subjects were compliant with the treatment. Cardiovascular ( $p=0.053$ ) and musculoskeletal ( $p=0.007$ ) were significantly associated with compliance. However, only musculoskeletal drugs remained significant ( $p=0.035$ ) when adjusting for polipharmacy. Conclusion: compliance is a major problem in the elderly, polipharmacy is a strong predictor of compliance failure. Drugs affecting symptoms may positively affect compliance. Health professionals should be aware about the difficulties an elderly patient faces when taking multiple drugs.

#### **PB8 501 ANEMIA IN THE ELDERLY**

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**Abstract Background:** Anemia in elderly is not caused by physiologic ageing process and should be seen as part of the frailty syndrome leading to increased secondary morbidity. Symptoms of anemia in elderly are not specific and therefore often neglected. It was the aim of this study to evaluate the prevalence of anemia in elderly and to investigate its causes in elderly patients submitted for various reasons into a University Hospital. **Methods:** 2 391 patients older than 65 years were seen for further treatment at different Departments at the Medical University of Graz from March 1st to March 31st 2007. Computed patient's records were followed for medical history as well as laboratory measures. **Results:** Out of 2 391 elderly patients 601 followed the criteria "anemia" as defined by the World Health Organization (WHO) indicating a prevalence of 25.1% for anemic patients. 272 of 355 anemic patients (76.6%) were malnourished according to serum albumin levels measured in patients (threshold level for malnutrition according to literature <3.5g/dL). In 61% of our patients with low serum- hemoglobin- concentrations

indicating anemia due to WHO standards the diagnosis of anemia was not listed in the discharge letter. Discussion: Our data indicate the clinical impact of anemia in elderly patients submitted for further treatment to a University Hospital. Leading cause of anemia in our cohort of elderly patients was "anemia associated with malnutrition". The awareness of the clinical impact and diagnostic procedures in elderly patients in the University Hospital Setting seems to be, at least in our hands, rather low. The underreporting of anemia in combination of malnutrition in elderly patients in the acute care hospital reflects the needs for further training of doctors in the field of geriatric medicine and frailty.

**PB8 502 ADMITTING ELDERLY PEOPLE TO A GERIATRIC SHORT STAY: DIRECT ADMISSIONS VERSUS ADMISSIONS BY THE EMERGENCY DEPARTMENT (ED).**

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Introduction: The increasing number of elderly people and the fact that the ED are likely to get jammed require to optimize the way we take care of old patients in amount of hospital. It is necessary to favour direct admission to hospital for those old frailty and polypathological patients. Methods and materials: Retrospective study of all patients who were hospitalized in the geriatric short stay in the hospital complex in Valenciennes (North of France) from the first of November 2006 to the twenty-eighth of February 2007. We compared the patients who were admitted directly to the ones who went through the ED. Results: Both groups were old and mostly composed of women. The patients who were directly admitted were more living in nursing homes ( $p=0.01$ ), stayed less in hospital ( $p=0.005$ ), underwent 45% less complementary examinations ( $p<0.001$ ). Direct admissions included more patients with dementia ( $p=0.02$ ). The exit diagnosis showed no significant difference except for cardiovascular, nephritic diseases and for behavioural troubles. The evolution of both groups was similar even for the mortality rate. Conclusion: These two groups of patients had little differences in their demographic characteristics as well as in their pathologies and evolutions. Direct admissions proved to be more beneficial: • The average length of stay, the number of complementary examinations and therefore, the costs of hospitalizations were reduced. • It was taken care of patients with dementia in a faster and more suitable way. We have to keep general practitioners informed of the advantages of direct admissions to strengthen the town-hospital network. We also need to improve the way the ED deals with elderly patients who could not be directly hospitalized.

**PB8 503 THE UNDERREPRESENTATION OF INDIVIDUALS 80 YEARS OF AGE AND OLDER IN CHRONIC DISEASE GUIDELINES**

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Introduction: Quality improvement is a priority for health care in the 21st century and many evidence-based clinical guidelines have been developed to ensure high standards of care for chronic disease management. Underrepresentation and low participation of elderly in intervention studies, clinical trials and clinical practice guidelines, however, is a significant concern given population aging worldwide, limiting both generalizability and clinical usefulness of findings. Purpose: The purpose of this study was to analyze 5 Canadian chronic disease guidelines (CDGs) to determine whether CDGs and evidence used to create CDGs includes individuals 80 years of age and older, the population segment with the greatest impact on health utilization and cost. Methods: 2008 diabetes, hypertension, heart failure, 2006 stroke and 2002 osteoporosis guidelines were analyzed to identify recommendations for individuals  $\geq 65$  years,  $\geq 80$  years and those with multiple chronic conditions. This was followed by analysis of all references in the 5 guidelines (diabetes n=1883, hypertension n=63, heart failure n=201, stroke n=100, osteoporosis n=394) to determine representation of older individuals. Non-human, non-intervention studies (n=704) and those not reporting a mean age (n=367) were excluded, leaving a total reference sample of n=1570 (diabetes n=1118, hypertension n=25, heart failure n=111, stroke n=31, osteoporosis n=285). Results: While 4 of 5 guidelines provided specific recommendations for individuals  $\geq 65$  years, none provided recommendations for individuals  $\geq 80$  years. Furthermore, only 12 of 1570 studies used to support guideline recommendations reported a mean age of  $\geq 80$  years, even though this group forms the predominant population who suffer from these conditions. Conclusion: There is very low representation of individuals in advanced old age in CDGs and the studies upon which these guidelines are based. Because of the complexity of medical and functional problems in the very old, the applicability of current chronic disease guidelines to this sector of the population is doubtful.

**PB8 504 IMPROVING THE PRIMARY CARE PRESCRIPTION OF HYPNOTIC AND ANXIOLYTIC DRUGS IN THE FRENCH ELDERLY**

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**INTRODUCTION** The remit of the French National Authority for Health (HAS) is to improve quality and safety of care. The prescribing of hypnotic and anxiolytic drugs (H/A) is often inappropriate and higher in France than in other European countries, especially in the elderly, more exposed to side-effects. To monitor prescribing practices and to identify corrective actions, specific data of H/A in the elderly and comprehensive analysis of the real life situations of prescription are required. **METHODS AND MATERIALS** In close collaboration with geriatrics, psychiatrics and general practitioners, the circumstances of prescriptions in insomnia and anxiety were analysed in order to identify (i) the reasons of prescriptions (ii) the drugs used. The H/A consumption overall the elderly French population was measured using the National Health Insurance database. The data were analysed with health professionals to elaborate implementation tools for good practices. **RESULTS** In 2007, 3,498,826 people over the age of 65 (34.8%) had long term H/A prescription, respectively 27.6% in the 65-74 y.o., 39% in the 75-84 y.o., 46.8% after 85 years. New prescriptions of benzodiazepines concerned 358,738 people after 65 years (3.5%) between the 1st of September and the 31st of December 2007. To improve practices in the elderly in ambulatory setting are proposed : (i) implementation tools for good practices (reminders, clinical cases, diagnosis tools, guidelines for the discontinuation of BZD in the elderly), (ii) professional sessions to discuss about clinical experiences; (iii) press conference to promote key messages. All reports, figures and tools are available in a dedicated section of HAS website (has-sante.fr). **CONCLUSION** The H/A overuse is confirmed: key actions to reduce first and renewal prescriptions have been undertaken and the H/A consumption will be followed each year. However, a media campaign on the H/A in order to sustain the changes in practice is probably necessary.

**PB8 505 THE 'OLDEST OLD' AS RESEARCH PARTNERS: A CRITICAL REVIEW OF PARTICIPATORY RESEARCH WITH PEOPLE AGED 80 AND OVER**

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Introduction: Various approaches facilitate client involvement in research. Participation can range from that of research subject to active partner in all elements of the research process. A recent review found that older adults are increasingly involved as partners in health research to inform policies and services. The extent of participation by the oldest old, a fast growing segment of the older population, is unknown. This review evaluated the scholarly literature on actively partnering with people aged 80+ in health research. Methods: Electronic databases (Medline, CINAHL, PsycINFO, Scopus, Ageline, Abstracts in Social Gerontology, Embase, AMED) identified peer-reviewed English language papers, 1995-2008. Papers reporting persons aged 80 as active partners in any part of the research process were included. Bibliography reviews identified further articles. Two reviewers evaluated papers using the McMaster Critical Review Tool and a template for data extraction. Results: Over 780 citations met some of the inclusion criteria. Many papers had limited details regarding participant involvement; others did not state ages. Various terms described active research involvement (e.g., community-based participatory research, user-involved research), pointing to the need to clarify these terms. Four papers reported involving people aged 80+ as active research partners. Participation included determining research priorities, providing feedback on instruments, collecting data, developing interventions, and using findings to stimulate action. Emerging themes indicated the importance of participatory research in reflecting the interests of older adult. Conclusions: Researching with, rather than on, communities is continually promoted, but few studies engage with the oldest old as active partners. Most papers reviewed here grouped all older adults as 65+. The paucity of evidence makes it difficult to confirm the value of participatory research with this group. More studies are needed to evaluate the outcome of participatory research with the oldest old in terms of achieving specific community and systems change.

**PB8 506 THE INTERVENTIONS TO REDUCE LENGTH OF STAY AT THE EMERGENCY DEPARTMENT OF GRENOBLE UNIVERSITY HOSPITAL ARE EFFICIENT FOR ELDERLY PATIENTS.**

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Introduction. Patients older than 75 years represented 20 % of admissions in Emergency Department of Grenoble in 2008. Risk of complications increases with their length of stay at Emergency room. This study aimed at assessing the efficiency of changes in care management at the Emergency room on the length of stay of elderly patients. Materials and methods. In 2007, an audit identified causes of time wasting in care management at the Emergency department of Grenoble University Hospital and defined improving interventions. Monthly data on care management and length of stay of patients attending the Emergency Department were compared before and after implementation of corrective measures, respectively in April 2006 and in April 2008. Benefit according to age (patients aged 15 to 75 years versus older than 75 years) was assessed. Results. In 2008, 16% of

patients attending the emergency room were older than 75 years (no difference with 2006). A length of stay decrease (-10%) was observed among all patients and was higher among elderly ones (-18 %, with a reduction of almost 75 minutes). Delay before first medical management was improved (decreasing from an average of 3 hours to an average of 1 hour , representing of 67 % reduction), the absolute gain being the highest among elderly (with an average 3 hour reduction). Home discharges or admissions in specialized services occurred before the sixth hour for 80% of elderly patients in 2008. Conclusion: Elderly patients had more benefit than younger ones from care reorganization at the Emergency department. Reduced length of stay represents a chance to reduce adverse health outcomes. To decrease complications linked to unplanned admissions, other factors have to be considered: opportunity of direct admissions in geriatric medicine units, availability of equipment to prevent immobilization complications and availability of beds in geriatric medicine units.

**PB8 507 OSTEOPENIA AND OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN**

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Introduction: Osteoporosis is a high prevalent disorder characterized by predisposed people who have damages in the bones mass. Presuming that this damage begins in young women, the present study had as an objective to identify the prevalence of osteopenia and osteoporosis in women whose ages vary from 45 to 59 and from 60 or more. Material and Method: The study analyzed the secondary data of the patient's files referred to the years of 2000 to 2006, under the approval of COETICA- #164/2006, related to: age, the first and the last appointment's dates, the result of the bones mineral's density (DMO) classified by the categories: normal, osteopenia and osteoporosis. Results: The osteopenia was detected in adults and elderly women in the initial exam and in the last diagnostic. However, after the treatment, it was detected an increase in the osteopenia and a decrease in the osteoporosis's cases in elderly women. In patients aged 60 years and over the osteopenia increased from 47.1% to 56.6% in this age group, and the decrease in cases of osteoporosis (42.5% to 33.0%), observed data with statistical significance (qui square=160, 595, p = 0.000). Conclusions: In terms of Public Health, these findings are reasons for a precocious detection, warning to have a routine evaluation that is justified by the concern that osteoporosis should not be involved not only in the specialties but in all the levels of the services of health.

**PB8 508 MEDICAL STUDENT EDUCATION IN GERIATRIC MEDICINE, A HANDS-ON APPROACH**

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Introduction: Studies have shown that as medical students advance through their training, there is an increased negative bias in the treatment of geriatric patients. In an effort to improve the exposure of medical students to geriatric syndromes early in their medical school education, a 4 month curriculum was created targeting nine key areas in geriatric education, including gait and balance, wound care, functional assessment, end of life issues and mental status evaluation. Second-year medical students enroll in the program on a voluntary basis. A pre-test is given prior to the start of the course. The students participate in 1.5 hour workshops biweekly, with segments composed of a 20 minute didactic session and a one hour practicum. At the end of the course, a post-test is given to assess improvement from baseline knowledge. The post-test is identical to the pre-test. Methods and Materials: Data was collected since the initiation of the course in 2003. A total of 91 2nd year medical students have completed the course, as well as both the pre- and post-test. The overall scores on the pre- and post-tests were compared using paired t-test analysis. Students demonstrated significant improvement on knowledge assessment, with mean scores increasing from 59.5% on pre-test to 79.5% on post-test ( $p < .0001$ ). Results: Analysis of the pre/post-test data shows a clear improvement in overall scores. In addition, course evaluations indicated that students felt the course improved their overall knowledge in geriatric syndromes and should be continued as an elective within the medical student curriculum. Conclusion: The introduction of geriatric medicine early in the course of medical student education is an effective way to expose students near the beginning of their training to geriatric patients and geriatric syndromes and positively influence both knowledge and attitudes in the treatment of the elderly.

**PB8 509 RETOOLING FOR AN AGING AMERICA – THE NATIONAL INSTITUTE ON AGING RESPONSE**

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Introduction: In April 2008, the Institute of Medicine (IOM) released "Retooling for an Aging America: Building the Health Care Workforce." The report noted that there is a need for more specialists in geriatrics who can train other health care providers and generate new knowledge. It also recommended that new models of care be developed. The National Institute on Aging (NIA) is the primary NIH institute tasked with aging research funding and has been a leader in preparing the nation's aging research workforce. In response to the IOM's recommendations, NIA conducted an analysis of NIH's investment to establish a baseline for future activities, determine gaps in critical areas, and identify opportunities for collaboration. Methods: A retrospective review of funded grants using CRISP and two internal portfolio search applications was conducted using various combinations of the search terms aging, geriatric, workforce, geriatric care, staffing, personnel, caregiver, physicians, nurses, certified nurse assistants, nursing home, long-term care, recruitment. Results: Since 1977, 194 grants have been funded by NIH with a primary focus in keeping with the search terms. Of those, NIA accounted for 70%. From 1999, approximately 68 grants have been funded by six NIH institutes (NCI, NIA, NIDCR, NIMH, NINR, NLM) focused on the search terms. Of these, 60% were focused on training. 73% were funded by NIA. Analysis of these portfolios indicates significant investment in developing evidence-based models of care for older adults. Conclusions: NIA has a long and accelerating history in leading initiatives responsive to the 2008 IOM report. Much of NIA's responsiveness has been through training of scientists in aging research. Future steps in implementing the IOM recommendations will require recruitment of additional scientists for NIA/NIH training programs, effective dissemination of established findings, and focus on areas that have not previously been addressed.

**PB8 510 EVALUATION OF THE OMISSION OF TREATMENT IN ELDERLY**

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INTRODUCTION The acts of omission i.e. failure to prescribe drugs when indicated is a prevalent problem in elderly. START is an instrument that helps in identification of the omission. The aim of this study is evaluate the omission of treatment enclosed in START in the first attendance and after follow up in a clinic of geriatrics. METHODS AND MATERIALS Medical records of the patients who had the first attendance on the clinics between 2005-2007 are revised. START was filled with the data of the first and the last attendance. The diseases enclosed in the instrument were atrial fibrillation, coronary, cerebral or peripheral disease, hypertension, heart failure, myocardial infarction, chronic angina stable, asthma, COPD, respiratory failure, Parkinson's Disease, depression, gastroesophageal acid reflux, diverticular disease, rheumatoid disease, osteoporosis, diabetes and its respective treatments. RESULTS and CONCLUSION Were revised 109 medical records. The mean age of the patients was 75 years, 76% were females, 59% had been directed of the proper hospital. The mean time of follow up was 18 months. In the first attendance was found one or more omission in 74.3%. There was no relation between omission, age and sex. The most common omissions in order were statins in atherosclerotic disease, inhaled steroid in moderate-severe asthma or COPD and the antidepressant in the presence of depressive symptoms. Patients following clinic had an increase of 19% in the diagnostic number. In only 25% of the cases there was treatment omission, without association with sex or age, with a significant reduction in the omission in relation to the first attendance. Most common omission was B2-agonist or anticholinergic agent and inhaled steroid for mild to moderate asthma or COPD and ACE inhibitor for myocardial infarction. The lapsing omission is an important problem in elderly. This population benefits of follow up in a clinic of geriatrics.

**PB8 511 SLEEP APNEA IN ELDERLY**

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Obstructive Sleep Apnea in the geriatric population has been grossly under diagnosed by the primary care physician. More often than not it is specialty making the diagnosis of OSA many years after the initial symptoms have progressed to cause multi-system complications. Therefore the patients quality of life and cognitive ability could be preserved much longer with early diagnosis and treatment of OSA. The research data which include extensive literature and case studies of the geriatric patient and the complications of OSA. Studies are available that highlight the benefit of CPAP therapy and adherence to the treatment plan. Evidence based data spanning over two decades indicate that undiagnosed, and untreated OSA in the non demented population causes cognitive impairment, excessive daytime somnolence, and diminished mood thus leading to decreased quality of life. In some instances patients that have been diagnosed with delirium whom are found to have untreated OSA, delirium disappears with CPAP therapy. The frequency of such cases is not known, but the fact that some individuals have dramatic functional and neuropsychometric improvement with CPAP therapy, and the high prevalence of OSA in the elderly is cause for every geriatric physician to be vigilant in the screening for OSA. Because of the decrease of oxygen saturation and the increase of intracranial pressure during apneic events the elderly patient is at greater risk for stroke, cardiac arrhythmia, congestive heart failure, and pulmonary hypertension. Quality of life

issues arise ,as does depression,risk of falls ,and irritability due to day time somnolence. The importance of early diagnosis of OSA and treatment by the primary care physician are paramount especially in the geriatric population . Many of whom already present with decreased quality of life and cognitive impairment caused by OSA.

**PB8 512 MANAGEMENT OF ELDER OUTPATIENT ANTICOAGULATION BY A MULTIDISCIPLINARY TELEPHONE-BASED SERVICE**

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Introduction: As the population ages, an increasing number of people take warfarin. Because of warfarin's narrow therapeutic index and its many drug and dietary interactions, patients who take warfarin must have their international normalized ratio (INR) monitored and their warfarin dose adjusted on a regular basis. This study describes and analyzes elder outpatient anticoagulation by a multidisciplinary telephone-based service. Materials and Methods: Retrospective analysis of the database in Excel of patients on anticoagulation from January 2006 to September 2007, enrolled in a program of interdisciplinary care with telephone-based anticoagulation service. We considered the results after 2 months of monitoring. Patients receiving frequent calls from nursing, checking adherence to treatment, administration of warfarin's correct dose, complications, and control scheduling of examinations. Telephone calls were made fortnightly and monthly according to the INR. The examinations were performed by the same laboratory and they were checked by the nurse. If INR was outside the therapeutic range, the doctor adjusted warfarin's dose, and the patient was communicated by telephone. Results: In this period 39 elderly people were followed, aged 60 to 94 years and the median 79. This group was formed by 22 women and 17 men, and the diagnoses for anticoagulation: FA (20), DVT (12), cardiomyopathy (4), TEP (2) and valve metal (1). 267 connections were made by the telephone, on average 12.7 calls per month. The examinations have tested outside the therapeutic range, 70% had the dose of medication early corrected by telephone service. Regarding complications, there was no case of thromboembolism and only 7 episodes of bleeding in 5 patients (12.8%) during follow-up, and none of clinical severity. Conclusion: The monitoring of elder outpatient anticoagulation by a multidisciplinary telephone-based service enabled adjustment of the medication early, reducing number of complications.

**PB8 513 MANAGEMENT OF A MIXED OUTBREAK BY CLOSTRIDIUM DIFFICILE AND NOROVIRUS IN A GERIATRIC WARD**

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Introduction Clostridium difficile acute diarrhea (CDAD) continues to be the most common cause of nosocomial diarrhea. Noroviruses are an important cause of ambulatory gastroenteritis world-wide. We describe a mix CDAD and Norovirus outbreak and its control in a geriatric unit. Methods Delarue building is one of the two geriatric sites of Paul Brousse Hospital in Villejuif (France). It consists of 161 beds located on 5 levels and includes beds of acute, rehabilitation and long care unit. A diarrhea outbreak progressively extends in the overall ward. CDAD was diagnosed by fecal toxin A detection with a qualitative rapid immunoassay. Feces were conserved for CDAD search by pcr. Results The diarrhea outbreak involved in 49 of 161 patients in the 5 geriatric wards on 15 days. The overall 49 patients were considered as positive for CDAD by the rapid search of toxin A detection. We initially managed those patients in this supposed diagnosis by cohorting, linking and isolating patients detected as positive. Clinical symptomatology and outbreak extention did not matched with CDAD outbreak. A second verification by pcr was research has been achieved. CDAD was only confirmed in two cases. 10 cases revealed Norovirus infection and no infection in the 37 lasts cases involved. The confusing factors were: a defected test for rapid toxin A detection, excessive use of laxatives, a false definition of the diarrhea by the staff, a stress situation and healthy chronic carrier of Clostridium among geriatric patients. Those factors explain the aggressive and quick spread of the outbreak though measures of contact isolation, restriction movement and cleaning measures. Conclusion Definition of the diarrhea, control of antibiotic prescription and clinical symptomatology of CDAD allowed to distinguish viral infection in the overall diarrheas despite positive toxin A detection.

**PB8 514 DISAGREEMENT OF SF6D WITH EQ-5D INDEX IN AGEING POPULATION IN KOREA AND ASSOCIATED FACTOR WITH THE DIFFERENCE**

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Introduction: SF-36 and EQ-5D are frequently used survey tools to evaluate Health Related Quality of Life (HRQOL) and correlation between them was well-established. In addition, both of their utility indexes (SF6D and EQ-5D index) are frequently used to calculate Quality Adjusted Life Year (QALY). We compared these indexes in ageing population, and investigated factors associated the difference between them. Method and material: Cross-sectional survey was performed in randomly selected 534 elderly subjects of nationwide sample of Korea Longitudinal Study of Ageing (KLoSA) in 2008. We calculated correlation coefficient and compared the means and 95% confidence intervals of SF6D and EQ-5D index. Then we performed multiple regression analysis to elucidate associated factors with the difference multiplied by 100 between two indexes for significant variables in univariate analysis. Included variables in univariate analysis were sex, age, education, occupation, marital status, current cigarette smoking, alcohol intake, Short-Physical Performance Battery, Brief Fatigue Inventory, family APGAR, calorie consumption calculated by International Physical Activity Questionnaire-short form. Results: Of 534 subjects, 427 subjects who completed both questionnaires were included in analysis. The correlation coefficient of the utility scores was 0.663 ( $p<0.01$ ). The mean utility score of SF6D was 0.738 (95% confidence interval 0.726 – 0.751) and that of EQ-5D index was 0.863 (95% confidence interval 0.851 – 0.873). The factors associated with the difference between the utilities were Brief Fatigue Inventory-Korean version ( $\beta=1.70$ , 95% confidence interval 1.24 – 2.17) and alcohol intake( $\beta=-0.73$ , 95% confidence interval -1.25 – -0.20). Conclusions: SF6D and EQ-5D index utility scores were moderately correlated but were significantly disagreed in ageing population in Korea. This difference was exaggerated when subjects were more fatigued or habitual alcohol drinkers.

**PB8 515 WRITING, READING AND INTERNET USE IN RELATION TO MENTAL HEALTH IN THE 65 OVER.**

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Introduction Aim. Describe the reading habits and mental activities of people over the 65 and the presence of mental illness, particularly anxiety and depression. Methodes and materials Design Descriptive study Scope Urban Health Center, with postgraduate education. Population Study 65 seniors who visited the primary care during the months of October, November and December 2008. Methodology. After informing the study and obtaining verbal consent, applying a sheet of data collection. Posterior chart review to quantify the presence of mental health problems (anxiety, depression or mixed). Results Attended the 322 people, 6 refused to participate. Study population 316. Women 213. Perform some activity 85 women, 55 men and 39.90%, a 53.39%. As readers is a mental pathology 27.7% of females and 8.3% of men. In the reader there is no mental pathology in 49.50% of women and a 38.46% of men. Women read more books and magazines, male sports journalists. Internet use is low in these age groups. There is a 9.6% men and 5.25% of women said to connect a minimum of 3 times per week. Conclusions. In our study, it seems that there is a lower tendency to suffer mental disorder in those who have an intellectual activity. We need to make further study and apply statistical techniques to prove or disprove hypothesis is. Internet facilitates the relationship between people and can help improve the isolation suffered by some elders. This study encourages us to continue in Primary Health Care Studies and stimulate intellectual habit to all our patients. Keywords. Mental activities, mental health, people over the 65 years old.

**PB8 516 OLDER HOME CARE CLIENTS' AND PROFESSIONALS' PERCEPTIONS OF CARE**

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Introduction. With advancing age, many older people require home care support to be able to remain in their own homes. The aim of this study was to explore and compare older home care clients' (65+) and their professionals' perceptions of care and to identify possible differences in these perceptions. Methods and materials. A postal questionnaire was distributed to 200 clients and 570 social and health care professionals. The response rate of both questionnaires was 63%. The questionnaire included the questions concerning respondents' perceptions on physical, psychological and social care provided by professional carers. The differences in responses between clients and professionals were analysed using cross-tabulations, Pearson Chi-Square Test and Fisher's Exact Test. Results. There were statistically significant differences between the two groups on care; overall the level of satisfaction of the client group with the quality of physical, psychological and social care assessment was rated lower than the professional group ( $p<0.05$ ). The client group had significantly more often criticism, for example, dental, hearing and eyesight care, the level of support in facilitating them to be able to move

outside of home as well as motivating them to engage in the same age community groups than the perceptions in the staff group. Conclusion. In general, the clients appreciated the support they received from services. In this study, the clients have also criticised those areas on basic care, which are have been seen satisfied in earlier studies, for example, assessing in daily functions. There is a need to discuss, whether the quality of care and services has weakened. In order to be able to support clients continue to live at home, staff need to take better account of the perceptions of the clients themselves and listen to what kind of care and help their clients need and adopt their own approach accordingly.

**PB8 517 MODIFIABLE CARDIOVASCULAR RISK FACTORS AMONG THE OLDEST PATIENTS OF PRIMARY CARE**

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Introduction Aim of the study was to assess prevalence of modifiable cardiovascular (CV) risk factors detected during single visit in unselected octogenarians of primary care (PC) depending on their blood pressure level. Material and methods The study was performed in 256 units of PC in 2004 and 2005 year. Clinical interview and blood pressure (BP), weight, height, waist circumference measurements were obtained from patients over 80 years old visiting general practitioners. Prevalence of selected CV risk factors was analyzed: 1) obesity ( $BMI \geq 30 \text{ kg/m}^2$ ), 2) visceral obesity (waist  $\geq 88 \text{ cm}$  for women and  $\geq 102 \text{ cm}$  for men), 3) smoking habit, 4) diabetes, 5) coronary heart disease (CHD) 6) presence of  $\geq 2$  risk factors. The prevalence of risk factors was estimated and compared among 5 groups of patients with different BP levels: optimal BP (n=141), prehypertension (n=43), mild (n=785), moderate (n=1063) and severe hypertension (n=581). Results Mean age of the sample (3003 patients) was  $85.1 \pm 5.3$  years and 37.9% were male gender. The prevalence of CHD was similar among studied groups (about 50%), but of other risk factors significantly differed (\*- p<0.05) compared with patients with optimal BP (obesity: 7.8 vs 15.2% vs 19.4% vs 22.9% vs 27.0%; visceral obesity: 12.1 vs 19.2% vs 20.3% vs 21.5% vs 27.5%; diabetes 18.4 vs 15.2 vs 24.3 vs 28.2% vs 26.1%; smoking: 6.4 vs 9.7 vs 10.4 vs 15.1% vs 13.4%). A quarter (24.2%) of the oldest patients of PC had 3 or more modifiable CV risk factors but the frequency of risk factors rise along with increase of BP values (8.1 vs 32.7% vs 34.8% vs 44.1% vs 46.3%). Conclusions Even without laboratory findings the estimation of CV risk revealed that among the octogenarians the severity of hypertension is still associated with other cardiovascular risk factors.

**PB8 518 MAXIMUM STEP LENGTH AS A POTENTIAL SCREENING TOOL FOR FALLS AND DISABILITY IN NON-DISABLED OLDER ADULTS LIVING IN THE COMMUNITY**

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Background: Falls and disability are common problems in aged people. Impaired physical function is known as a good predictor of future falls and disability. Among various assessment tools, we evaluated the relationships the relationships between two tests of maximum step length (MSL) and short physical performance battery (SPPB). Method: Cross-sectional survey was performed in randomly selected 534 elderly subjects of nationwide sample of Korea Longitudinal Study of Ageing (KLoSA) in 2008. MSL and SPPB were completed in 506 participants (95%). Spearman's correlation coefficient was calculated to evaluate association between MSL and SPPB. Results: The mean of MSL (average of six direction of MSL) was 63.9cm and standard deviation was 21.5. All of six direction of MSL were highly correlated with mean MSL. The mean MSL was highly correlated with total SPPB score and each of 3 sub categories score of SPPB (balance, walk speed, chair stand up) (<0.01). Conclusion: MSL was highly correlated with SPPB and one direction MSL was highly correlated to full set of six directions MSL. Thus one direction MSL could be used as brief test to evaluate physical function for predicting future falls and disability in community-dwelling older persons.

**PB8 519 PREVALENCE AND ASSOCIATED FACTORS ON COMPLEMENTARY AND ALTERNATIVE MEDICINE USE IN TAIWAN: A POPULATION BASED SURVEY**

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Introduction: As a result of increased consumer awareness, personal preference, and limitations of conventional medicine, the use of complementary and alternative medicine (CAM) has become increasingly popular in recent years. In Taiwan, there are series of studies on factors related to the utilization of traditional Chinese medicine (TCM), but little focus on CAM, especially in the community elderly. To investigate the prevalence and associated factors of CAM use in the elderly, a community-based study is conducted in

Southern Taiwan. Methods and Materials: With stratified randomized systematic cluster sampling of households throughout the Tainan city, the oldest city of southern Taiwan, a total of 910(505 men and 405 women) elderly aged over 65 were included from May 2004 to November 2005. All subjects were interviewed according to a structured questionnaire by trained interviewer. The questionnaire included demographic variables, medical history of chronic diseases, activities of daily living (ADLs), instrumental activities of daily living (IADLs), and clinical characteristics of CAM use. Results: The prevalence of CAM use is 74.2%. The CAM use increased with age, but it was not significantly different between male and female gender. The most frequent item in CAM use is Vitamin (31.6%), and the next two are Glucosamine(25.3%), fish-oil(8.5%). The major information source of CAM use comes from him/herself and families. The major purpose of CAM use is nutrition supplement(45.9%). Over two-third elderly utilize CAM per day and most of the users expend averagely less than 20 \$/wk. Although 43.5% elderly felt CAM effective, most of them didn't introduce CAM to others. Multivariate analysis showed medical history of chronic diseases and disability in ADLs were independently related to CAM use. Conclusion: The prevalence of CAM use is 74.2%. Medical history of chronic diseases and disability in ADLs were the associated factors of CAM use in the elderly in southern Taiwan.

**PB8 520 THE CLINICAL INTERPRETATION OF THE OLD PATIENT WITH COMMUNITY-ACQUIRED PNEUMONIA**

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Introduction A comparative study of the community-acquired pneumonia (CAP) in the elderly and the younger adults has been realized to elucidate the clinical and paraclinical particularities in correlation with the immunity changes. Methods and materials 149 old patients and 89 patients younger than 65 years old with CAP have been examined. All the patients passed the following examinations: clinical examination, blood and urine analyses, biochemical analyses, ECG, radiological exam of the lungs, bacteriological exam of the phlegm, immunoenzymatic blood analyses, the estimation of lymphocyte populations (CD3+, CD4+, CD5+, CD8+, CD16+, CD19+, CDH1A DR+), the immunoglobulins A, M, G determination. Results In the elderly the main pathogen remain to be the Streptococcus pneumoniae (21.4%), followed by the Streptococcus pyogenes (17.3%) and Staphylococcus aureus (14.7%). The Pseudomonas aeruginosa, the Klebsiela pneumoniae, the Moraxella catarrhalis have a small incidence. Chlamidia pneumoniae is not observed in the etiological structure in the elderly, the Mycoplasma pneumoniae can be seen in 37.8%. The clinical picture has the classical manifestations in 35.6% of the elderly and in 62.9% of the younger adults (p<0.001). The 64.3% old patients presented only a fatigability, dry cough, subfebrility or a dispnoea. The objective manifestations of the CAP are practical the same in the old and the younger patients. The leukocytosis were determined respectively in 33.6% and 27% (p>0.05), the lymphopenia – in 52.4% and 44.3% (p<0.01), the C-reactive protein – was increased in 35.8% and 33.3% (p>0.05), the fibrinogen – in 36.6% and 47.7% (p>0.05), the urea – in 35% and 16.2% (p<0.01). The immunity examination revealed an important decreasing of the cellular immunity – the values of the lymphocytes are – CD19 –  $2.9 \pm 0.3\%$  et  $4.5 \pm 0.4\%$  (p<0.01), CD3 –  $48.5 \pm 1.6\%$  et  $55.9 \pm 2.4\%$  (p>0.05), CD4 –  $29.1 \pm 1.3\%$  et  $38.3 \pm 1.7\%$  (p>0.05), CD8 –  $17.4 \pm 1.2\%$  et  $21.1 \pm 1.7\%$  (p>0.05), CD5 –  $34.9 \pm 1.6\%$  et  $43.1 \pm 2.6\%$  (p>0.05), CD16 –  $17.7 \pm 1.1\%$  et  $19.2 \pm 2.1\%$  (p>0.05), CD HLA DR  $16.2 \pm 1.0\%$  and  $13.6 \pm 0.9\%$  (p>0.05), CD4/CD8 –  $1.96 \pm 0.14$  et  $2.03 \pm 0.19$  (p>0.05), respectively and modifications in humoral immunity - IgA –  $3.5 \pm 0.2 \text{ g/l}$  et  $3.4 \pm 0.3 \text{ g/l}$  (p<0.01), IgM –  $1.75 \pm 0.2 \text{ g/l}$  et  $1.77 \pm 0.2 \text{ g/l}$  (p>0.05), IgG –  $16.9 \pm 0.5 \text{ g/l}$  et  $4 \pm 0.5 \text{ g/l}$  (p>0.05), respectively. Conclusions The main pathogen in CAP in old people is Streptococcus Pneumoniae. As a rule the old people has a less expressed picture of pneumonia. The elderly with CAP show an important decrease of cellular immunity, modifications of the humoral immunity, a decreased regulatory function and a low capacity of infection control in the presence of the associated pathologies. Pneumonia has a poor picture and a protracted evolution when the severe disturbances of the immunity exist. When the immune response is preserved, the old patient develops a classic pneumonia.

**PB8 521 IMPLICATIONS ON A CONTINENCE CARE CENTER FOR THE ELDERLY WITHIN A CONTINENCE-CENTER**

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Urinary and fecal incontinence are part of the giants of geriatric syndroms. It is more frequent in women, increasing with age, and is particularly common amongst those in residential care (Hunskaar 2002). Prevalence rates vary from 5 up to 40 % in elderly community living people. But figures are unlikely to reflect the true scope of the problem because embarrassment and other factors may lead to under-reporting. Only 10% of elderly people in Germany living in the community with continence-problems consult their doctors. Incontinence in geriatric patients is not only a problem of the lower urinary tract. Embarrassment, shame, missing knowledge and also exacerbation of chronic disease are reasons for underreporting and undertreatment of incontinence. As part of the Continence-Center of the Klinikum Nuernberg we now established a continence consultation board for

elderly patients in our Geriatric clinic and in a next step also for outpatients-advice. The interdisciplinary consultation-center is co-organised by a Geriatrician and a nurse with specific postgraduate trainings in continence. We started in summer 2008 and screend the first 75 patients with our continence-screening-tool. The poster dicusses the first results and outlines the advantages and drawbacks after the first year of implementation.

**PB8 522 ASSESSMENT OF DAYTIME SLEEPINESS IN THE ELDERLY**

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Introduction : The Epworth Sleepiness Scale (ESS) is a simple 8-item questionnaire widely used in quantifying daytime sleepiness in sleep apnea syndrome (SAS) patients. Usually in the elderly, the SAS is characterized by daytime sleepiness (ESS score >10), snoring and an apnea-hypopnea index (IAH)>15 /h. However, in geriatric practice the ESS may be inaccurate and may not reflect the severity of SAS if the patient has little awareness of his/her own daytime sleepiness or believes that it is part of normal aging. The purposes of this study were 1) to investigate the agreement between patient and caregiver perceptions of the patient's sleepiness, 2) to assess the correlation between ESS scores and IAH. Methods: One hundred and eight older adults (79 yo ± 6.1) and their caregivers rated patient sleepiness by answering the ESS. All patients were assessed with MMSE and polysomnography. Agreement between ESS scores (patient versus caregiver) was measured using the Bland&Altman method. A multivariate regression analysis was performed to identify factors influencing score differences between patients and caregivers. The correlation between the ESS scores and the IAH was calculated (Spearman). Results: The SAS was diagnosed in 68 patients. Patients rated their sleepiness lower (7.1 ± 4.4) than their caregivers did (9.8 ± 5.2) ( $p<0.0001$ ). According to multiple regression analysis the two factors influencing the ESS score difference between patients and caregivers were cognitive impairment and increasing in age. The only correlation was found between caregivers ESS assessment and IAH. Conclusion: To improve the relevance of ESS in the elderly, caregivers should rate the questionnaire, since the sleepiness is easily observed by other persons. This approach is particularly useful to evaluate the sleepiness of older patients with cognitive impairment.

**PB8 523 RELATIONSHIP BETWEEN THE SELF-CARE AND QUALITY OF LIFE OF OLD INDIVIDUALS WITH OSTEOARTHRITIS**

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Introduction: Osteoarthritis is one of musculoskeletal disorders that is very common among old individuals and causes physical inefficiencies. Pain and limitation of movement ability affect individuals' situation of performing self-care and quality of life. Methods and materials: The study has been carried out as an illustration with the aim of investigation about the relationship between the competency in self-care and life quality of old individuals with diagnosis of Osteoarthritis. 90 old individuals who are treated in a physical therapy hospital with diagnosis of osteoarthritis and accepted to participate in the study exemplify this research. In the collection of data "Descriptive Information Form", "Self-care Scale", and "WHOQOL-Bref quality of life scale" were used. Results: Patients' average of age was 69.72±4.12 and 62.2% were women, 28.9% were illiterate individuals. The average self-care points of patients were defined as 124.85±12.35. Self-care competency points of patients who are women, 70 or more years old, use adjuvant apparatus, take 5 or more drugs a day were detected to be low. Quality of life points of patients who are 70 and more and women patients were also found to be low. It has been found out that there is a positive significant relationship between the points of self-care competency and quality of life and psychological, environmental and national environmental areas of quality of life scale. It has been determined that points gained from all other dimensions except bodily area were high in the patients whose points for self-care competency were high. Conclusion: According to these research results; self-care competency points of old individuals with osteoarthritis demonstrate a good competency of self-care. However, quality of life points are slightly above the average. There is a significant relationship between good self-care competency and points of psychological, environmental and national environmental areas of quality of life scale.

**PB8 524 STUDY OF CGA36 ON ELDERLY PATIENT IN JAPAN**

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Introduction: New health insurance for over 75years has staryed in Japan since 2008. This system was requested CGA for elderly patients. We made a novel comprehensive geriatric assessment which was a simple and short version of assessment for elderly patient when admitted in acute hospital. This assessment was made for to easy use for detect triggers for new inpatients and to make care plan for each patient. Methods: The purpose of this study was to examine the tool. It took 10 to 15minitsue for examination. This assessment was composed from 18 domains and 36 questions. 46 patients were studied in this study.

Results: There ware 18 triggers in average of 36 questions for each patient. There were 10 triggers of 18 domains in average for each patient. Major triggers were cognitive dysfunction, hearing loss, and decline of ADL and IADL. Conclusion: In conclusion, this assessment sheet is good for evaluation of elderly patients. We will study further sensitivity and reliability.

**PB8 525 ASSESSING THE SUITABILITY OF STAY IN GERIATRIC UNITS BY MEAN OF THE APPROPRIATENESS EVALUATION PROTOCOL (A.E.P.)**

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Background: the evolution of hospital costs leads the Belgian public authorities to encourage measures of limiting length of stays. According with the growing ageing of the hospitalised population, the geriatric units are particularly observed. Moreover, hospitals are now financed in relation with the number of their admissions, and the corresponding pathologies. In this context, the use of a tool which could assess the proportion of inappropriate admission and days, as well as their causes, is highly interesting, especially for the public authorities and hospital managers who try to reduce their average length of stay without damaging the quality of care.. Materiel and methods: the selected tool in this research is the Appropriateness Evaluation Protocol (AEP). Three successive cross-sectional surveys were led from 2003 till 2005, in 23 Belgian hospitals, in internal medicine, surgery and geriatrics units. During this period, 12,000 hospitalization days, including 4,164 oldest patients (over 75 years) and 1,686 in geriatric units, were audited by means of AEP. Results: the proportion of inappropriate days in geriatrics wards was 36.3 %, while other units show only 23.1%. Among oldest patients, 44% (against 29% for other patients) of inappropriate days are due to a lack of extra-hospital structures ( resting homes, rehabilitation places, day clinics, day center,...). Internal causes of inappropriate days are mostly due to a lack of coordination between the care units and some technical services. Conclusion: AEP is usefulness as a tool of internal audit to measure the proportion of non-justified days especially in old patients, and their causes turns out to be possible. Results have provided some accurate and interesting informations, specific to each hospital, and also globally for the public health authorities. It confirms that social complexity and coordination of cares are major problems influencing the discharge of geriatric patients.

**PB8 526 GEOGRAPHICAL VARIATIONS IN THE USE OF THREE ELECTIVE SURGICAL PROCEDURES IN THE ELDERLY**

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Background: geographical differences of the use of hospital resources are illustrated in the international literature for decades. The probability of undergoing a surgical procedure depends partially on the place where we live. This issue is important since it reflects problems of accessibility to care or contrasting the possibility of potentially inappropriate care. We study the incidence of three surgical procedures in the old person, very important to improve their functional status, especially in terms of mobility, total hip replacement (THR) and total knee replacement (TKR), or in eyesight (cataract intervention). Materiel and methods: we considered the administrative data of all hospital admissions in Belgium (classical and one-day hospitalizations) on the concerned surgeries between 1997 and 2002. These data contain clinical and socio-demographic informations. For each of the three selected procedures, a perimeter of definition was built by combination of criteria of inclusion (APR-DRG, ICD-9-CM procedures) and exclusion (diagnosis and procedure ICD-9-CM codes). Results: the geographical variability of the admissions, studied on the town of residence of the patient, is observed through standardized admission ratio (SAR). In an attempt to explain the observed geographical disparities, we study the effect of supply variables (hospital equipment, numbers of physicians) and demand variables (accessibility - rurality, comorbidity) in a multiple regression model. There was significant growth in incidence rates for these elective surgeries between 1997 to 2002. Regional variations of SAR are limited for cataract; nevertheless, for THR and TKR, we detect an east-west split. These differences seem to be influenced by the density of the medical offer. Conclusion: the regional variations, although significant, are moderated; moreover, the intraregional differences are often also important as the interregional ones. As for the explanatory power of regression models, it remains low, which still raises many questions about the appropriateness of care and differences in medical practice.

**PB8 527 POTENTIALLY DRUG-DRUG INTERACTIONS AMONG ELDERLY POPULATION UNDER THE NATIONAL HEALTH INSURANCE IN TAIWAN**

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**Introduction:** As the population ages and there is often high drug consumption among older people, potentially inappropriate medication for elderly people is a common and serious public health issue worldwide. Elderly patients are at high risk of having drug-drug interaction (DDI), and potentially lead to adverse drug reactions. Because the actual prevalence of DDIs is not well documented, we aimed to elucidate these DDIs in the elderly population in Taiwan by analyzing the National Health Insurance (NHI) claim database.

**Materials and Methods:** Ambulatory claim visiting files in the year 2006 from the NHI were extracted, and prescriptions for beneficiaries aged 65 and above were evaluated. The analyses included drug combinations that should be avoided in the elderly population according to the Beers and McLeod criteria. Techniques used in analyzing the database including data mining, associate rules and cluster analysis.

**Results:** Among 27,788 elderly people under warfarin treatment, the number and percentage of concomitant drug use of aspirin, dipyridamole, non-steriod anti-inflammatory drug, ticlopidine and cimetidine were 5,143 (18.5%), 4,334 (15.6%), 2,303 (8.3%), 527 (1.9%), 483 (1.7%), respectively. Totally, 10,504 (37.8%) of elderly warfarin users had potentially harmful DDIs. Our results were significantly higher than 6.6% reported from the United States. Age and polypharmacy were significantly correlated with these DDIs. Among 1,166 elderly monoamine oxidase inhibitor users, 66 (5.7%) had concomitant drug use of selective serotonin reuptake inhibitor.

**Conclusion:** While elderly patients are at high risk of DDIs, most of them are preventable and manageable. Our results demonstrated a high percentage of potentially DDIs in older people under the NHI in Taiwan. Our results will remind physicians to recognize the potentially drug-drug interactions when prescribing medications to the elderly.

#### **PB8 528 MEASURE OF NURSING TIME INTERVENTIONS FOR HOSPITALIZED ELDERLY PATIENTS**

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**Background:** Belgium is one of the only countries where the activities of nurses contribute to determine the financing of the hospital. The level of these activities is measured by means of a belgian adaptation of the Nursing Interventions Classification (NIC) instrument. To improve the current system, a study was led at the request of federal authorities. The final result will be a two-step nurse costing model: (1) a list of nursing interventions and their relative weights that contribute to nursing time needs as a proxy for costs, (2) a model will be build in linking and explaining nursing costs with Diagnosis Related Groups (DRGs) and other related variables. Nursing time was assessed by a Delphi study in which nurse interventions are evaluated for specific patient cases. Materiel and methods: We study the effect of patients' age on nursing workload. We tested the model of the nursing interventions times on a database of more than 10 000 inpatients in 66 Belgian hospitals, on voluntary base, and in specific wards. A balanced sample was obtained for the following specialties: geriatrics, intensive care, revalidation, general internal medicine and general surgical procedures. Results: There is no difference in the burden of nursing care according to age. The same observation is obtained for oldest patients. However,, within care programs, an age effect is noted, only in geriatrics. On the other hand, in all cases, the comorbidity is a determinant pattern , justifying the intensity of nursing care. Conclusion: unlike comorbidity, age does not influence the time of nursing activities throughout care programs analyzed, except for geriatrics where nursing time correlates with the age of the patients(65+). These findings should be interpreted in relation to demographic changes in Western societies, but also according the quality of care for old hospitalised patients.

#### **PB8 529 MULTIPLE CHRONIC CONDITIONS AND MEDICINES – CHALLENGES IN SELF-MANAGEMENT SUPPORT IN HOME CARE**

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**Introduction:** Chronically ill patients often have to manage pharmacotherapies to control their disease(s) and obtain quality of life. Although socio-epidemiological trends stress the importance of self-management support, patient education and counseling is still lacking in German health care, especially for elderly people with multiple chronic conditions. The aim of the research project\* was to explore the challenges inherent in living with longterm pharmacotherapy, and to assess the potential of home care nurses to provide self-management support taylorlored to the patients needs. Methods and materials: A multi-perspective qualitative research design was adapted, covering semistructured interviews with 26 health professionals in primary care and in-depth interviews with 27 chronically ill. Data collection and analysis were guided by empirical strategies of the Grounded Theory approach. Results: The day to day management of medication regimes is a lifelong challenge in chronic illness. Symptom perception and communication, health and medication beliefs, daily routines, and social support are important factors influencing the medication management. The data stress the need of self-management support in a coaching manner. Respecting the experiences and expertise of the chronically ill and their

relatives as well as the increasing complexity of the challenges they are faced with in the course of the illness trajectory seems to be crucial in the care of the elderly. Conclusions: Promoting the patients ability to manage their medication is an essential of care in chronic illness. Nurses should take an active role to provide self-management support in primary care, especially for elderly patients with multiple chronic conditions. Like other health professionals nurses have to be prepared adequately. Based on the results an intervention has been developed consisting of a qualification training and a practise guideline. To evaluate the intervention a control study\*\*) is carried out, in which 50 home care nurses are taking part. \*) The project is part of the nursing research network "patients' perspectives in chronic illness – new concepts of health care", funded by the German Federal Ministry of Education and Research 2004 to 2010 (AZ 01GT0315 / 01 GT 0615). \*\*) The control study was approved by the Ethical Commitee of the Medical Council Westfalian-Lippe and the Medical School, Wilhelms-University Münster (AZ: 2007-241-f-S).

#### **PB8 530 ARE THE FALLS OF ELDERLY PEOPLE DUE TO BAD USE OF MEDICATION ? PRESENTATION OF A CASE CONTROL STUDY IN A FRENCH RETIREMENT HOME**

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In retirement homes, drugs are sometimes crushed before their administration to the residents, without taking care of the pharmacokinetics. Moreover, elderly people are often victims of falls. So, we made a case control study during 11 months, to attempt to highlight a link between falls and administration of crushed tablets. All the residents were randomized in two groups, whether they fell or not. We noted several parameters : age, sex ratio, number of medicines, including those which cause adverse effects like vertigo, orthostatic hypotension, disorientation, ... We classified the medicine whether the release was extended or not, and if the tablet could be crushed. The number of residents included was 108 : 57 fell, 51 didn't fall. The cases and the control were similar concerning age (85,2 vs 85,5 years old), sex ratio (16 men and 41 women vs 11/40), the dependence assessment score, the number of medicine taken (5,5 vs 6,5) and those who cause secondary effects (3,4 vs 3,2). Whatever the treatment, the risk of falling was higher when the tablets were crushed (OR = 3,41 IC 95 :[1,54;7,54]). If the tablets were wrongly crushed (manufacturer's recommendations, extended release, ...) the risk was multiplied by four. The most frequently involved medicine are antihypertensive drugs, treatments of Parkinson's disease, alpha blockers in benign prostatic hyperplasia, ... These results suggest a link between falling and taking crushed tablets. To reduce this misuse, we decided to increase the number of appropriate forms (patches, orally disintegrating tablets, solutions, ...). For each concerned medicine, we wrote a special mention in our medical software. If the tablets have to be crushed, the decision is now taken by the staff and not by only one person. We will make soon another study to confirm our theory with more residents, and with studying the underlying pathologies.

#### **PB8 531 IDENTIFYING KNOWLEDGE TRANSLATION TOOLS TO ASSIST FAMILY PHYSICIANS WITH DEMENTIA ASSESSMENT AND DIAGNOSIS: A REVIEW FOR THE NATIONAL INITIATIVE FOR THE CARE OF THE ELDERLY'S (NICE) DEMENTIA THEME TEAM**

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**Introduction** The Dementia Theme Team of the National Initiative for the Care of the Elderly (NICE) undertook to identify knowledge translation tools to assist Canadian family physicians with dementia assessment and diagnosis. Two literature review findings are reported. Methods and Materials Review one: Assessment and diagnosis instruments for dementia. Review two: Educational tools for dementia knowledge uptake. Search strategy included: MedLine, PubMed, Ageline, and PsychINFO databases were searched up to December 2006. A web search of grey literature, and interviews with key informants using a snowball approach, captured unpublished programs and tools. Results Review One: 13 papers yielding 11 individual instruments and two reviews of assessment tools. Canadian family physicians assessed cognitive function most often with the MMSE instrument. While several other instruments were identified that take less time to administer and have good validity in clinical settings, these have not been as widely adopted. Review Two: Yielded seven papers, including six papers comparatively evaluating educational programs developed in the United Kingdom (UK), with only one UK-based review. Survey of key informants uncovered five targeted Canadian programs or tools, including two continuing medical education (CME) programs, one educational website, and two CD-ROM or DVD-based tutorials. Of these, only the two CME programs had been evaluated for physician satisfaction. The comparative effectiveness of these Canadian programs in terms of improving physician knowledge has not been examined. Conclusion Selecting an optimal knowledge translation tool to assist family physicians with dementia assessment and diagnosis is challenging. Reasons for the failure of shorter cognitive assessment tools to be widely adopted, in spite of considerable time pressures faced by family physicians, are not well understood. Second, rigorous evaluations of the impact of the identified Canadian

education programs on physician knowledge is required in order to identify the most effective knowledge translation tool.

**PB8 532 ABDOMINAL PAIN IN ELDERLY PATIENTS ASSISTED AT A GERIATRIC EMERGENCY SERVICE**

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**INTRODUCTION** To describe the frequency of abdominal pain found in elderly patients assisted at an emergency service, as well as its final diagnosis. **MATERIAL AND METHODS** Evaluation was performed of the final diagnosis of all the 269 patients complaining of abdominal pain assisted at the geriatric emergency service , from March 2005 to March 2006. Collection of data was retrospective and was originated at the notebook where registration is made of all the assistance performed at this unity. **RESULTS** The elderly patients are mostly women (57.2%), at an average age of 74.5 years, and represented 7.15% of all the patients. The main diagnosis were: diverticulum disease (5.2%); biliary tract disease (4.8%); nephrolithiasis (4.4%); urinary tract disease (4.4%); fecaloma (4.0%); diarrhea (4.0%); pancreatitis (2.9%); dyspepsia (2.9%); cancer (2.9%); hernia (1.4%); and appendicitis (1.1%). In 49.8% of the cases, the diagnostic cause was not established at the emergency service, and 38.0% of those patients with no diagnosis were admitted for further exams. **CONCLUSION** The observed data coincide with those supplied by the literature, which report complaints of abdominal pain in 5% to 10% of elderly patients assisted at emergency units, with a 50% need of admission of these patients. Six out of the 11 more frequent diagnosis (diverticulum disease, biliary tract disease, appendicitis, pancreatitis, cancer and hernia) are among the seven more frequent diagnosis of abdominal pain in elderly patients who come to the emergency services, according to the literature. The practitioner ought to be aware of a possible scarcity of symptoms in some situations of severe diseases in elderly patients, as well as of the difficulty at the initial diagnosis. Therefore, cases of abdominal pain with no diagnosis should be re-evaluated either at the outpatient department or in admission, with a less restrict use of image examinations.

**PB8 533 TRANSCUTANEOUS POSTERIOR TIBIAL NERVE ELECTROESTIMULATION TO TREAT URINARY INCONTINENCE IN OLDER WOMEN.**

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Introduction. The frequency of urinary incontinence increases with age, especially in women. Due to disability it causes, especially social, and the risks and complications of surgical treatments, is of great importance to develop non-invasive management strategies for the elderly population, when conservative treatment is not effective. The aim of this study was to examine the efficacy of transcutaneous posterior tibial nerve electrostimulation to treat urinary incontinence in older women. Methods and materials. The study design was a randomized clinical trial conducted in 45-60 years) with urinary urge incontinence. All were ≥elderly women (treated with 12 days of bladder and pelvic floor muscle training, while 23 were randomly selected to receive electrical stimulation also. The cases were evaluated by the number of 3-day incontinence episodes (3-IE), the Incontinence Quality of Life (I-QOL), and a personal satisfaction questionnaire (ICQ). Results. The study population had a mean age of 68 years, and about half lived with a partner, 60% had previous treatment, and 80% had associated stress incontinence. These characteristics and measures of urinary loss and quality of life prior to treatment were similar in the groups. Both groups showed significant improvement in ICQ, in most areas of the I-QOL, and in urgency 3-IE, but not in stress 3-IE. However, there was a greater improvement in the group treated with electrical stimulation. The areas of the I-QOL that showed significant differences between groups were: Incontinence Impact, Role Limitations, Physical Limitations, Emotions, Sleep/energy, and Severity Measures. Conclusion. It was seen in our study that transcutaneous posterior tibial nerve electrostimulation is efficient to treat urinary urge incontinence in older women. This therapy should be considered a good alternative in the treatment of elderly.

**PB8 534 INDEPENDENCE AND SOCIAL BEHAVIOURAL IN OLD PEOPLE**

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**INTRODUCTION** Aging is a challenge for individuals and society and it's necessary to be prepared to face it with success. It is important to know the profile (status and needs) of old people in order to help them to maintain independence as long as possible. **METHODS AND MATERIALS** Aims: To evaluate independency and the contribution of bio behavioural and social factors. Our study is descriptive and analytic using non probabilistic sample, with a proportional quota sample strategy, that included 384 individuals with 55 years and over. People were interviewed, using a questionnaire that include measures of

Independency – Activities of Daily Living (ADL), bio behavioural (Self-perception of Health and the presence of disease) and social factors (loneliness and social network - Lubben, 1998). **RESULTS** Independence (ADLs) was higher in younger old people ( $p < 0.05$ ) and in men ( $p < 0.05$ ). High Personal Activities average were related with eating, use toilet, dressing, grooming and the lowest were walking and rise and go down stairs. Instrumental Activities had lowest average levels. There were differences between independence and Self-perception of health, people with more negative perception of health tends to be 'less independent (& 'Qui2' & '74,997 p < 0,001) and those who had a diagnosed disease tends to be less independent ('& 'z -4,907 p < 0,001). People that had more control over their health tend to be less independent ('& 'z -2,521 p < 0,05). Independence correlates positively with social support networks ('& 'rs 0,145 p < 0,005) and also feeling loneliness ('& 'Qui2 10,316 p < 0,05). **CONCLUSIONS** The authors emphasize the importance of bio behavioural and social variables (namely self perception of health or self reported diagnosis health, social support networks and loneliness) to independence, and the need for health, social and psychological interventions to prevent morbidity and mortality.

**PB8 535 REVIEW OF THE EVIDENCE FOR A COLORECTAL CANCER SCREENING PROGRAMME IN ELDERLY PEOPLE**

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Introduction Colorectal cancer is a major public health issue, being the second leading cause of cancer deaths in Europe and the USA. It mainly affects elderly people. A National Health Service screening programme for colorectal cancer in people over 60 is being introduced across the UK throughout 2009. Other countries have also recently introduced screening programmes e.g. Finland (2006), France (2007). Aims of this work were to review evidence for colorectal cancer screening and determine how much this applies to elderly people. Methods+Materials MEDLINE database was searched for articles published from 1990-2007, using search terms colorectal neoplasms, mass-screening, faecal occult blood, colonoscopy, sigmoidoscopy. Articles included were limited to those in English and in which data or discussion included people over 70 years. 251 abstracts were eligible and full articles for 249 of these were read. Results Evidence for the benefits and complications of screening for colorectal cancer are well-known. However, no article dealt with screening only in elderly people, and very little was found specifically on screening the elderly. Most discussed several age groups, including the elderly, without analysing this group's needs separately. This is surprising as many health authorities advise screening older people. Most define an age at which to begin (e.g. 50 in USA; 55 in Australia) but not an age for reviewing recommendations. Conclusion More research is needed into the differing benefits and limitations of screening in older people compared to younger people. Screening procedures detect bowel polyps many years before malignant transformation, so is there an age after which screening benefits do not outweigh risks? There are no clear guidelines on specific screening programmes for elderly people, which given their increased susceptibility to the disease, but decreased likelihood to benefit from preventative measures decades before the onset of symptoms, is an area which deserves further research.

**PB8 536 EXPERIMENTAL PROJECT CONCERNING CLINICAL PHARMACY IN GERIATRIC WARD**

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Introduction Involving a pharmacist in a multidisciplinary team is granted by Belgian health services in a geriatric ward of the CHBAH. The target is to improve pharmaceutical cures and elderly patient's autonomy, patients who usually suffer multi diseases and have several drugs. This new vision developing itself in Belgium is worthwhile observing in order to demonstrate its pertinence. Methods and materials Evaluating pharmacist's job has been done, listing his actions performed in a 24 beds geriatrics ward of the CHBAH during 2008. The job consists of a pharmaceutical history, the medicine following through during the hospital stay, and improving patient's autonomy in the coping of his treatment at discharge. Results 368 pharmaceutical interviews were performed. They usually reveal auto medication. 515 interventions viewing every pharmaceutical treatment were performed during the very period. They can be described as follows: identification of medicine interacting (26 %) undesirable effects (18%), therapeutic recommendations (18%), adjustments of directions of use, depending on creatinine clearance (13%), suggestion of stopping medicine (9%), propositions of taking drugs again after stopping them in hospital (10%), changes of galenic forms. (7%). Furthermore, in order to encourage patient's autonomy with the coping of their treatment, the pharmacist takes care in evaluating and education of self management of medicine procedures as well as using broncho-dilatators. At discharge, treatments were explained to patients or to their relatives in order to improve the patient's compliance. Conclusion. Clinical pharmacist has been included in a medical geriatric team as he definitely brings a plus in coping with patients. Rich exchanges of view between the pharmacist and the other members of the team are

observed. They bring the elderly patient a better health, autonomy and quality of life, as well in hospital and at home.

**PB8 537 PRESENTATION OF A TYPOLOGY OF HEALTH IN THE ELDERLY: TITAN (TIPOLOGIA TOTAL DEL ANCIANO)**  
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**Introduction:** A typology could be useful given the heterogeneous character of elderly people what makes chronological age a bad system of classification for health purposes.  
**MATERIALS AND METHODS:** We present a typology of health for elderly patients in order to help in decision making, diagnosis, prognosis and treatment of elderly persons in hospital, nursing home and ambulatory set. **RESULTS:** We included 269 persons over 65 years. 113 outpatients; 76 nursing homes residents and 80 inpatients in a geriatric acute care service. Mean age was 79, 8 years (range: 65 – 100) 65% female. TITAN is a classification for elderly person according to physical and mental health and physical function. In short TITAN 1 equals successful aging, TITAN 2: Organic pathology of easy control for instance mild hypertension. 3: Complex organic pathology like heart failure NYHA I or II. 4: dementia GDS 4 or 5; TITAN 5: advanced disease for instance renal failure requiring dialysis. 6 Patients with 4 + 5 or 3; TITAN 7: Bedridden persons. In our group we found 0,7% TITAN1; 19,7 T2; T3 43,5%; T4 5,2%; T5 14,5%; T6 9,3% and T7 7,1%. **CONCLUSION:** In our preliminary experience TITAN, a novel typology of health, seems to be very useful in the follow –up, prognosis and decision making process for clinicians caring for elderly patients

**PB8 538 EFFECTS OF ACUPUNCTURE TREATMENT ON QUALITY OF LIFE OF ELDERLY PATIENTS**  
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**Introduction:** acupuncture treatment is potentially interesting for elderly population, particularly for the possible avoidance of drug use. A way to measure the positive effects of it is to evaluate of its impact on quality of life Methods and materials: the results of a pilot study performed with patients of the Geriatrics Service pf Clinics Hospital of Medical School of São Paulo University are described. The study included 13 patients. All were out-patients, aged 65 or older. They were evaluated 10 weeks before the beginning of the treatment, at the first, 10th and last day of treatment and 3 months after the end of it. Needling occurred weekly during 20 weeks and evaluation of quality of life was performed using the WHOQOL – brief scale, translated and validated to Portuguese. This instrument includes four domains: physical, psychological, social, relationships and environmental. Results: ten patients, nine females, completed the study. Their scores at the previous interview, the first, 10th and last day of treatment and 3 months latter were, respectively: for the physical domain – 51,07; 50,36; 56,79; 67,14; 58,43; psychological domain: 54,58; 57,50; 60,00; 65,08; 60,83; social domain: 67,50; 70,00; 71,67; 75,00; 769,17; environmental domain: 54,38; 52,81; 57,99; 63,44; 62,50. Score differences were significant better between first and 20th needling section at physical domain ( $p=0,001$ ), psychological ( $p=0,002$ ) and environment ( $p=0,001$ ); decrease was significant between 20th needling and first interview 3 months later at physical domain ( $p=0,027$ ). Conclusion: improvement in WHOQOL-brief scores was observed at physical, psychological and environmental domains; that improvement did not persist on physical domain at first control after the end of the treatment.

**PB8 539 PHARMACIST EXPERIENCE WITH MEDICATION REVIEWS IN ONTARIO, CANADA**  
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**Introduction:** Community pharmacists in Ontario are now compensated for providing a Medication Review Service (MedsCheck) to residents of the province of Ontario in Canada taking three or more chronic medications. The service mainly targets older adults. The objectives of this study were to identify barriers and facilitators to implementation of MedsCheck by pharmacists and identify factors predicting the number of MedsCheck reviews completed. **Methods:** A sequential explanatory mixed methods study design was used, consisting of administration of a semi-structured mailed survey followed by an in depth telephone interview using open-ended questions with a random sample of community pharmacists across all regions of Ontario. Regression was conducted to determine the factors predicting the number of MedsCheck reviews completed. **Results:** Completed surveys were received by 217 pharmacists. Twelve pharmacists were interviewed. The majority (98.6%) of pharmacists had completed at least 1 MedsCheck review. The average time to complete a review was 50.9 (SD, 22.2) minutes. Key facilitators to implementation included scheduling reviews by appointment and during

slower times or when pharmacist coverage was available, reducing documentation, having a private counselling room, maximizing use of technicians, and motivating patients regarding the value of the service. Factors predicting an increase in MedsCheck reviews reported were having a target number of MedsChecks at the store, not reimbursing individual pharmacists for MedsChecks, using computers, being from northern Ontario, and a longer time since pharmacy graduation. **Conclusions:** MedsCheck was well received by pharmacists in Ontario. Practical suggestions to improve the delivery of MedsCheck or similar services were identified. Further research can assess uptake of the program as well as the effectiveness (and cost-effectiveness of the program) to optimize medication use in older adults.

**PB8 540 UNEXPLAINED UNINTENTIONAL WEIGHT LOSS OF OLDER PATIENTS**  
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**Background** Unexplained unintentional weight loss (UWL) in older patients is frequently multifactorial and poses a diagnostic challenge to physicians. This problem is associated with increased morbidity and mortality, irrespective of underlying pathologies. The main purpose of this study was to explore underlying pathologies of older patients with UWL in Taiwan. **Methods** From January 2006 to December 2007, data of patients aged over 65 who were admitted to the geriatric evaluation and management unit of Taipei Veterans General Hospital were collected for analysis. UWL was defined when subjects had documented weight loss of at least 5% of their baseline body weight. A 12-month follow-up was conducted after the index admissions. **Results** In total, 50 geriatric patients (mean age =  $78.8 \pm 4.7$  years, 82% males) were enrolled for study. The mean weight loss was  $8.7 \pm 4.6$  kg or  $14.1 \pm 6.6\%$  during 0.5–24 months. Overall, 82% patients were related to organic causes, including malignancies in 3 (6%), benign gastrointestinal pathologies 11 patients (22%), and psychiatric disorders in another 11 patients (22%). However, no particular etiologies could be identified in 9 patients (18%) despite extensive investigations during the study period. **Conclusions** In Taiwan, 82% of older patients with UWL were caused by organic pathologies, which were mainly non-malignant diseases. Familiarity with the spectrum of disorders associated with UWL in older patients may facilitate the diagnosis and care in these patients.

**PB8 541 OBSERVATION-BASED NOCTURNAL SLEEP INVENTORY (ONSI) FOR ELDERLY**  
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**Introduction :** Sleep apnea syndrome (SAS) is characterized by recurrent episodes of cessation of respiratory airflow with a consequent decrease in oxygen saturation and sleep fragmentation. If unrecognized and untreated, SAS is associated with cardiac disease, stroke, cognitive decline, and impaired quality of life. The prevalence of SAS, defined as an apnea-hypopnea index (AHI) of 15 or greater per hour of sleep, is about 20% in the elderly. Despite its high prevalence and clinical significance, SAS in geriatrics is often overlooked and under-diagnosed. The aim of the study was to validate the Observation-based Nocturnal Sleep Inventory (ONSI) in discriminating between elderly patients likely or not likely to have SAS. **Methods :** Cross-sectional blinded study. A total of 115 consecutive patients aged 70 and over suspected of having SAS underwent simultaneously polysomnography and ONSI assessment. The ONSI was performed by nurses during the overnight polysomnography. The validation process was completed in 111 patients. **Results:** Polysomnography identified 68 patients as having SAS and 43 patients as not having SAS. In comparison with polysomnography data, the ONSI demonstrated a high level of sensitivity (90%), positive predictive value (88%), specificity (81%) and negative predictive value (83%). **Conclusion:** The ONSI is the first valid SAS screening tool proposed for elderly hospitalized patients. This study demonstrates that the ONSI provides accurate information, is a simple, easy-to-use bed-side tool, and is highly sensitive and specific in screening SAS, when compared with overnight polysomnography results. The ONSI may be useful in a number of settings, such as assessment for referral to a sleep center, sedation and any type of anesthesia that can affect respiratory drive and clinical research.

**PB8 542 SHIFT FROM CONSULTATIVE TO COLLABORATIVE PRIMARY CARE OF GERIATRIC PATIENTS WITH CHRONIC DISEASES**  
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**INTRODUCTION:** Chronic diseases in the tripling rising population of an aging population is exhaustive on Singapore's resources. Nurses can do far more in strategic methods of disease counseling to improve outcomes, in partnership with doctors. **METHODS:** Based on a study of cultural preferences and trends, a unique method of

communal interactive co-counseling and human resource development equipping methodologies were tested with a population of 120 Singaporean elderly patients. RESULTS AND CONCLUSIONS: It was found that one of the new methodologies with the local cultural preference taken into consideration has demonstrated a lowering of blood pressure readings by 20mm/hg for 80% of the population and a drop of 1-2mmol/L in diabetic patients after a 8-month trial. Other methodologies employed had a 30-50% improvement, as compared with the usual one to one counseling done by nurses.

**PB8 543 ONE-LEG BALANCE TEST IN A GENERAL GERIATRIC POPULATION: RESULTS OF TWO STUDIES IN FRANCE**

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Context: Falls are a major public health concern among the elderly, as well as is malnutrition. In France, estimates show that 9000 deaths are annually associated with a fall in people over 65. The regional social insurance union (URCAM) and the regional union for liberal medicine (URML) decided in 2004 to set up a study concerning the nutritional status of people 75 or over in Brittany. Two small neighbouring cities in a rural coastal area of Brittany, Brest and Etables (BE) were chosen for the experiment. Different factors with a likely influence on the nutritional status were concomitantly checked with a mini standardized geriatric evaluation (SGE), including the risk of fall. The One-leg balance test (OBT) was selected for that purpose, in competition with the get up and go test which was considered more complicated and less reliable. In order to harmonize the realization of the tests, all the participating nurses were trained simultaneously. In 2006, URCAM and URML decided to repeat the study on a larger scale in Pont Croix (PC), an area also located in Brittany. Population All individuals 75 or over in the area, identified from the electoral rolls and on home care nurses registers, were invited by newspaper and individual letter to participate in the study. For those who accepted to participate, a nurse gave the mini SGE at home (individually or collectively). If the score was found abnormal, people were referred to their usual medical practitioner for further evaluation. In BE, 724 people out of 767 (mean age 83,1) accepted to enrol the study. In PC, 838 out of 939 (mean age 84,2). Refusals came generally from the families, spouses or children, who were rather reluctant to let an outsider evaluate the way they cared for elderly relatives. Results In BE, 501 one-leg balance tests were normal (69,2%). Abnormal or impossible : 213 (30,8%). At home, 187/665 (28,1%); in sheltered houses : 26/59 (44,1%) In PC, 500 tests were normal (59,7%). Abnormal or impossible : 338 (40,3%). At home 215/690 (31,1%); in sheltered houses : 19/59 (30,6%); in nursing homes : 104/119 (87,7%) Discussion The difference observed in the two population samples can be explained by the existence of a nursing home, where disabled elderly are commonly accepted. If we exclude this subgroup, there is no significant difference for the two sites (p value less than 5%) with 70% of the general ambulatory population in our two samples have a normal one-leg balance test. Conclusion A study about nutritional status of a general elderly population included the one-leg balance test. A comparison to the literature was not possible, as no reference was found by the authors regarding OBT for such a population in PubMed, using the keywords: balance, one-leg balance test, elderly. Correlation of the OBT was found for several parameters. Further studies should be made to examine the determinants of possible future discrepancies.

**PB8 544 IS THERE AN ASSOCIATION BETWEEN IRON DEFICIENCY AND COLORECTAL ADENOMA IN SYMPTOMATIC HOSPITALIZED OLDER PATIENTS?**

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Introduction: Iron deficiency anaemia (IDA) is a common problem in older patients. Gastrointestinal endoscopic investigations are the most appropriate way to find the cause. Aim of this study is to investigate whether colorectal adenomas (CRA) were associated with iron deficiency (ID) and IDA in older hospitalised symptomatic patients. Methods and materials: We retrospectively investigated 247 consecutive hospitalized, symptomatic geriatric patients (160 women, 87 men, mean age 83 years): 186 with normal colonoscopy, 61 with at least 1 histologically confirmed CRA. Patients with arteriovenous malformation, colitis, ulcer, diverticular bleeding, colorectal carcinoma were excluded. Indication for colonoscopy was based on clinical grounds (haematochezia, melena, change in bowel habits, unexplained diarrhea, constipation, weight loss, IDA, unexplained anaemia, abdominal pain, suspicious lesions found during another technical investigation). Laboratory tests were analysed with routine measurements. Anaemia was defined as a haemoglobin level <13 g/dl for men and <12 g/dl for women, ID as a serum ferritin level < 50 µg/l. Statistical analyses were done with student's T-test, Mann-Whitney U test, ANOVA, chi-squared test and a stepwise logistic regression analysis. Results: Serum ferritin, haemoglobin levels and the prevalence of ID and IDA were not significantly different between the control group, patients with small (1 or more polyps < 10 mm) and

large (at least 1 polyp >= 10mm) CRA. Prevalence of CRA was similar between patients with a serum ferritin < 50 µg/l (27%), between 50 and 100 µg/l (29%) and > 100 µg/l (20%) (p=0.4). In a logistic regression model, haemoglobin and serum ferritin were not found to be independent risk factors for CRA. Conclusion: Our study could not demonstrate that symptomatic older patients with small and large colorectal adenomas have a higher prevalence of iron deficiency with or without anaemia as compared to a control group.

## Track C – Behavioural and Psychological Sciences

**PC8 545 LONG-TERM EFFECT OF A FLOOD ON PSYCHOSOCIAL HEALTH AND VALUES OF ELDERLY: A QUESTION OF RESILIENCE**

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In 1996, in Saguenay (Canada), a flood caused a lot of damage and several people, a good number of which were 50 years old and over, suffered personal losses. After this event, some people developed health problems of a physical or psychological nature, received support from members of their family and developed good intervention strategies to overcome their emotional, family or financial difficulties. Two and three years after the flood, studies were carried out in urban municipalities (in urban communities it was two years after the flood and in farming communities, it was three years after the events). A group of 124 people (50 years old and over), victims of this catastrophe, and 107 people non disaster victims, of the same age group, took part in a mixed longitudinal study integrating quantitative and qualitative research methods. Eight years after the flood, 62 disaster victims and 44 non disaster victims were met once again. These individuals then answered various closed or opened questions about their physical and psychological health as well as the impact that the flood had on their life and personal values. The results of this longitudinal study show that in spite of the mid and long term presence of negative effects on the psychological health of the participants and in other aspects of their life (personal, social family and matrimonial life, etc.) the health of the study subjects improved over time (less significant differences between disaster victims and non disaster victims over time and higher score on the various measurement scales used in this study). On the level of the changes brought in their personal values, some elderly realized that unsuspected qualities and forces lived in them, enabling them to solve their problems and defend their interests against authorities sometimes recalcitrant to recognize the needs of disaster victims.

**PC8 546 HOLOCAUST SURVIVORS IN THE FOCAL POINT OF THERAPEUTIC A. YOUNGER\*** (Bait-balev, Hod Hasharon, Israel)

OVERVIEW Some 250,000 Holocaust survivors live today in Israel. Of this number, 40% are hospitalized. "Bayit Balev" (Hebrew for "Home in the Heart") identified a need in training the caregivers on the special characteristics of Holocaust survivors and providing them with tools to address the specific difficulties of this population. OBJECTIVES • Expose the caregivers to the special characteristics of Holocaust survivor population through training and provision of tools for identifying and resolving difficulties. • Provide sensitive, customized, professional and effective treatment to Holocaust survivors. THE TARGET POPULATION • All the social workers (21) and multidisciplinary teams in sheltered homes, supportive housing and hospitalization departments of the Chain. METHODS / PROCESS • Mapping the Holocaust survivors among the tenants of sheltered homes who are hospitalized. • Appointment of an experienced, Chain-wide coordinator who took the relevant courses and has acquired additional extensive knowledge. • Hold a workshop for all social workers on the treatment of Holocaust survivors. OUTCOMES • Approx. 35% of the tenants and hospitalized tenants are Holocaust survivors. • A kit with articles, clip, treatment guidelines and information about special rights. • Comprehensive seminar for all the social workers of Bayit Balev. • Training sessions as part of the team meetings in the sheltered housing and hospitalization departments • Employees report on feelings of confidence and knowledge in respect to treating Holocaust survivors. • Assisting the survivors in completing their personal testimonial for the Yad Vashem Holocaust Memorial project. • Help survivors exercise their rights through better use of the Holocaust Survivor Fund. CONCLUSIONS • Increasing the awareness to the special characteristics of Holocaust survivors is important. • Teams are currently more sensitive and aware of the special needs of this special adult population. • The establishment of "My Life Journey" - a group of Holocaust survivors in the sheltered housing, facilitated by social workers

**PC8 547 ONGOING EXISTENTIAL THREATS ON OLD HOLOCAUST SURVIVORS: NEEDS AND UNIQUE CHARACTERISTICS DURING WAR.**

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**Objective:** to examine needs and difficulties (functional and emotional) of Holocaust survivors under the missiles attack during the second Lebanon war in order to plan immediate and future responses to urgent needs. **Method:** 110 men and women, Holocaust survivors that lived in communities under missiles attack in northern Israel, and received home care services after acute hospitalization, were interviewed by telephone. Data was collected with a structured instrument that included measurements of anxiety, somatization, depression and loneliness, health status, and services received from different agencies. In addition, an in-depth interview which included issues related to personal, emotional and functional needs of the survivors. The interviewees were Hebrew and Russian speakers, and were interviewed in their mother language. Findings reveal higher rates of anxiety, depression and somatization among the newer immigrants (less than 18 years in Israel), and among residents of the periphery. Women, unmarried older survivors, residents of the periphery and the newer immigrants reported more loneliness. There were many complaints of physical functioning and health problems. Survivors reported an increased use of tranquilizers. The survey revealed some instrumental-care problems: Paid home carers did not come to work; a shortage of food and medications. The coping patterns that were identified included mutual help; use of past memories for strengthening (the resilience model); for others, prior trauma reduced the ability to withstand the additional stress (the vulnerability model). **Conclusions:** It is of major importance to provide for basic needs in times of emergency. The elderly Holocaust survivors have a small and fragile support network that was partly paralyzed during the war. Agencies in the community were not always available which impacted on personal care, supply of food and medications. It is necessary to activate informal and formal support systems and to develop programs that will respond to the survivor

**PC8 548 DISASTER PREPAREDNESS OF NURSING HOMES: WHAT HAS BEEN DONE AND IS IT ENOUGH?**

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Nursing home disasters around the world have demonstrated that nursing home residents are a highly vulnerable population. In major events, the safety and well-being of residents may be threatened and deaths may occur. While the public sector in the United States and several other countries has begun to address emergency preparedness issues, in many cases nursing homes have not participated in this planning process. Further, the limited amount of research on nursing home emergency preparedness indicates that little attention has been placed on evaluating the effectiveness of facility disaster plans. This study examines how facilities in Massachusetts have prepared for disasters and identifies key areas for improvement. Data was collected using four sources: a review of thirty state nursing home disaster regulations, survey of all Massachusetts nursing home administrators, case studies of four facilities, and an analysis of facility disaster plans. Study findings suggest that Massachusetts's facilities are not adequately prepared for a major disaster and that steps should be taken to enhance existing plans. Training and communication were two areas identified as needing improvement. For example, while administrators conduct some emergency training, they need to increase education to improve staff knowledge of disaster plans. Second, disaster communication within and outside of the organization was often limited or non-existent. While it is possible a facility will not be completely prepared for a disaster, the results suggest that facilities may benefit from clear guidelines that identify the minimum requirements needed to prepare for a major event. Findings can be used to enhance facility disaster preparedness and increase awareness of the importance of preparedness to improve the safety of residents. This presentation will discuss how facilities in Massachusetts currently prepare for disasters, it will address areas identified for improvement, and it will reflect upon whether they have sufficiently prepared.

**PC8 549 DISASTER PREPAREDNESS AND OLDER ADULTS LIVING IN RURAL COMMUNITIES.**

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C. GREEN(1) - (1) Supporting People in Need (Murphysboro, United States of America)

Older adults living in rural communities, who are low income will be at risk when impacted by disaster due to the remote nature of rural communities. The purpose of this study was to examine how this target population living in rural communities perceive disasters, and to what level are they prepared. Nine focus groups were conducted, along with a survey instrument (MEPS) examining perceptions of difficulty for preparedness in the areas of planning, utility, knowledge and supply. Focus group questions solicited responses related to perceptions of disasters, perceptions of community's action in case of a disaster, barriers to preparation and knowledge about disasters and family disaster planning. Variables included demographics, perception of readiness and perception of difficulty for preparedness. Respondents identified the top three types of disaster to include tornados, floods and earthquakes. Over half of the respondents did not have disaster kits prepared or available. More than one third of respondents (34.8%) felt that a disaster would not happen to them, while other barriers included time and finances. There was a significant difference between income level and having items to be prepared, including batteries and flashlights. Findings suggest that people are not prepared in case of a disaster and also the lower the income level, the less prepared people are. Older adults could recount anecdotally about previous disasters, but this experience had no correlation with preparedness. **Implications:** Educational interventions targeting information and

preparation for low income groups will be an essential first step in the preparation process for disasters. In addition, community based agencies may need to consider alternatives to personal preparation, and assist low income communities to develop community preparation plans. These findings also suggest the need for further exploratory work through survey strategies targeting people that frequent resources such as food banks and thrift stores.

**PC8 550 A PATIENT-CENTRED COMMUNICATION TRAINING INTERVENTION: A PILOT STUDY**

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**Introduction:** Clients with aphasia, as a result of dementia or a stroke, are left with difficulties in understanding, talking, reading and writing. This severely limits their ability to communicate effectively with their family and care providers, resulting in adverse effects on their social interactions and quality of life. This pilot study was conducted with 2 aims: (1) to evaluate the effects of the patient-centred communication intervention (PCCI) on patient and nurse outcomes; and (2) to examine the nurses' perception of the helpfulness of an individualized client plan and communication strategies in enhancing interactions with clients with communication impairment. **Methods and Materials:** A quasi-experimental, no control group design, was conducted in a selected long-term care facility in Canada. Data were collected at 2 time periods: baseline and one-month post-intervention. The intervention included developing communication care plans for each patient based on individualized assessments of the clients by a Speech Language Pathologist, followed by support for nursing staff to implement them into their care. **Results:** Nine residents and 18 nurses consented to participate. The PCCI was successful in improving the nurses' communication abilities ( $p = .037$ ) and their knowledge of communication impairments ( $p = .001$ ). Following the one-month intervention patients' satisfaction with care ( $p = .024$ ) and their well-being ( $p = .024$ ) improved. Nursing staff also found the individualized communication care plans were very helpful in terms of understanding the patients needs, thus, enhancing their efficiency. **Conclusion:** Individualized communication care plan is an effective method to foster nurse-patient communication and assists to improve the relational care between nurses and patients with stroke living in LTC.

**PC8 551 WHY IS IT MORE INTERESTING TO ASK TO AN ALZHEIMER'S PATIENT TO READ THAN TO WRITE?**

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**INTRODUCTION** Allowing to patients with dementia to establish a good communication is essential for keeping friendly relations with them, understanding their needs and more generally, improving the quality of life of the patient and his family. However, it is well-known today that the language ability is impaired at different stages of the disease. Defining preserved abilities in order to maintain relations between the patient and his environment is then crucial. **METHOD AND MATERIALS** We met Alzheimer's patients at an early phase (S1), at an intermediate level (S2) and at the end (S3) of the disease, and evaluated them with a language evaluation battery. All verbal and written aspects of the language were tested. **RESULTS** Results clearly show a loss of language proficiency correlated with the degree of the disease. Notably, it seems that S1 patients are only characterized by writing difficulties at different levels. For S2 patients, oral spheres (production and comprehension) become impaired but the reading proficiency is preserved. Finally, for S3 patients, the reading skill becomes the last efficient communication channel. **CONCLUSION** These results tend to prove some dissociation between the different aspects of the language in the Alzheimer's disease. We show that impairments in language vary with the degree of the disease, but equally that some abilities remain preserved until the term of it. For example, the reading proficiency stays efficient for S3 patients, and could represent an interesting channel for keeping some relations with them. We think that it is important for therapists to have a clear representation of the preserved language abilities in order to adequately adapt their relations and activities at the most efficient level. The aim of our next researches should now be to develop a short language battery specifically adapted for neurodegenerative pathologies.

**PC8 552 EMOTIONAL THERAPY FOR PATIENTS WITH DEMENTIA**

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**Introduction:** Preserved plasticity of cognitive processes raises the intriguing possibility of appropriately designed cognitive training regimens. Problem is what kind of activities will help cognitive decline in dementia patients. We studied if emotional therapy for patients with dementia by retired high school teachers improved cognitive function. The emotional therapy consists of thematic story of various areas cited from well written books. The present emotional therapy is not simply reminding events happened to the patients like reminiscence therapy but feeling emotions by thematic story. **Methods:** forty six patients

were entered into the study of usual care plus emotional therapy (n=15, 78±4 (mean + SD) year, 10/5, F/M) or usual care without emotional therapy ( n=31, 79±4 (mean + SD) year, 22/9, F/M). Emotional therapy was performed in Tomizawa Hospital, Sendai, Japan by retired high school teachers in a class of 5-10 patients, each 1 to 1.5 h, once or twice a week. Results: After 12 months of emotional therapy ,MMSE increased from 16±4 (mean + SD) to 19±5 (mean + SD)(p<0.01). In control group, MMSE changed from 16±4 (mean + SD) to 13±5 (mean+SD)(p<0.01). Barthel Index did not change from baseline in both groups. Conclusion: Emotional stimulations might be one way of stimulating the remaining cognitive functions of the brain

**PC8 553 AZELASTINE HYDROCHLORIDE ON BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS IN DEMENTIA PATIENTS**

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Introduction: Antipsychotics have been used for behavioral and psychological symptoms of dementia patients (BPSD), but these drugs often induce other adverse events such as extrapyramidal symptoms, falls and aspiration pneumonia. We found that azelastine hydrochloride, which has been used for the anti-allergic diseases of asthmatics, allergic rhinitis and atopic dermatitis, might show sedative effects for BPSD in the elderly. Methods: Thirty patients with dementia (11 men and 19 women; 78±10 (mean +SD) years, MMSE 13± 8 (mean +SD) were studied. BPSD was assessed and evaluated using the Neuropsychiatric Inventory (NPI: lower scores indicate better performance). Patients were randomly assigned azelastine hydrochloride 1mg two times a day (n=14) or no active treatment (n=16) and were observed for 4 weeks. Results: Significant improvements in the score for NPI ( from 29± 11 to 17± 13, p<0.01) was observed in the azelastine hydrochloride group, where NPI in the control group ( from 31± 12 to 28±13 ) did not change significantly. Barthel index and MMSE did not change significantly in both groups. Conclusion: Azelastine hydrochloride has been proved to penetrate the blood brain barrier. Patients with BPSD might suffer some brain injuries and anti-leukotriene and anti-histamine medicine might be benefit to subside these injuries.

**PC8 554 OLDER AUSTRALIANS WITH LIFE LONG INTELLECTUAL DISABILITY: EXPERIENCE AND EXPECTATIONS OF 'ACTIVE AGEING'**

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'Active ageing' as a construct is increasingly gaining international currency. However, as we are only now seeing the first substantial group of older adults with lifelong intellectual disability reach old age, how this group perceive and experience the process of ageing is unclear. Thus, this qualitative research utilises an active ageing framework to explore how older Australians with lifelong intellectual disability experience ageing, their goals and expectations for the future, and the facilitators and barriers to active ageing. Method Using purposive sampling, disability or aged care service providers for people with intellectual disabilities were asked to service users who were aged older than 50 years and able to communicate verbally. Semi-structured interviews were conducted with 16 service users; 16 service providers and 16 key informal network members from regional/rural and urban areas in two Australian states (Queensland & Victoria). Results Active ageing for older people with lifelong intellectual disability means having a sense of empowerment, being actively involved in their communities, having a sense of security in terms of finances, emotional wellbeing and future care, having opportunities to learn and maintain skills, having congenial living arrangements, having optimal health and fitness, being safe and feeling safe, and having satisfying relationships and support. Conclusions Older people with lifelong intellectual disability wanted to "keep on keeping-on" in areas of life that gave them pleasure, rather than discontinuing them because of age. They wanted more control over issues affecting their lives and to be given meaningful roles. Mental stimulation, companionship, reliable support and safety were valued. Critically, they want to have a sense of control, be included in decision making and be empowered to lead the lifestyle they choose to lead in their older age.

**PC8 555 COMMUNICATION WITH NURSING HOME RESIDENTS WITH DEMENTIA: A SYSTEMATIC REVIEW OF THE LITERATURE**

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Background: People with dementia develop more and more difficulties in communicating as the disease progresses. Their way of communicating changes from verbal to nonverbal, and such communication difficulties are considered a trigger of neuropsychiatric symptoms. This review studies the effects of non-pharmacological interventions in nursing homes on communication between residents with dementia and nursing staff, as well as on the neuropsychiatric symptoms of residents with dementia. Method: Pubmed, PsychInfo, Web of Science, the Cochrane Library, and reference lists from relevant publications were systematically searched to find articles describing a controlled, communicative intervention. Meta-analysis was performed when data allowed pooling. Results: A total of 19 intervention studies, were included. The two common types of interventions were interventions for residents at set times (e.g., life review) and interventions teaching nursing staff to apply communication techniques during daily care activities (e.g., sensitivity to

nonverbal communication). A meta-analysis of four of the set-time studies revealed significant effects for communication outcomes (standardized mean difference, 0.73; 95% confidence interval, 0.08–1.37; p = 0.03), but none for neuropsychiatric outcomes for residents with dementia. Interventions conducted during daily care activities also showed positive effects on communication outcomes. Conclusion: Results of this review indicate that it is possible to significantly improve communication in nursing homes when interventions are structured and interactive. Multi-task interventions are not any more effective than one-on-one attention. No positive effects have been found for neuropsychiatric symptoms. Future research should focus on effects leading to the positive behavior of residents instead.

**PC8 556 MECHANISMS OF PSYCHOMOTOR SLOWING IN ALZHEIMER DISEASE AND LEWY BODY DEMENTIA**

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Psychomotor slowing has been documented in dementia, however, they did not examine separately rapidity of processes involved in RT tasks such as perceptual, motor, decisional processes and attention. The objective of this study was to determine whether RT lengthening in Dementia with Lewy Bodies (DLB) and Alzheimer's disease (AD) is due to global slowing or specific alteration of perceptual, motor, decisional processes or of attention. 19 mildly demented patients (AD: n=11; DLB: n=8) with a MiniMental Score ≥20/30 and 19 age and education-matched controls were included. 4 tasks were used to assess rapidity of motor processes using finger tapping test; visual processes using Visual Inspection time (VIT); perceptuo-motor integration and attention using Simple RT (SRT); and binary decision processes using Choice RT (CRT). Analyses of variance showed slowing of (1) finger tapping in AD (p<0.02) (3.85±1.2 Hz); (2) Visual Inspection time in both AD (267±183 msec) and DLB (477±75 msec) patients (p=0.0001, both); (3) SRT both in AD (406±126 msec) and DLB patients (457±131 msec) (p=0.03 and p=0.02, respectively); (4) CRT both in AD (916±179 msec) and DLB patients (810±182 msec) (p=0.0001 and p=0.02, respectively) with increase of error rate in DLB patients (9.7±8%). Additional analyses of SRT distribution indicated that SRT lengthening in AD patients was mainly due to slowing of perceptuo-motor index (p=0.03) whereas it was due to impaired attentional index (p=0.004) in DLB patients. This study supports the presence of psychomotor slowing in both AD and DLB but indicates that it is due to different mechanisms with a prominence of perceptuo-motor slowing in AD and disorders of attention and visual processes in DCL.

**PC8 557 PRAYER AS AN INTERVENTION FOR AGITATION AND QUALITY OF LIFE IN LATE-STAGE DEMENTIA**

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This study explored the use of spirituality as a coping strategy for dementia residents with agitation. A prayer exercise was used as a concurrent integrative approach for nursing home residents with agitation to facilitate stress reduction and improve quality of life. Caring for a person with Alzheimer's disease or other types of related dementias poses unique problems, one of those being the presence and management of agitation and aggression. Using a mixed-methods experimental research design, nursing home residents with moderate to late-stage Alzheimer's disease or related dementias were assessed before and after the use of a prayer exercise. A multivariate analysis of covariance was used to identify significant differences between a control group and a treatment group who received the prayer exercise. Quality of life and 10 domains of neuropsychiatric symptoms of dementia were measured with pre- and post-tests developed specifically for persons with dementia. Additionally, journal entries for each intervention were qualitatively analyzed to illustrate the experience of prayer with a nursing home population with dementia. Four themes were identified through this process: gratitude, reverence, satisfaction, and familiarity. Multivariate analysis of covariance and subsequent univariate tests identified a statistically significant mean difference between the two groups for quality of life, indicating a higher quality of life for the treatment group. No statistically significant mean differences were found between the two groups on neuropsychiatric symptoms; however, there was a slight improvement in the mean scores for the treatment group. Findings from both quantitative and qualitative analysis demonstrated that quality of life was improved for those residents in the treatment group. The spiritual activity of prayer was an effective intervention among the demented elderly in this population. The findings underscore the importance of researching interventions that benefit quality of life for persons with dementia.

**PC8 558 EVALUATION OF A TELEPHONE HELP-LINE FOR CHALLENGING BEHAVIOUR ASSOCIATED WITH DEMENTIA**

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Introduction: An evaluation was conducted into the effectiveness of the Australian National Dementia Behaviour Advisory Service (NDBAS), a telephone help-line run by Alzheimer's Australia for home carers and health professionals dealing with challenging

behaviour associated with dementia. Procedure and Materials: The calls of interest were where an NDBAS consultant provided a clinical intervention. For these, callers were invited to complete a questionnaire over the phone. Participants were contacted again three and six weeks after the initial call. Measures included nature and frequency of behaviour, disruption, stress caused by the behaviour, and satisfaction with NDBAS. Demographic data, level of dementia of the person manifesting the behaviour, and emotional state of the caller were assessed at baseline. Results: Of 571 calls received during the evaluation period, 68% involved challenging behaviours and, of these, 31% involved a clinical intervention. Eighty-seven callers (56%) of these agreed to participate in the research. Most calls were from a family member. The mean age of the person with dementia was 81, most were still living in the community and in the mild or moderate stages. The most common behaviours were: resistance to care; paranoia/suspicions/accusations; and, aggression/violence/anger. With few exceptions, callers were extremely distressed at baseline, with emotions in the anxiety spectrum more pre-dominant than depression. Satisfaction with NDBAS was high, and the findings showed a significant and sharp decline in behaviour frequency. A third of behaviours did not occur at all six weeks after the initial call and, overall, 66% to 70% of behaviours had improved in frequency, stress and/or disruption. Discussion: The evaluation suggests that this relatively low cost intervention can be effective in assisting home carers with challenging behaviour. Specialised telephone help-lines for this population remain part of dementia services funded by the Australian Government.

**PC8 559 EVALUATING THE PSYCHOMETRIC PROPERTIES AND THE CLINICAL FEASIBILITY OF A CHINESE VERSION OF THE DOLOPLUS-2 SCALE AMONG COGNITIVELY IMPAIRED OLDER PEOPLE WITH COMMUNICATION DIFFICULTY**

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Background A variety of behaviourally observed tools have been developed to assess pain among cognitively impaired older people with communication difficulty. However, no adequate pain observed instrument is available for this group in Taiwan. Objective The study was undertaken to translate the French version of the Doloplus-2 scale into Chinese and to evaluate the psychometric properties and the clinical feasibility of the translated instrument. Methods The Doloplus-2 scale was translated into Chinese using the back-translation technique and pilot testing was performed to determine the comprehensibility and the initial psychometric characteristics. A total of 241 subjects with moderate and severe dementia were recruited and registered nurses in charge of these residents rated pain using the translated scale. Internal consistency and inter-rater reliability was evaluated by Cronbach's alpha and intra-class correlation coefficient. Based on the known correlated validity model, the association between C-Doloplus-2 and empirically supported correlates of pain such as the past pain history, the presence of pain related condition, functional disability, agitation and depression was examined using the Pearson correlation coefficient for validating the construct validity. Furthermore, factor structure was investigated using the Principal Components Analysis. Results The internal consistency was adequate for the total scale (alpha 0.74) and the subscales (alpha range 0.67-0.87). The intra-class correlation coefficient of the total scale was 0.81 and of the subscales ranged from 0.60-0.81. The association between pain latent variable and disability or depression was proved, partial supporting the construct validity. Three factors were extracted to confirm the original three-dimensional structure perfectly, accounting 65% of the total variance. Conclusions The psychometric qualities of Chinese Doloplus-2 were supported. Further research is needed to assess the clinical value of the translated scale performed in the institutions.

**PC8 560 INTERACTIONAL PERSPECTIVE ON THE IMPACT OF NURSING STAFF'S BEHAVIOUR ON RESISTIVENESS TO CARE IN DEMENTIA**

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Introduction Resistiveness to care (RTC) in patients suffering from dementia is a complex phenomenon in which patient-nursing staff interaction is considered critical, yet poorly understood. The aim of the present study is to describe, in an interactional perspective, the impact of an exhaustive set of nursing staff's behaviours on RTC during morning hygiene care manifested by institutionalized dementia patients. Methods and material Five residents suffering from severe dementia and exhibiting RTC on a weekly basis, and 25 caregivers, were recorded on video during 30 hygiene care sessions each, for a total of 150 sessions. Videotapes were rated using a real-time coding program (The Observer 5.0) specifying nursing staff's and patient's behaviours in accordance to a predefined coding scheme. Sequential analyses were used to analyze patient's RTC in five-second periods immediately following the onset of nursing staff's physical (instrumental and expressive touch) and verbal behaviours (neutral, positive or negative utterance, positive or negative instruction, distraction). Their relative impact on RTC behaviours was assessed considering the patient's behaviour at the onset of the caregiver's behaviour. Results Nursing staff's behaviours that were significantly ( $p<0.001$ ) associated with the onset of RTC include: instrumental touch, neutral, positive and negative utterances and both types of instructions. While these behaviours can trigger RTC, the magnitude of their effect is

dependant on the patient's preceding behaviour. Their relationship with RTC is moderate to strong when the patient is already exhibiting RTC while it is weak to moderate when the patient is collaborating or in a neutral state at the onset of the caregiver's behaviour. Conclusion This observational study is the first to describe with such precision the nature of interaction associated with RTC. Theoretical and clinical implications are discussed.

**PC8 561 THE PSYCHOSOCIAL IMPACT OF MULTIMEDIA DIGITAL BIOGRAPHIES ON PERSONS WITH COGNITIVE IMPAIRMENT**

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Purpose: The aim of this project was to observe cognitively impaired patients' responses to personalized, multimedia digital biographies (MBs). Media-related technology procedures were used to construct in DVD format multimedia biographies of six persons with Alzheimer's disease (AD) and six persons with mild cognitive impairment (MCI). Participant responses while viewing their MBs were filmed and submitted to analysis so as to extract the psychosocial impact on the participants and their families. Methods: An interdisciplinary team consisting of multimedia biographers and social workers interviewed family members of persons with AD and MCI and collected archival materials that best captured the patients' life histories. We filmed patients' responses to watching the MBs, conducted follow-up interviews with the families at three and six months following the initial viewing. Qualitative analytic strategies were used for extracting themes and key issues identified in both the filmed and interview response data. Results: Analysis of the interview and video data showed that the MBs evoked long term memories that stimulated and enhanced social interactions among patients, family members, and with formal caregivers. Family members reported changes in acceptance of their relative's impairment and engaged in interactions with the relative that they had previously believed untenable. Conclusions: This study demonstrated the feasibility of producing MBs for individuals with Alzheimer's disease or mild cognitive impairment, and their families. Extracted content from feedback interviews and videos of the participants viewing their own multimedia biographies showed how user-friendly technological strategies can be used to develop biographies that hold special meaning for persons with Alzheimer's, MCI and their families.

**PC8 562 CHANGING THE TRANSACTIONAL PROCESS BETWEEN THE ELDERLY WITH DEMENTIA AND THEIR FAMILIES: SPECIFIC SKILLS AND MEASUREMENT METHODS**

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The study aimed to demonstrate the relationship between the transformation of a Deviance Amplifying Feedback Loop (DAFL) of an elderly person and their family for the improvement of their health status. The process of transforming DAFL was shown by a three-dimensional graph. Enhancing the adaptive functions within a family is one of the most important aspects of promoting health. The case study shows the concrete process of change in a DAFL. The client was a woman who had taken care of her elderly father with dementia. She complained about her father's problematic behavior and her physical symptoms. Data related to meaning construction and behavior selection were collected through interviews using a tracking technique. The data were assessed following the paradoxical mechanism of DAFL. The fathers problematic behavior became pathological symptoms, although the daughter tried to improve her fathers problematic behavior. The data of DAFL were sorted based on Baless categories (Bales, 1950), which were used to analyze the interaction process. The dynamic processes were illustrated by a three-dimensional graph. Based on this graph, an intervention point was chosen and specific skills were selected. Post-intervention data were collected and graphed following the same procedure as for pre-intervention. From using circular questions to change the point where the DAFL mechanisms operated, the process of DAFL within a family was transformed. Post-intervention, the clients complaints discontinued. Moreover, the elderly father's problematic behavior did not worsen. By analyzing the pre- and post-intervention graphs, the transformation process was shown quantitatively. We concluded that the effectiveness of the intervention activity to transform DAFL mechanisms within a family to promote the health of an elderly person and their family was empirically proved.

**PC8 563 LET'S DANCE DANZÓN! THE EFFECT OF DANCING ON PEOPLE WITH DEMENTIA LIVING IN CARE HOMES: A PILOT STUDY**

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Introduction: Recent findings suggest health benefits of exercise programmes for older adults with dementia. This study aimed to investigate the effects of a psychomotor intervention based on Danzón, a form of Latin ballroom dancing. Methods and materials: A qualitative-quantitative longitudinal pilot study took place in 2 care homes in Newcastle upon Tyne, UK. An external observer used evaluation forms to measure the training units

during the dancing session. Thirteen participants with dementia were observed and later interviewed as well as carers who participated. Results: Quantitative results showed that participants could perform and exhibiting learning a sequence of four simplified Danzón steps over a session lasting 35 minutes, two days per week during 6 weeks. Grounded theory was used in the qualitative arm; a model emerged from residents and carers. It was stated that Danzón had a beneficial impact on the participants, mainly in terms of behaviour, affect and mobility. Moreover, carers reported positive outcome for themselves and the residents. Conclusion: The results of this study indicate that Danzón was enjoyed by both participants and staff, and that Danzón overall had a positive impact in the study settings. Therefore, this form of psychomotor intervention warrants further research. We plan a more in-depth study of the effects of the intervention in the Care Home.

**PC8 564 COST-EFFECTIVENESS OF A FUNCTIONAL PROGRAM TO INCREASE QUALITY OF LIFE IN COMMUNITY-DWELLING OLDER ADULTS**  
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Introduction: This paper examines the cost-effectiveness of a randomized clinical trial of a 12-month home-based intervention (Advancing Better Living for Elders; ABLE) to improve quality of life in community-dwelling elders with functional difficulties. Cost-effectiveness studies of functional improvement programs are important to advance standards of care for this underserved vulnerable population. Methods and Materials: We used an incremental cost-effectiveness ratio (ICER), to determine cost per quality-adjusted life-year (QALY). The ICER represents the additional costs to bring about one additional unit of benefit (QALY) from the intervention compared with no intervention. QALY was measured by the EQ-5D index weighted for U.S. societal preferences. Decision tree and probabilistic sensitivity analysis was conducted to test robustness of the model. Of the original 319 ABLE randomized sample, 301 African American and White older adults 70 years of age and older with functional difficulties with complete baseline and 12-month data were included. Of these, 152 were in intervention and 149 were in a usual care (no treatment) control group. The intervention involved occupational (OT) and physical therapy home and telephone contacts and implementation of home modifications (e.g., grab bars, raised toilet seats, monitors, rails) to reduce functional difficulties and improve quality of life. Results: The intervention cost was \$941.88. The cost for an additional QALY compared to no treatment (ICER) was \$16,052.12. The cost for the ABLE intervention group was less than \$50,000 per participant per year. Results were most sensitive to changes in home modification costs and in-home OT sessions. Conclusion: ABLE is cost-effective compared to usual care (no treatment) based on a willingness to pay of \$50,000 suggesting that a societal investment in home-based programs to improve function is worthwhile.

**PC8 565 REFLECTIONS FROM A COMMUNITY-BASED DENTAL EDUCATION IN LONG-TERM CARE FACILITIES: STUDENTS' VALUES**  
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Background: In 2007, Faculty of Dentistry at University of British Columbia formally introduced the course 'Professionalism And Community Services' – PACS in the dental curriculum. PACS has Community-Services Learning – CSL as an experiential learning pedagogy in different community sites including long-term care facilities where the students developed, applied and assessed health promotion activities. While experiencing this community-based dental education, students kept a reflective journaling. Objective: to illustrate how continuing reflections impacted students' learning in the context of their first experience in a long-term care facility site. Methods: Students were encouraged to reflect 'before', 'during' and 'after' the development of their CSL projects. 121 students provided and are still providing individual reflections through email, password protected intranet site (WebCT), or handwriting. Reflections were not graded and students were stimulated to favor thinking over description in at least 150 words per reflection. 83 students were from two classes of second years and 39 from one class of first years. Reflections were analyzed thematically for essential themes and categories. Results: Students not only appreciated the community experience in a long-term care setting, but also pondered about their own learning as health care providers for that population in the future. Before reflections emphasized 'expectations' and 'feelings of belonging', whereas during and after reflections promoted the discussion of 'challenges and struggles', and of 'ongoing engagement', respectively. Conclusions: Reflective activity helped students to better understand the struggles and rewards in working in a long-term care environment. It also enabled them to appreciate a community learning experience in a dental curriculum. It allowed them to gain additional value from a community-based education with a positive impact on their attitudes about services, themselves, and the long-term care in which they developed their CSL projects.

**PC8 566 ILLICIT DRUGS PATTERN UTILIZATION IN A PUERTO RICAN BABY BOOMERS SAMPLE.**  
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Introduction: A relationship exists between use of illicit drugs, exchanging needle and contracting HIV/AIDS. Individuals within the baby boom cohort have engaged in riskier sexual and drug-related behaviors as opposed to previous cohorts. Projections reveal that in approximately 20 years the number of older adults in need of substance abuse treatment will double; however, substance abuse related disorders have been overlooked and under treated. This study sought to describe the drug usage pattern in a Puerto Rican Baby Boomers sample. Methodology: A cross-sectional exploratory pilot study, with a non-probabilistic sample of 50 individuals (25 females and 25 males) participating in a Needle Exchange Program was conducted. Face to Face interviews were performed in a survey to determine the drug and alcohol usage pattern. Results: 90.5% are currently using street drugs and prescribed drugs. The most common drugs used are: cannabis (65.8%), crack (60.5%), cocaine (56.4%), heroine (53.8%) and speedball (48.6%). 90 % of the participant started using street drugs at 15 years old and have been using drugs for more than 10 years. Starting age of injecting drugs also shows a similar pattern among participants (15 years old or more). Needle usage varies from 9 to 10 per day; with an injecting pattern of 5 to 7 times per day. It should be noted that although participants are in a needle exchange program 40.7% shares needles, and 59.3% shares "cookers". Last, 53.6% mix their drugs with horse anesthesia. Conclusions: The participants' drug consumption patterns show high risk behaviors for HIV/AIDS infection. The population studied, are using adulterated street drugs as they are using veterinary products. There is no previous study performed that describe baby boomers drug usage profile in the Puerto Rican population, however more research needed.

**PC8 567 IMPACT OF AN INTEGRATED HEALTH EDUCATION, PATIENT-CONSULTATION, AND EXERCISE PROGRAM ON FUNCTIONAL PERFORMANCE AMONG WOMEN WITH KNEE OSTEOARTHRITIS**  
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Background: Knee osteoarthritis (OA) is known as a health problem affecting adults and older adults. A limited function caused by joint pain, crepitus, and stiffness leading to psychological dysfunction and socio-economic costs. The intervention that can be improved a limited function, is needed. Objective: The aim of this study was to examine the impact of an integrated health education, patient-consultation, and quadriceps-exercise training on functional performance in terms of improving joint range of motion (ROM), muscle strength, functional ability, reduction of pain, and weight reduction. Methods: A total of 73 patients with knee OA were recruited for the study. Participants were given health education class-based sessions three times, quadriceps exercise training followed by home-based exercise adherence for 12 weeks of three times a week, and individual counseling by telephone or meeting at the orthopedic out-patient clinic for 12 weeks of once a week. Data were collected at baseline, 8-and 12-week follow-ups. Statistical analysis was performed by using repeated measures ANOVA. Results: Results showed that ROM, muscle strength, and functional ability were significantly improvement after enrollment. Participants also had a statistically significant decrease in pain and joint stiffness; however, weight reduction did not achieve significance. Conclusions and recommendations: Findings from this study suggest that this integrated intervention program can be recommended to patients and health care providers for the management of knee OA. Moreover, further study needs to emphasize what strategies promote weight reduction that is commonly associated with osteoarthritis of the knee.

**PC8 568 THE INFLUENCE OF THE SOCIAL COMPETENCE IN DEMENTIA CARE ON THE OCCUPATIONAL STRESS OF NURSING HOME STAFF**  
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Nurses for the elderly are a group at high risk of burnout syndrome. Problems associated with dementia care are major reasons for occupational stress in nursing home staff. To analyse the influence of the social competence in dementia care on the occupational stress of nursing home staff, a theoretical model was designed and evaluated. From this model interventions to prevent burnout can be deduced. A training program was developed on basis of the above mentioned model. Purpose of this intervention was to reduce occupational stress of nursing home staff with training special social competencies in dementia care. The training was implemented and evaluated in two controlled training studies using multiple control group designs and process measurement. Participants were 79 nursing home professionals in the first and 39 in the second study. All participants were in daily contact with residents suffering from dementia. The trainings of both studies focused on problems and strategies in the communication with dementia patients and the communication with colleagues. The training evaluation supports effects for all relevant variables: The "social competence" of the caregivers increased and their "occupational stress" decreased while the "well-being of residents suffering from dementia" increased. Furthermore the results of multivariate time series analysis show that the effects for "occupational stress" and "well-being" can be attributed to the increased "social

competence" of the caregivers. The results of this study corroborate clearly the influence of social competence on the occupational stress of nursing home staff and the well-being of residents suffering from dementia. It can be concluded that training nursing home professionals in social competence is an indirect method to reduce their work stress and increase dementia patients' well-being. Therefore, the introduced training provides an opportunity to improve the situation of dementia care in nursing homes and to prevent burnout.

**PC8 569** PROMOTING HEALTH THROUGH AN INTERGENERATIONAL CAMP: PUERTO RICO GERIATRIC EDUCATION CENTER EXPERIENCE (PRGEC)  
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Introduction: The generation gap is a visible phenomenon in our society. The older adult and youth generations are growing, living and playing in a parallel way due to the myths and stereotypes that both populations can have about each other. The intergenerational summer camp initiative, respond to: break generational gaps between older adults and youth, and to allow opportunities to come together across generational lines. Older adults in Puerto Rico represent 15.4% of the total population according to the US Census, 2000. This population is characterized by heterogeneity, poverty, isolation and the prevalence of chronic conditions, such as hypertension, arthritis, and diabetes mellitus. The inadequate management of these chronic conditions can result in impairment, disability or death. To countercheck these possible results it is necessary the application of health promotion and disease prevention strategies for older adults. Methodology: The PRGEC in coordination with public and private community organizations, designed and have been implementing an intergenerational summer camp within a health promotion approach in a faith based organization during the past six years. Youth and children are trained on basic aspects of aging, normal changes, myths and stereotypes of aging. The activities for older adults include lectures on health promotion topics based on a need assessment, exercises, excursions, a field day and handcrafts. Results: A total of 616 persons, represented by three generations were impacted. Ninety eight percent of older adults evaluated the experience as excellent. Thirty six conferences on health topics and health fairs were held. Eighty eight percent of older adult increased their physical activity. Respect and good disposition to share which each other was expressed in focus group interviews. The success of the initiative is the result of many collaborative efforts. Conclusions: Besides the opportunity of promoting health, the intergenerational learning experience allows changes in attitudes between

**PC8 570** ANALYSIS OF COMPUTER GAME GENRE AND OLDER ADULTS (50+)  
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Computer games have significantly evolved since they were first developed in the 1960s. The knowledge and skills that have developed over the years have seen many young people adopt this form of entertainment as part of a life style. Baby boomers may remember when the first computer game was released or recall even playing it, but what about now in the 21st Century? Would older adults consider playing games with their children/grandchildren or within other social networks given the current technology and game content? This study investigated the notion of game content through a step-by-step approach of individuals designing their own game idea related to a hobby or interest. Qualitative and quantitative data reported positive results from participants in relation to computer/game usage, design ideas and whether the respondents would play games given the opportunity. Examples of positive results from the workshops included: 1) "The computer game for the elderly must encom! pass an exercise element and purpose;" 2) "I would like to play computer games to play with my grand-daughter;" 3) "If a game was of help to any particular hobby I could be interested. Come a time when I am not very active, computer games could have a place in my life;" and 4) "I still think that playing games is educational and fun". Although gaming has become popular due to the marketing of the Nintendo DS and Wii to older people, the findings from this study indicate game content needs to be further addressed by the games industry if additional marketing towards older adults is to increase. Data from this study supports the hypothesis that with the improvement in game content it is possible older adults may adopt gaming as part of their life style similar to that of younger audiences.

**PC8 571** INTELLECTUAL AND SOCIAL POTENTIAL UPDATE DURING OLD AGE  
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The promotion of a healthy aging is complex, which includes the achievement of a good quality of life. It is vital to broaden awareness about the aging process and the importance of health maintenance during it. Quality of life, health promotion and potential update of the elderly is our challenge in education. Our goal is to promote the integration of the elderly to the social environment, providing the expansion of their knowledge and

intellectual skills by means of activities such as: workshops, lectures, seminars, round-tables, forums and celebrations, allowing the elderly to discuss matters of great contemporary importance, aiming at expanding their personal and academic knowledge, developing a critical and significant consciousness in the social field. By taking advantage of the trainees' academic potential, the activities' organization and the deepening of the theoretical content are scheduled. A field research is done in order to evaluate the quality and impact of the events and from that the contents and the activities done in class are prepared. The main materials used are: booklets, CDs and DVDs, in short, printed materials and audiovisual. With the opening of space for the elderly production, by means of cultural workshops and internal and external presentations, old people's value and their active inclusion in society are recognized successfully. It is evident that the activities developed by the UnATI/UERJ are crucial to a healthy and harmonious coexistence among the students, which is extremely important to the search for a more productive and socialized old age. As for the trainees, the exchange of experience with the elderly is an excellent resource towards professional maturity and consciousness, providing a better interdisciplinary social interaction.

**PC8 572** SELF-MANAGEMENT SUPPORT PRACTITIONER TRAINING IN PRIMARY CARE: THE BRITISH COLUMBIA APPROACH  
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Introduction Health care systems have evolved around the concept of infectious disease, and they perform best when addressing patients' episodic and urgent concerns (Geneva: WHO; 2002). In these situations, the "expert practitioner" and "compliant patient" relationship has been effective. However, with changing global demographics, this acute care paradigm is no longer adequate, especially as people grow older, experience chronic health conditions, and have limited access to practitioners and services. Changing the way health practitioners interact with patients (especially seniors) to an empowerment model is fraught with barriers at the policy, organizational, administrative, educational, and individual levels. Methods British Columbia's approach to fostering collaborative practitioner/patient relationships is strengthened by the Chronic Care Model in which self-management support is a key component. At the policy level, BC's philosophical orientation to care is highlighted in a Primary Health Care Charter which calls for the development and delivery of policies, provider education and regional supports in efforts to implement "a patient as partner" systems approach. Results With the foundation of the Chronic Care Model and the Primary Health Care Charter, initiatives have included modified fee structures, mapping strategies, and integrated health networks. Single- and multi-session group sessions, internet and e-based technologies are available to practitioners through community in-service education and to students at training institutions. At the individual and family levels, interventions and programs are delivered by both health practitioners and lay leaders. Conclusion Bringing about collaborative relationships between practitioners and patients is difficult, especially in organizations influenced by the Acute Care paradigm. Progress is being made but success will require multilevel approaches over time. Support at the policy and individual levels exists but difficulties persist at the organizational level. Practitioner training at the Primary Care level will lead to productive practitioner/patient relationships experienced by seniors.

**PC8 573** IMPROVING THE COOPERATION BETWEEN GENERAL PRACTITIONERS AND COMMUNITY NURSES IN DEMENTIA CARE  
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Introduction In Germany, some 75% of patients with dementia live at home, supported and nurses primarily by family caregivers. In addition, GPs and community nurses play an important role in the care, either directly towards the patient or indirectly through supporting the family caregivers. It can be forwarded that an optimal communication and cooperation between GPs and nurses would be beneficial for the family caregivers in the sense of burden reduction and thus indirectly for the person with dementia. In Germany however, this cooperation is far from optimal, as the two professions have almost no contact to define common care objectives and evaluate the effects of their care. Methods The objective of the study is to develop a toolbox of instruments to improve the cooperation between the two professions and to test the effects of these instruments in a complex intervention evaluated within a randomized controlled trial in Hamburg. The toolbox contains interventions on different levels, e.g. clinical conferences together with the caregivers, measures to increase accessibility, common documentation formats etc. In the RCT, 30 nursing services working under the umbrella of the Protestant Church and covering the whole territory of the city were allocated at random to the intervention and the control arm. In the intervention arm the complex intervention will be tested over 12 months, whereas in the control group treatment as usual will take place. The project covers some 600 patients and their caregivers. Evaluation will be done by means of attitude questionnaires and case documentation. The project is actively supported by the Department of Nursing of the University of Applied Sciences, the Alzheimer Association,

the Association of GPs and the Association of Nurses. The project is funded by the Federal Ministry of Health Results and conclusions Will be available at the congress.

**PC8 574 "AGEISM EVALUATION DURING THE CAREGIVERS TRAINING PROGRAM AT THE BUENOS AIRES NATIONAL UNIVERSITY"**

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**Introduction** The research is about knowing the influence of the caregiver's training. The study investigate if the caregiver's training sessions influence the student's old age image, the presence of prejudices, stereotypes and implicit theories about old people. The subject is studied from the Gerontology as a field of study of aging, taking into account the contributions made by the psychogerontology. Method and materials The research describes how the University of Buenos Aires training sessions influence the caregiver's ageism, theories and stereotypes about old age. At the same time, the utilized design was a qualitative one. We used two surveys as collecting data instruments. The first one was done at the beginning of the training course and the second one at the end of it. Results From the first part of the research, the surveys discover that there are prejudices about old age and about old people resources. Analyzing problematic situations, the study found signs of showing overprotection attitudes, intimacy invading and stereotypes about old age. The research in the second part can find that there were changes in the caregiver's students after they completed the training sessions. Conclusions The evaluation is relevant for didactic objectives and for social preventive intervention project behind the strict academic concern. If we find that prejudices about old age are significant, then we recommend the need to emphasize the review of them during the training courses, together with the teaching of the contents refered to caring.

**PC8 575 EVIDENCE-BASED HEALTH PROMOTION FOR OLDER ADULTS: NCOA'S ONLINE TRAINING MODULES**

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**Introduction** Evidence-based health promotion programming for older adults is a rapidly growing area of aging services delivery, yet not all service providers in the US or elsewhere feel knowledgeable or adequately prepared to deliver such programming. Easy to access training and materials are thus needed to enhance provider and partner capacity to assure quality in program planning, implementation and ongoing maintenance of older adult health promotion programming. Methods/Materials This session showcases the six self-paced, online modules titled, "Introduction to Health Promotion for Older Adults" series produced by the National Council on Aging. The modules provide all of the basic concepts, frameworks, tools, strategies and resources that providers and their partners can use to implement evidence-based health promotion and prevention programs. Module 1 focuses on making the case for health promotion and aging; Module 2 focuses on explaining what evidence-based health promotion is; Modules 3-6 focus on the five components of the RE-AIM model (REACH, EFFECTIVENESS, ADOPTION, IMPLEMENTATION, MAINTENANCE) which is a prominent framework in the US for systematically planning, implementing and evaluating public health programs. Results These modules have been tested nationally in the US and are recommended by the Administration on Aging as basic training on evidence-based practice in aging services. They can be used for in-service training or general orientation with a number of audiences, including: administrators and line staff in aging, health, human services, or other community agencies; potential funders and other community sponsors of health promotion programs; volunteers recruited to participate in health promotion programs, and students in gerontology or other health disciplines. Conclusions Discussion will include ways to apply the content, tools and resources to various audiences and challenges and opportunities for cross-cultural application.

**PC8 576 SOCIAL WORK AND OLDER ADULTS: IMPACT OF THE HARTFORD PARTNERSHIP PROGRAM FOR AGING EDUCATION ON MSW STUDENTS**

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"The US is undergoing a demographic transformation - by 2030, the number of people aged 65 and older is expected to double - to 70 million. This growing older adult population will create an unprecedented demand for aging related programs, policies and services." (Retrieved from <https://www.socialworkers.org/aging.asp>, January 6, 2009) The demand for trained, credentialed social work graduates who serve older adults and their families will far exceed the availability if the supply is not increased, ie more students do not pursue careers in aging. Several surveys have found that students are reluctant to consider careers in aging due to their lack of knowledge about, and limited exposure to, the opportunities in this field. The Hartford Partnership Program for Aging Education was specifically created to promote learning opportunities for social work students in the field of gerontology. The aim of this educational initiative is to expose students to the diversity of the aging arena through enhanced field practicum experiences across multiple populations and disciplines, strategic mentoring by trained field instructors, and the development of leadership potential (Retrieved from <http://www.nyam.org/initiatives/swli.shtml>, January 6, 2009). Indiana

University School of Social Work was one of the 72 graduate schools awarded a grant sponsored by the Social Work Leadership Institute. IUSSW developed a consortium of community organizations working in the field of gerontology to provide expanded field practicum opportunities for the students selected into the program. As an incentive, students received a stipend for participating in this initiative. This presentation will provide - • A blueprint for developing and enhancing university-community collaborations in the field of aging. • Ideas for recruiting and retaining students. • Guidelines for the recruitment and training of gerontological field supervisors. • Preliminary findings of the competencies gained by students and satisfaction with their practicum experience.

**PC8 577 LONG-TERM CARE DECISIONS FOR OLDER PEOPLE: A RESEARCH-BASED THEMATIC ANALYSIS OF STAKEHOLDERS' VALUES AND PRIORITIES**

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**Introduction** Discussions and decisions about long-term care (LTC) for older people are stressful and can result in conflict between older people, their families and health professionals. This combined methods (qualitative and quantitative) project investigated psychological values and priorities concerning older people's need for long-term care and the LTC decision-making process. Methods and materials Using research-based thematic analysis and chi-square, responses to a semi-structured interview and hypothetical vignette were used to compare the values and priorities of three types of stakeholder : 10 frail older people living at home, 8 younger relatives of frail older people, and 18 health professionals engaged in discharge planning for older people. Results Findings were complex: older people valued autonomy for themselves, but suggested safer and more restrictive options for the hypothetical older person in the study vignette, perhaps adopting the stance of a proxy decision-maker. Younger stakeholders (relatives and health professionals) endorsed less restrictive options for the older person in the vignette, but expressed conflicted ethical views about the relative value of safety (or beneficence) and autonomy for older people needing LTC. Asked what was most important when making difficult LTC decisions, older people emphasised balance, relatives emphasised planning, and health professionals emphasised timing. Conclusion Older and younger people have different values concerning LTC needs. Thus in clinical settings, discussions of LTC would likely be effective and less conflictual if focused on priorities valued by older people, such as autonomy, balance and control. Accordingly, health professionals' training could incorporate more sophisticated models of values and ethical practice including both psychological and physical safety. Most importantly professionals, educators, policy-makers and legislators must be guided by the priorities of older people with regard to LTC decisions.

**PC8 578 IS EXERCISE EFFECTIVE IN PROMOTING MENTAL WELL-BEING IN OLDER AGE? A SYSTEMATIC REVIEW**

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D. HUGHES, P. LINCK, R. IAN, W. ROBERT T

**INTRODUCTION:** Mental health promotion for older people has been a neglected area. This paper examines the effectiveness and cost effectiveness of exercise and physical activity interventions on the mental well-being of people aged 65+. **METHODS:** a systematic review, meta-analysis and economic model were developed. Reports/papers published in English were identified by searching data bases, websites and references lists of other reviews. Eligible studies were those with a comparison or control group or offering qualitative evidence; exercise and physical activity interventions for people aged 65 and over living at home, in the community, in supported housing or in residential care homes; including outcome measures of mental well-being, not simply measures of depression or anxiety. Low quality studies were excluded from the data synthesis. Results: 13 robust papers, including one qualitative paper and one cost effectiveness paper were included. An overall effect of combined exercise on mental well-being was found (effect size =0.28; CI=0.15-0.40). The interventions were designed for older people, targeted those who are sedentary and delivered in a community setting primarily through a group based approach led by trained leaders. Firm conclusions about the number of sessions, their length and intensity are difficult to ascertain. As a minimum, the evidence indicates two sessions per week, each of 45 minutes duration. There is some indication that exercise can also improve the mental well-being of frail elders. Economic evidence indicated incremental cost-effectiveness ratios (compared with minimal intervention) in the range of £7,300 to £12,100 per QALY gained. **Conclusions:** Mental well-being in later life is modifiable through exercise and physical activity. The wider social benefits of group exercise activities in later life are an important factor in a population where social isolation and loneliness is commonly found.

**PC8 579 A THEORETICAL FRAMEWORK FOR MOBILITY IN OLDER ADULTS**

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**Introduction.** Mobility is fundamental to active aging and is intimately linked to health status and quality of life. Although there is widespread acceptance regarding the importance of mobility, none of the existing conceptual frameworks for mobility adequately addresses the multitude of factors relevant to older adults. The purpose of this

paper was to develop a comprehensive model of mobility in older adults. Methods. Literature relevant to measuring and describing mobility in older adults was reviewed. A new, broader framework was then developed. Results. Gait speed, stair-climbing and other lower extremity strength and power measures have been used to describe physical aspects of mobility. Life space diaries and questionnaires, videotaping, pedometers, accelerometers and global positioning systems have been employed to measure mobility in the community. Mobility has been conceptualized in different forms; along a continuum of function, among concentric rings of life-space locations, and by mapping walking ability relative to different environmental factors. For this paper, mobility was defined as the ability to move oneself (independently, with assistive devices or by using transportation) to different areas of the home, neighborhood, service community and regions beyond. Mobility was conceptualized through five fundamental dimensions (psychosocial, environmental, physical capabilities, financial resources, cognition and knowledge), encompassed by gender and cultural influences. Each dimension was devised to include an increasing number of factors, demonstrating greater complexity associated with mobility further from the home, further from the neighborhood, etc. Conclusion. A new theoretical framework for mobility in older adults has been developed to encompass the dimensions and underlying factors relevant to those living independently in the community as well as to those requiring specialized assistance or care. The framework illustrates how mobility impairments can lead to limitations in accessing different life-spaces and the interconnectedness of factors that influence mobility.

**PC8 580 SELF-MANAGEMENT HEALTH BEHAVIORS AND RELATED FACTORS AMONG DISABLED ELDERLY**

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Purpose: This study aimed to investigate the self-management healthy behaviors and related factors among disabled elderly. Methods: Data was collected by face-to-face survey from the day care, rehabilitation outpatient and long term care institution users who were aged 60 or over with physical disabilities. There were 563 persons interviewed, and 505 of them completed the survey, with completion rate of 89.7%. Self-management health behaviors included exercise and rehabilitation, dietary behavior, leisure activity change, and spiritual coping behavior. The predictors included demographic characteristics, health status, social support, assistive device use and home modification, and external resources. Logistic regression analysis was applied. Results: The disabled elderly who lived in the community ( $OR=10.233$ ), had more community resources ( $OR=1.087$ ) and used more assistive device ( $OR=3.890$ ), performed more exercise and rehabilitation. Those living in the community ( $OR=2.229$ ), having more community environment resources ( $OR=1.157$ ), and less applying home modification ( $OR=0.636$ ) performed diet management. Those who had more community environmental resources ( $OR=1.170$ ) and less physical disabilities ( $OR=0.863$ ) changed more leisure activities for health management. Being male ( $OR=3.299$ ), lived in the community ( $OR=2.361$ ), having more community environment resource ( $OR=1.074$ ), more media information ( $OR=1.080$ ), and less physical disabilities ( $OR=0.881$ ) were more likely to performed spirituality coping behavior. Conclusions: The disabled elderly living in the community performed more self-management of health behaviors than the institutional elderly, which indicates the passive attitude or lower autonomy of the institutionalized elderly. External resources provide supports to self-management behaviors and would be helpful to successful aging.

**PC8 581 THE SENSE TO RECREATE THRU THE AGEING PROCESS AND THRU ESTHETIC EXPERIENCE**

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Introduction The use of art in the intercourse with older adults is a proposal that appears often in our time. Today, more than ever, the different expressions of art are accessible to public. Our times of image value and spread acoustic, visual, tactile and kinetic expressions everywhere. A theoretical approach to this question is developed considering central contributions from Psychoanalysis, Esthetics, as part of philosophy, and Psycho gerontology. This reflection is given when the concept of "subject" is installed in society. "Subject", the idea of an autonomic fellow, of "being involved" as an individual, as center, place of decision and "creator of one's world". But at the same time, the idea of "not have been finished", of having the need to be completed by some one else, of being recreated in one's relationship with other. Methods To build conceptually three figural circles that represent different areas of knowledge: Psychoanalysis, Esthetics, and Psycho gerontology to explain the meaning of recreation in the constitution of the "subject", in the approach of a piece of art and in the processing of ageing. Conclusion The elderly, conscious of the fact that time goes by, of his own future death may active transmission and achieve intergenerational intercourse favoring his possibility of future. Considering the esthetic experience in relation with the capacity to recreate one self and create world explains why changes in behavior are observe thru educational and therapeutical proposals.

**PC8 582 ARE EPISODIC INTERVIEWS ADEQUATE FOR INTERVIEWING NURSING HOME RESIDENTS?**

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It is important to research subjective perceptions of the aged to meet the old peoples' needs in daily practice of geriatrics. Understanding and emphasizing those subjective perceptions

may lead to a person-centered gerontology. This seems to be especially important for institutionalized old people as their personal perspective is easily forgotten. Due to frailty, cognitive impairment and hearing loss it seems difficult to interview nursing home residents. Although older people like to narrate especially, the classic narrative interview does not seem to be convenient for nursing home residents, regarding its length. In order to survey nursing home residents' subjective concepts we therefore consider the episodic interview to be adequate. In our study we research nursing home residents' subjective concepts about sleep and sleep disorders. Thus it is important to ask whether episodic interviews are adequate for interviewing nursing home residents. We conduct episodic interviews with 30 nursing home residents about their subjective conceptions of sleep and sleep disorders. We include nursing home residents older than 65, who have been living for at least six months in a nursing home and are oriented to place, person and situation. The interviews are recorded and transcribed. We especially focused on how the interviewees manage the interview situation. For this purpose we also ask the interviewees to evaluate the interview. In this talk we will be able to present first results, whether the episodic interview is adequate for interviewing nursing home residents. We expect the episodic interview to work quite well with nursing home residents. It is important that the interviews are short and the interviewer speaks clearly and loudly. We expect nursing home residents to appreciate especially the possibilities to narrate during the episodic interview. To conclude, the episodic interview is appropriate for interviewing nursing home residents about their personal and subjective perspectives.

**PC8 583 THE HEALTH PROFESSIONALS POINT OF VIEW ABOUT HUMAN AGING AND THE INTERFERENCES IN COMMUNICATING WITH THE ELDERLY**

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Introduction: The lack of disseminating geriatric communication knowledge among health professionals has contributed to difficulties in the therapeutic approach for the elderly. This situation led to developing a non-verbal communication-training course about gerontology for professionals. One course objective was to identify comprehension about human aging and factors that interfere in elderly communication. Methods and materials: Quantitative, exploratory, field study developed in two hospital centers in São Paulo State after Ethical Committee approval. The twelve-hour course was offered to forty health professionals. A questionnaire was used to verify previous perceptions about aging and elderly communication interference factors. Results: Human aging was understood as: a) an evolution process with shared experiences; b) a phase where progressive transformations lead to fragilities, limitations, and incapacities requiring more health care attention; c) an unavoidable stage that brings unacceptable exhaustion and prejudice; d) valorization of care and respect. Difficulties in elderly communication were: 70% exclusively on their response, due to sensory problems, slow thinking, and pathologies; 10% on professional attitudes, with limited time and insufficient for to necessity recognition; 7.5% said both are responsible for the difficulties (elderly + professionals); 2.5% cited physical environment and 10% didn't respond. Facilities recognized for elderly communicating were: 47.5% associated it with the fact that they are affectionate and needy, therefore needing the professionals; 25% stated interpretation of elderly desires is not restricted to words, or to the use of simple vocabulary, interaction time and charismatic attitudes and attention shown, bring confidence and connection, thus aiding communication; 15% concluded that both are responsible for interacting, and 12.5% didn't respond. Conclusion: The professionals presented a pessimistic attitude about human aging before the course. There is a misunderstanding of papers and of recognition of communication functions, professionals leave interaction responsibility to the elderly.

**PC8 584 AUTONOMY AND INDEPENDENCE OF THE ELDERLY IN HOSPITALS: STRATEGIES IDENTIFIED BY THE HEALTH PROFESSIONALS.**

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Introduction: Gerontological care encompasses several participants: the elderly, their families, the caretakers, the community, and the health care team. Everyone must act interrelated and focused on integrated care; those that respect individuality, autonomy and that maintain or maximize elderly independence. Moved by this statement, a training course was developed to discuss non-verbal communication for health professionals in gerontology, where one objective was to identify strategies that could contribute to autonomy and independence of the elderly in the hospital. Methods and materials: Quantitative, exploratory, and field study developed in two hospital centers in the interior of the São Paulo State, after receiving Ethical Committee approval. The twelve-hour course was offered to forty healthy professionals, where they were questioned about their contribution to provide autonomy and independence to the elderly. Results: Each participant was able, during the required response on the first day of the course, to cite at least one strategy that could favor the independence and autonomy of the elderly. The answers were organized in three groups: a) ethical values (exerting principles such as patience, care, dignity, and respect; explaining their rights as citizens); b) technical knowledge (encompassing the aging process; updating geriatric information; planning facilities and home furnishing installations; evaluating the functionality and dependency

levels); c) communication (paying attention to details that were not said; not interrupting when someone is talking; knowing how to listen; encouraging to decide by their own accord; “wasting time” with communication and making it a validation process). Conclusion: The aspects connected to verbal and non-verbal communication were the most cited as strategies for contributing to maintain or maximize autonomy and independence of the elderly in hospitals. The ethical dimension with little elaboration indicated that it was necessary to be worked on throughout the course.

**PC8 585 AUTONOMY AND RISK IN OLDER PEOPLE**  
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The principle of autonomy, which emphasises self-determination and individual control over decision-making, is a central concept in professional ethics. Although professionals have a duty to uphold the principle of autonomy, this principle is limited by the capacity of clients to make decisions and the extent to which the decision places the individual and others at risk of harm. While much has been written about the conflict between these principles in theory, their interpretation in practice is less often addressed. This study explored the ethical decision-making processes of 24 professionals working in the community with older people who were labelled as self neglecting or living in squalor. Semi-structured, qualitative interviews were conducted with participants and results were analysed using NVivo. The research found that participants adopted two different interpretations of autonomy. The six health professionals who were interviewed espoused a strict view of autonomy based on a medical test of capacity. If a client who was self neglecting or living in squalor was found to be capable of making decisions, these participants respected the service refusal and did not advocate for further intervention. For these participants, decision-making capacity overrode concerns about risk, particularly in situations that involved squalor. The other 18 professionals in this research believed that a high amount of risk exists in situations of self neglect, hoarding and squalor. Because of this, they considered it to be important to intervene to minimise this risk even in situations where an individual was capable of making decisions. These two interpretations of risk led to different resolutions of ethical dilemmas in situations of self neglect and squalor, indicating that it is necessary to further explore the ways in which risk is understood by professionals who work with older people.

**PC8 586 THE PATIENT'S PRIVACY IN THE CARE OF ELDERLY PEOPLE AND ITS CORRELATION WITH SATISFACTION IN EMERGENCY DEPARTMENT**  
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Background: Privacy is as basic human principle and one of basic right of each person. Patient's privacy and satisfaction are seen as quality of care indexes and one of the basic goals of health services system. Patient's privacy is a cultural concept and only few studies have been done in this issue in developing countries. Aim: The objective of this study was to determine the rate of observe patients Privacy by treatment team and its correlation with patient's satisfaction in an Emergency Department. Methods & Material: This was a cross-sectional correlation study that 260 hospitalized elderly patients in census method were recruited in Emergency Department of selected hospital of Tehran, Iran. Data were collected using a questionnaire included various dimensions in patients privacy and satisfaction. Data were analyzed using descriptive and analytic statistical methods by SPSS software. Results: Half of patients perceived that their privacy observed at poor to medium level. About 49.4% of patients reported that their privacy was observed at near to excellent level. Also about 1/3 of patients perceived that physical privacy and psychosocial privacy observed in medium level and their good information privacy. Satisfaction of 76.4% patients was low and medium. However satisfaction 50% of patients in physical privacy and 58.6% in information privacy was low. There is a strong correlation between level of privacy observed and satisfaction in various dimensions. There was significant correlation between some of the demographic variable and observes of privacy and satisfaction. Conclusion: In regard to observe of privacy and satisfaction of the most of patients is not in good level thus it is need to specific attention of clinicians and educators to this point. Also interventions is need for better observe of privacy and patients satisfaction.

**PC8 587 A FIVE YEARS' EXPERIENCE OF A FRENCH ALZHEIMER'S ETHICO-CLINIC WORKSHOP**  
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Introduction: Encouraged by the national Alzheimer's disease plan, several "ethico-clinic workshops" are created in Memory Centers. After five years of experience, it is a good time to assess this workshop. Methods and materials: We have recorded 60 monthly coordination meetings, 10 have been held through videoconferences with various participants. Most of the time, clinical situations that are experienced in our daily activities are brought up and exposed for a collective discussion. Also, we organize the meetings through critical readings of the legislation texts or through comments about articles dealing

with Ethics. Results: We retain four main ethical topics: the acceptance of the person, the balance of benefit / risk, the information given to the patient and his family, and one's individual ethics as opposed to the ethics of a group. Thanks to the diverse experiences and activities of each participant (doctors, psychologists, social workers, nurses, family's members association, jurist, theologian, students...), discussions about Ethics reach a high quality. Conclusion: Although this ethical center is not a source of deontologies, as a place of shared arguments/thoughts, it could constitute a reference to be used to come to decisions with complex situations. Besides the importance of ethical questions that are raised, it should encourage open-minded attitudes and enrich the professional involvement in daily situations. Finally these workshops could be a field of research for theses, dissertations and could answer to the training and research needs in a Memory Center.

**PC8 588 LISTENING TO MUSIC AS A COPING RESOURCE IN MIDDLE AND OLDER AGE**  
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Introduction Most adults are involved with music in some way in their leisure time. Some findings show that in early adulthood (about 25 years onward) people have less time to listen to music; however, it remains unclear whether this negative age trend also applies to how people listen to music. In addition, there is scarce evidence on its relevance to coping processes over the life course. The present study investigated two questions related to four different types of listening functions (emotional listening; structural-listening; everyday coping; social function). First, age-related differences in listening functions were investigated. Second, we investigated whether coping resources (rumination, tenacious goal pursuit, flexible goal adjustment) were related to the various functions listening to music has. Methods and Materials Over 370 participants took part in this cross-sectional questionnaire study (age range 19-96 years). Structural equation models were used to examine the proposed questions. Results At first glance, older adults showed lower mean levels in most listening functions. However, our findings do not suggest an inevitable decrease in listening functions over the life-span. The effects were small and can be explained by the fact that the amount of people who have learned to play a musical instrument is much higher among the younger adults. Higher structural-listening was associated with higher tenacious goal pursuit as well as flexible goal adjustment. Emotional listening was correlated with rumination. Furthermore, listening to classical music (which is more pronounced in middle and old age) was also related to flexible goal adjustment. Conclusion Music is important to people at older ages, however, our results underscore the role of societal influence. We interpret our results in the context of life-span theories and in view of their relevance for advanced age.

**PC8 589 LONELINESS AND LIVED EXPERIENCES OF ELDERLY INDIVIDUALS LIVING INDEPENDENTLY: HERMENEUTIC PHENOMENOLOGICAL APPROACH.**  
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Abstract Loneliness is a pervasive human experience. It is a subjective experience that is influenced by one's personality and situational variables. Loneliness has been recognized as a public health problem that requires the attention of clinicians and researchers both as a condition in itself and its relationship to other conditions. The study examined and generated an in-depth understanding of loneliness as experienced by eight individuals (65 years and above) living independently. A hermeneutic-phenomenological approach was used to describe and interpret the meaning of loneliness in the lived experience of elderly individuals. These interpretations were made possible through the support of the incidental themes, which were formulated by the participants' descriptions of their experiences of loneliness. Through interpretation, four themes emerged from explanations of how the elderly individuals interpreted loneliness. First, the participants experienced the existence of a painful void. Second, the participants experienced a state of being overwhelmed with work and emotion. Third, participants experienced a state of emotional pain. Fourth, the participants experienced a state of no direction. These findings affirmed that negative feelings were associated with loneliness according to the participants' descriptions. Understanding the common themes and meanings of the lived experience of these elderly individuals provides an effective base for the therapeutic relationship between counselor and the elder. The strengths and limitations of the study, and significant implications of the findings and future research, practice and education in counseling, were identified.

**PC8 590 HOW LIFE REGRETS CAN INFLUENCE ADAPTIVE OUTCOMES IN RETIREMENT: A LONGITUDINAL STUDY OF ACTIVITY ENGAGEMENT**  
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Introduction: This study examined trajectories of retirement outcomes and attempts to determine the role played by psychological factors. Specifically, we examined whether the experience of life regrets can motivate activity engagement among recent retirees. While research has shown that the experience of regret can be associated with a variety of psychological and physical complications in old age (e.g., depression, physical health problems; Wrosch et al., 2005, 2007), we reasoned that regrets may also, at times, provide

the basis for new goals and thus may predict adaptive outcomes (Epstude & Roes, 2008). Such an association should occur in particular when retirees are both capable and motivated to actively address their life regrets. Method: To test this hypothesis, we asked 317 recent retirees to record their most severe life regret, as well as their perceived opportunity and motivation to undo the regret. We also asked retirees to report their current level of activity engagement across three years (Years 1 – 3). In addition, we asked retirees to retrospectively report their pre-retirement level of activity engagement. Results: Trajectories of activity showed engagement in optional activities (i.e., activities of personal interest and investment; e.g., volunteering, traveling) increased significantly from pre-retirement to the post-retirement measurements, whereas maintenance activities (i.e., obligatory activities; e.g., chores, finances) remained stable. As hypothesized, regret predicted adaptive outcomes in retirement. Specifically, having both favorable opportunities and being motivated to undo the regret predicted high levels of optional activities at Year 1 (when controlling for pre-retirement levels) and high levels of optional activities at Year 3 (when controlling for Year 2 levels). Conclusion: These findings imply that regret can play an adaptive role in later life such as influencing engagement in activities of personal interest and investment.

**PC8 591 CLINICAL, SOCIAL AND DEMOGRAPHIC FACTORS ASSOCIATED TO THE PAIN LOCUS OF CONTROL OF COMMUNITY-DWELLING ELDERLY**  
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The problems associated to disability, among which stand out the algic symptoms, common in the elderly people with chronic dysfunctions, are an important worldwide concern regarding the population aging phenomena. Pain is considered a multidimensional experience, involving various aspects. The objective was analyse the perception of pain locus of control (LC) in elderly individuals along with its association to clinical, demographic and social variables. Design: A cross-sectional observation study. Participated in the study 162 elderly Brazilians (71.8;6.6 years) with chronic musculoskeletal pain living in the community, selected by convenience and with no cognitive difficulties. A structured clinical-socio-demographic questionnaire, assessment of self-perception of health, Form C of the Multidimensional Health Locus of Control Scale (Pain Locus Control - PLOC-C), visual analogue scale (VAS) for pain, geriatric depression scale (GDS) and the Timed Up and Go test (TUG) were administrated. The Kruskal-Wallis test, Mann-Whitney test and multivariate linear regression were employed to analyze pain LC and associated clinical-socio-demographic variables. The elderly preferentially perceived pain LC in healthcare professionals and internal. Low schooling and a higher GDS score were associated with a greater perception of chance pain LC (adjusted R<sup>2</sup>= 0.13). Being separated, using only medication to control pain and a worse TUG performance were associated to a lower perception of internal pain LC (adjusted R<sup>2</sup>= 0.10). Being evaluated at healthcare services was associated to a greater perception of pain LC in healthcare professionals when adjusted for the VAS score (adjusted R<sup>2</sup>= 0.04). Not living alone and a worse GDS score were associated to a greater perception of pain LC in others (adjusted R<sup>2</sup>= 0.10). These findings strengthen evidence of the influence of clinical-socio-demographic factors in the perception of chronic among elderly community individuals.

**PC8 592 THE CONCEPT OF MOBILITY REVISITED**  
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1 Introduction Mobility is a precondition of autonomy, independence and quality of life for elderly. A loss of mobility in age is a potential risk for care need. Despite the risks and threats of frailty the elderly value their independence, sense of individuality, self-worth and their freedom to decide what activities to undertake. Current research indicates that findings on falls prevention are inconclusive. Traditional falls prevention programs have focused primarily on the physical aspect of mobility and not taken into account the subjective perspective and individual needs of the elderly. This lack of understanding is of particular concern given that falls are very common and often result in serious complications such as fractures or even death. Therefore, efforts to maintain and support independence and prevention of care need are paramount. This project is funded by the German Ministry of Research and Education within the program "Healthy Ageing" (chair of consortium Prof. von Renteln-Kruse). 2 Methods Episodic-narrative interviews were conducted with elderly in a geriatric unit in Germany. The sample was recruited on the basis of the theoretical sampling (Glaser/Strauss 1967). The data analysis was carried out on a procedure of content analysis (Mayring 2008) and – in case of the existence of narrative structures – on a modified procedure of the narrative analysis according to Schuetze (1983). 3 Results The results indicate that strategies and experiences of mobility of the current elder generation in Germany are to a high degree influenced by gender-specific experiences of the second world war and of its aftermaths for family relations. 4 Conclusion Mobility is to a high degree influenced by subjective, biographic experiences and their social context. New programs are needed which integrate the empirical evidence

of research findings with the subjective perspective of the elderly creating an individual-centred approach.

**PC8 593 ELDER'S PERCEPTION OF CRISIS AND DIFFICULT TIMES AND THEIR RESPONSE TO THESE.**

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A survey of persons 65 yrs or older attending day activities centers in four geographical areas was tested with the Mini-Mental of Folstain. Those having a result of 21 pts or more were surveyed orally. The survey was administered by the researchers and included close and open questions. Those elders living in metropolitan areas were more educated, informed and alert than those who lived in rural and small towns. Hardly any one had taken care of children other than their own and mostly all lived from the Social Security income. Their idea and examples of what a crisis is was influenced by the local discussion of the economy in the news and hardly any one saw in personal terms. The answer to their difficult times and what effect it had on their personality was varied but most said they had changed little and were now satisfied with their life as a whole. It was noted that difficult times was answered sometimes from childhood experiences and it was not related to historical or social events in the country.

**PC8 594 THE PERSONALITY DOMAINS AND STYLES OF THE FIVE-FACTOR MODEL PREDICT INCIDENT DEPRESSION IN MEDICARE RECIPIENTS AGED 65 TO 100**

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Introduction: Few prospective studies have examined personality and depression in older adults. We investigated whether the Five Factor Model (FFM) of personality traits — Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness — and trait combinations (styles) predict incident major or minor depression. Methods and materials: Prospective data were gathered on a community sample of 512 older adults with disability and a history of significant health care utilization who were enrolled in a Medicare Demonstration Project. Personality and depression were assessed at baseline; depression was assessed again at approximately 12 and 22 months. Participants free of depression at all three assessments were compared to participants who developed major or minor depression at either follow-up. Results: High Neuroticism and low Conscientiousness were risk factors for major and minor depression. Combinations of high Neuroticism with low or high Extraversion or high Openness conferred risk for major depression as did combinations of low Conscientiousness with low or high Extraversion, high Openness, or low Agreeableness. Three trait combinations, all involving low Conscientiousness, predicted risk for minor depression: high Neuroticism, high Agreeableness, and low Openness. Conclusion: The present findings highlight the importance of examining combinations of personality traits or personality styles when identifying those who are most at-risk for geriatric depression. Since other personality domains may modify the risk related to high Neuroticism and low Conscientiousness, the prevention, diagnosis, and treatment of depression could be greatly improved by assessing older patients not only on all five domains of personality but in terms of their combinations.

**PC8 595 CLINICAL AND PSYCHO-SOCIAL OUTCOMES FOR A LARGE POPULATION OF ELDERLY COCHLEAR IMPLANT RECIPIENTS.**

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Introduction Considering the increased longevity, health and expectation of quality of life of the elderly in our industrialised societies, deafness need not hinder access to communication through cochlear implantation, which also serves to mitigate the effects of ageing and concurrent disabilities. Our clinic has well over 200 recipients above age 70 and the number of candidates seeking the procedure is increasing every year. Methods and materials A retrospective study of pre and post-implant speech perception data of elderly recipients was compared to a sample of younger adults aged 50 to 69. Data regarding surgical complications and co-morbidities were also examined. In addition, an expanded version of the International Outcomes Inventory for Hearing Aids (IOI-HA) was used to survey psycho-social and otological outcomes specific to the procedure. Clinical contraindications were considered. Results The post-operative speech perception outcomes of the elderly confirm significantly improved ability to comprehend speech, comparable to the younger adult group. Surgical complications of both groups were minimal, making it a safe option for the elderly. The survey on quality of life and perceived benefits indicate that the vast majority have realised their expectations, while otological side-effects such as vestibular function and tinnitus were not significantly affected. Conclusions The elderly

population should be as eligible to the cochlear implant procedure as younger adults. The survey results provide first-hand accounts of the range of experiences, benefits and limitations, as well as answers to frequently asked questions to assist clinicians to counsel prospective candidates. Age alone is not a contraindication, as it provides clear benefits not only to the recipient but to their family, social circle and professionals who deal with them, provided there is thorough candidacy evaluation and strong emphasis on pre-operative counselling to optimise potential functional outcome and satisfaction.

**PC8 596 EFFICACY OF A NEED-ORIENTED INTERVENTION TO REDUCE VERBAL AGITATION IN PATIENTS WITH DEMENTIA**

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**INTRODUCTION** Verbal agitation (VA), which includes behaviours such as screaming and repetitive questioning, is amongst the most prevalent behavioural symptoms associated with dementia. The need-driven dementia-compromised behaviour model suggests that disruptive behaviours are expressions of unmet needs or goals. VA may serve to express internal needs, especially for social interaction, sensory stimulation and comfort, which the patient cannot express otherwise. We have developed a need-oriented intervention aimed at reducing VA in patients with dementia. The main objective of this study was to test the efficacy of this intervention. **METHODS AND MATERIALS** The sample (N=26) was composed of residents of long-term care facilities with a diagnosis of dementia and presenting VA several times a day. A single-group repeated measures design using four six-day phases (P1: pre-intervention, P2: intervention; P3: post-intervention, and P4: follow-up) was used. Participants continued to receive their usual treatments throughout the study. The intervention, which combined different techniques to provide social interaction and sensory stimulation activities and to reduce discomfort, was individualized and applied during 30 minutes sessions conducted by a trained therapist. The comfort component was applied first as long as necessary. The remaining time was split evenly between the social interaction and stimulation components. Duration and frequency of VA were recorded by trained observers. **RESULTS** Duration of VA was significantly lower ( $M=40\%$ ) during P2 than during P1 ( $p<.01$ ) whereas frequency was significantly lower during P4 than during P1 ( $p<.05$ ). Duration of VA reverted near P1 level during the 30 minutes after the intervention was terminated. Fifty-four percent of participants showed a reduction of at least 50% of VA duration during P2 compared to 23% and 34% at P3 and P4, respectively. **CONCLUSION** The intervention is effective in reducing the duration of VA.

**PC8 597 THE IMPACT OF A SEMI-STRUCTURED REMINISCENCE PROGRAMME ON EGO INTEGRITY AND ON DEPRESSIVE DISORDER IN ELDERLY PORTUGUESE**

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This study analysed the impact of a circumscribed, semi-structured individual programme of reminiscence on ego integrity and depressive disorder in older Portuguese adults. A quasi-experimental design was produced for this study, in which 90 individuals over 65 years old participated, diagnosed with depression disorder, deprived of anti-depressive medical treatment and showing no signs of dementia. Each individual was assigned to one of the following three groups: (1) experimental group (reminiscence therapy sessions); (2) control group or (3) control-placebo group (weekly sessions of relaxation). Pretest and posttest evaluations of depression disorder were conducted according to the CES-D Scale (adapted by Gonçalves and Fagulha, 2000-2001, from the original by Radloff, 1977) and the ego integrity (adapted by Silva, Novo y Peralta, 1997, from the original by Ryff e Heincke, 1983) of all individuals with the same time gap. The results indicated significant improvements on depressive symptoms of the experimental group ( $t(29)=19,70$ ;  $p<0,01$ ); the average value dropped from 39,87 ( $DT=7,90$ ) to 13,60 ( $DT=5,14$ ), and significant improvements on the ego integrity ( $t(29)=-12,62$ ;  $p<0,001$ ); the average value increased from 28,60 ( $SD=9,01$ ) to 42,80 ( $SD=7,22$ ). In the control group depression symptoms tend to worsen and there are no significant differences regarding ego integrity. In the control-placebo group the depressive symptoms decreased, although they were less significant than in the experimental group, and ego integrity tends to diminish. The study also highlights the negative associations between the depression disorder with ego integrity in the pretest ( $\rho=-0,36$ ;  $p<0,01$ ), which are enhanced in the posttest moment ( $\rho=-0,63$ ;  $p<0,001$ ). The results support the use of the reminiscence programme as a therapeutic tool.

**PC8 598 EFFECTS OF GROUP LOGOTHERAPY PROCEDURE ON DECREASING OF DEPRESSION AND INCREASING OF MEANING IN LIFE ON FEMALE OLDER ADULTS.**

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**Abstract** Introduction:Over the last couple of decades , controlled research studies have been completed that confirm the effectiveness of psychotherapy for depression of older

adults.The purpose of this study was to effects group Logotherapy procedure on decreasing of depression and increasing of meaning in life on Older adults. Method and materials: research sample were 30 women Older adults that resident in a sanatorium. Research instruments was GDS (Geriatric Depression Scale) and MLQ (Meaning in Life Questionnaire). GDS and MLQ were administrated as the pre-test and post- test. Older adults that took 15 score or more in GDS, selected randomly as 1 group experimental and 2 groups control. Hypotheses indicated that groupe logotherapy has efficiency on decreasing of depression and increasing of meaning in life. Results: The results of post-test covariance analysis showed that there was no significant differences between experimental group and control groups GDS post-test scores but there was significant differences between effects of groupe logotherapy on increasing meaning in life. Conclusion: The psychotherapy of the the adult olders gets increasingly widespread and important. finds, in this research,confirmed Sheikh(1996).Sheikh didn,t find significant differences in depression scores of controlled and randomly researches in sanatoriums. Since groupe logotherapy could increase meaning in life but couldn,t decrease depression,so meaning in life could not decrease depression in older adults that resident in senatrum merely, because there are another factors that impression on depression such as withdrawal from their family and somatic or biologic diseases. Key words:Groupe logotherapy,Depression,Meaning in life,Older adults.

**PC8 599 DETECTION OF EARLY COGNITIVE DISORDERS IN OLD PEOPLE WITH PARKINSON'S DISEASE WITH THE FAB SCALE**

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Early cognitive changes in patients with Parkinson's disease are often subtle and influenced by factors that interact with the disease process, including age of disease onset. Executive function deficits are the most frequently reported cognitive problems. The aims of this study was to confirm the frequency and pattern of cognitive dysfunction in old patients with newly diagnosed Parkinson's disease with the use of the FAB scale. A cohort of 56 consecutive patients with newly diagnosed PD underwent a detailed clinical evaluation with included assessments of Parkinsonians signs and cognitive status. 3 groups were compared : < 75 years old ( group 1,23 patients),  $\geq 75$  years (group 2, 33 patients) and witness  $\geq 75$  (group3, 30 patients). The patients of the group 2 have more frequently non amnestic mild cognitive impairment than group 1 and 3 and the FAB scale was performant to detect it. This finding may have important clinical implications for the patients and their caregivers.

**PC8 600 A 'CBT' GROUP FOR FRAIL VERY OLD RESIDENTIAL CARE RESIDENTS**

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**Introduction:** There is a high prevalence of depressive and anxiety disorders in residential aged care and a body of evidence suggesting older people can benefit from psychological therapy. However, few studies have explored group psychological therapy in an old, old sample in residential care. The current study was pilot, aimed at exploring the logistical and therapy issues involved in providing a group CBT program for older (>80 years) people experiencing mild to moderate depression and/or anxiety. **Method:** Six residents participated in 8 weekly group sessions based broadly on CBT principles. **Results:** Two participants demonstrated a reduction in depressive symptoms. All reported that the group addressed the general lack of validation they experienced in their daily lives, by providing a safe forum to discuss their feelings. Logistical issues included difficulty recruiting residents and defining a target group, privacy and confidentiality within residential care, size and location of venue, reminding and assisting physically frail residents to attend, working around other facility priorities, and appropriateness of standard measures for old, old people. All participants engaged comfortably with the group rules and processes, though the process was adjusted to accommodate the need for some participants to talk a lot and focus primarily on the past. Additionally, participants' preoccupations differed from our *a priori* assumptions based on standard diagnoses. Sleep, pain, worry about children, boredom and loss of independence were the most pertinent issues for them. **Conclusion:** Once the logistical issues of conducting therapy in residential care were resolved, these very elderly, frail residents responded extremely well to the group process, and appreciated the chance to openly discuss their concerns in a confidential and validating environment without having to endure the reassuring platitudes they normally received. Some showed improvement on depressive symptoms, indicating that this real world sample can benefit from group therapy.

**PC8 601 WHO KNEW GRANDPA SNORTED COKE?**

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**Substance use, abuse, and dependence are elusive constructs when it comes to assessing problem behavior among Geriatrics patients. Gerontology literature pays slight attention to**

alcohol problems and none to drug problems of the elderly. Mr. HR is a 68y male with complicated medical history. He was admitted to the hospital for abdominal pain and had duodenal ulcer repair. After surgery he became hypotensive and tachypneic, was intubated and started on pressors. Subsequently, despite being off sedation, he remained unresponsive for three days. He eventually regained consciousness and complained of severe pain and discomfort all over his body, a pain consult was requested. For the next few days patient continued to complain of severe pain 10/10 on pain scale despite being on Oxycodone, a Fentanyl patch and Ativan. However it was noted by the nurse that he was sleeping in between pain medicine doses and was missing his physical therapy sessions. Accidentally, while cleaning his room, a bag of cocaine was found in his belongings. While in the hospital his granddaughter also found drug paraphernalia in his house. Confronted with evidence, patient admitted to the use of cocaine and several other substances. This case underscores the problem of drug and substance abuse in the elderly. The substance abusing elderly individual may be seen as a nice little old man/lady who could not possibly have a drug or alcohol problem. No data exist to quantify drug use, abuse, and dependence patterns in the geriatric population. Lack of awareness of substance abuse as a potentially important problem for older adults, failure to obtain and/or record accurate drug histories, reluctance to ask potentially embarrassing questions and lack of initiation of any action regarding an older adults substance use may result in suboptimum medical treatment and potential complications.

#### **PC8 602 INTERDISCIPLINARY RESEARCH AND EDUCATION FOR HEALTHCARE STUDENTS ABOUT PERSON-CENTRED DEMENTIA CARE**

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Introduction: An educational resource for undergraduate healthcare students across disciplines was developed on how to interact with people with dementia. Person-centred care provided the theoretical underpinning of the project through a community-based, interdisciplinary approach. Participants were actively engaged in contributing to and developing filmed re-enacted case scenarios together with an accompanying workbook containing reflective exercises for students. Methods and Materials: The community-based, interdisciplinary research approach involved participation and collaboration with an advisory group of 20 healthcare professionals from 14 disciplines across 15 organisations. Following ethical approval, the advisory group considered the educational needs of undergraduate students in correlation with developing the theoretical content for the educational resource. Interdisciplinary case studies were scripted into five re-enacted scenarios that interrelated with the workbook and reflective exercise questions. Results: The collaborative interdisciplinary process produced 35 case studies that were then scripted into five docu-dramas demonstrating positive person-centred care as well as negative interactions in care. The results of the final evaluation by key academic personnel across disciplines in four universities in Australia, as well as multiple cohorts of undergraduate healthcare students, will be discussed. The value of an interdisciplinary educational resource for teaching and student learning in educational programs and the importance of a community-based methodology will be explored. Conclusion: This educational resource used an innovative approach of interdisciplinary, community-based involvement to demonstrate to students how to interact with people with dementia. It was evaluated by students and educators in a wide range of disciplines for its usefulness in teaching, student learning and practice. Educational resources are more likely to be utilised across undergraduate programs when their creation involves interdisciplinary participation at all stages. The resource has been converted into an online module for access by undergraduate students across disciplines both nationally and internationally.

#### **PC8 603 DEPRESSION LITERACY AMONG MIDDLE-AGED AND ELDERLY CHINESE-CANADIANS**

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Introduction: Mental health literacy has been defined as "knowledge and beliefs about mental disorders which aid their recognition, management, or prevention" (Jorm et al., 1997). However, previous mental health literacy studies have failed to address age and cultural factors simultaneously. Methods: Depression literacy (correct identification of depression, perceived efficacy of treatments, perceived etiology, and prognosis), stigma, and attitudes toward seeking mental health services among middle-aged (55 to 65 years-old) and older (66 to 87 years-old) Chinese-Canadians were assessed through interviews (N = 53) conducted in Cantonese and Mandarin. To examine cross-cultural differences, responses of Chinese-Canadians were compared to a sample of same-aged residents of Alberta who had completed a depression literacy survey over the telephone (N = 869; Wang et al., 2007). Results: Of the Chinese-Canadians interviewed, 11.3% could correctly identify depression as presented in a case vignette. Day-to-day problems and being a nervous person were considered the most likely causes of the case vignette's problems. Psychiatrists and close family members were considered as being the most helpful, while becoming more physically active and psychotherapy were considered the most helpful interventions. Significant differences in depression literacy between the Chinese-Canadian

and Albertan samples were noted, especially rates of correct identification of depression and degree of stigma against depression. Conclusion: Middle-aged and elderly Chinese-Canadians were less adept at identifying depression depicted in a case vignette, than same-aged residents of Alberta. Using existing community organizations, culturally-appropriate mental health education efforts are needed for older Chinese-Canadians to improve knowledge regarding depression.

#### **PC8 604 THE RELATIONSHIP BETWEEN EDUCATION OLDER ADULTS MEMORY COMPLAINTS**

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Introduction: It is plausible that older adults with memory deficits may complain about memory more frequently. Memory complaints may be more frequent among older adults with lower education, due to greater vulnerability to cognitive decline. Objectives: To investigate if memory complaints vary as a function of education, and to evaluate if memory complaints are associated with cognitive performance, anxiety and depressive symptoms. Methods and materials: 67 older adults (between 60-75 years) were divided into 3 groups: 1 - 4 years of education (n=23), 4 - 8 years (n=20), and 9 or more (n= 24). Protocol included Brief Cognitive Battery BCB (memorization of 10 pictures, Verbal Fluency Animal Category VF, Clock Drawing Test TDR), a questionnaire about frequency of forgetting, the Memory Complaint Questionnaire MAC-Q, the Beck Anxiety Inventory BAI, the Geriatric Depression Scale GDS, and the Mini Mental State Examination MMSE. Results: Significant differences were found among the 3 groups for picture recognition, VF, CDT, and MMSE. No significant differences were found among the groups for frequency of forgetting and MAC-Q, and there was no association between complaints, cognitive performance and depressive symptoms. Complaints were associated with anxiety symptoms. Conclusions: memory complaints and frequency of forgetting were not related to education, cognitive performance, or depressive symptoms, yet they were associated with anxiety symptoms. Key-words: memory complaints, aging, education, elderly, depression, anxiety.

#### **PC8 605 PREDICTION OF SYMPTOMATIC DEPRESSION BY DISCRIMINANT ANALYSIS IN THE JAPANESE COMMUNITY-DWELLING ELDERLY.**

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Background: Although a number of studies have examined risk factors of depression for the elderly, little attention has been paid to the prediction of individuals at risk. The aim of this study is to construct a predictive model of individuals who are at a higher risk of the occurrence of depression in the Japanese community-dwelling elderly, using linear discriminant analysis Methods: Data were collected from 754 non-institutionalized elderly men and women aged 65 years and older living in community in Japan, using face-to-face interviews in 2002. Linear discrimination analysis was used to construct a predictive model to select individuals who have a higher risk of depression. Results: All of the 5 predictor variables (hearing problem, less appetite, less financial leeway, low emotional support and less subjective usefulness) selected were independently associated with the risk of depression. The discriminant analysis yielded a statistically significant function ( $\lambda=0.816$ ;  $\chi^2=113.0$ , df.5, p<0.001). This function showed that the rate of correct prediction was 78.2% for depressed. Limitation: Due to cross-sectional data, the causality could not conclude. Conclusion: The calculated discriminate function based on hearing problem, less appetite, less financial leeway, low emotional support and less subjective usefulness is useful for detecting individuals at high risk of depression and preventing the development of depression among community-dwelling elderly persons. Prospective studies are needed to confirm validity and feasibility of the model for earlier screening for the occurrence of depression in the Japanese community-dwelling elderly.

#### **PC8 606 CAREGIVERS' COMMUNICATION WITH PATIENTS ABOUT ILLNESS AND DEATH: INITIAL VALIDATION OF A SCALE**

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Caregivers of terminal cancer patients experience substantial communication difficulties with their loved ones about their illness. Existing communication scales focus on communication as perceived by the patient and do not include items that refer to his close death. The current study describes the development and initial validation of an instrument aimed at measuring caregivers' communication with patients about their illness and death. Two hundred thirty-six bereaved primary caregivers of cancer patients were recruited over a period of 18 months. The psychometric properties of the scale were explored by confirmatory factor analysis. Results provided support for a one factor solution. The discriminant and convergent validity of the responses to the scale were also supported.

Future studies should further establish the validity of the scale with larger sample sizes and different populations of caregivers of patients with other terminal diseases.

**PC8 607 PATTERNS OF COGNITIVE CHANGES IN HOSPITALIZED ELDERLY PATIENTS DURING AND SIX MONTHS POST HOSPITALIZATION**

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**Introduction:** The objective of this study was to describe patterns of cognitive changes during and 6 months post hospitalization and to identify predictors for different patterns of changes, using cluster and multinomial logistic regression analyses. **Methods and Materials:** A prospective cohort study was conducted at five surgical/medical units of a 2000-bed tertiary medical center in northern Taiwan. We enrolled 351 hospitalized elderly patients in which 82.9% (291 subjects of 138 women and 153 men, with a mean age of 71.6 years) completed all four schedule assessments. Cognition was measured by the Mini-Mental State Examination (MMSE) over four time-points (admission, discharge, and 3 and 6 months post discharge). **Results:** Four cognitive changes patterns were identified. A deep V-shape with a mean fluctuation of 3.9 MMSE points was observed in dip and back group (n=47) while there was little changes in stay low group (n=83). Both high-end declining (n=66), and low-end declining (n=95) showed a persistent and accelerated decline with starting mean MMSE scores being 29.1 and 25.5 points, respectively. The multinomial logistic regression revealed that age, year of education, cardiovascular co-morbidities, number of medications, functional scores, depressive symptoms, surgical treatment, and hemoglobin level <12 g/dL upon admission were independently and significantly associated with different patterns of cognitive changes. **Conclusion:** Patterns of cognitive changes in hospitalized elderly is heterogeneous and factor identified will prompt effective targeting. There remains a need to understand how preventive, group-specific interventions aimed to maintain cognition should be structured at hospital settings in order to improve quality and care.

**PC8 608 APPROPRIATENESS OF PSYCHOTROPIC DRUG PRESCRIBING IN GERIATRIC PSYCHIATRY INPATIENTS.**

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**INTRODUCTION:** Inappropriate use of psychotropic medications in the elderly is commonly reported. The aim of the present study was to evaluate the prevalence of potentially inappropriate psychotropic medications in the geriatric psychiatry inpatients of a 470-bed teaching psychiatric hospital. **METHODS:** The study consisted of a one-day cross-sectional review of all the ongoing drug regimens in the geriatric psychiatry inpatients ( $\geq 65$  y) of the hospital, repeated on three separate days one year apart. Data were gathered for analysis. Inappropriate psychotropic medications (IPM) were classified into three categories: medications with unfavourable benefit-to-risk ratio (A), medications combining unfavourable benefit-to-risk ratio and questionable efficacy (B), and psychotropic-containing hazardous/contraindicated (H/C) drug combinations (C). The screening tools for reviewing drug regimens were the French consensus criteria defining inappropriate medications in elderly patients and the drug-interactions knowledge basis of the French Agency for Medicinal Products. **RESULTS:** The 227 elderly inpatients present on the study days were included. Median age was 72 y (range 65-93). Taking all inappropriateness categories together, 68% (n= 154) of the patients received at least one IPM, and 28% of these patients received at least two IPM. The total number of IPM was 260, including 126 in category A, 115 in category B, and 19 in category C. Psychotropic medications with anticholinergic properties accounted for 69% of IPM in category A. Supratherapeutic doses of short/intermediate half-life benzodiazepines accounted for 68% of IPM in category B. Half of the H/C drug combinations was accounted for by QT-prolonging antipsychotic polypharmacy in category C. **CONCLUSION:** Results of this study seem to confirm that inappropriate utilization of psychotropic medications is highly prevalent in elderly patients, even in mental healthcare setting.

**PC8 609 EMOTIONAL RESPONSES TO AWARENESS OF DEFICITS IN DEMENTIA**

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**Objective:** This study aimed to assess the emotional responses in Alzheimer's disease (AD) patients according to their awareness of cognitive deficits. **Method:** The mild to moderate patients and their caregivers (n=52) were evaluated by a questionnaire-based method for deficit awareness and for the presence of its emotional response. MMSE, CDR, and Cornell for cognitive status, severity of dementia and depression, respectively. **Result:** The mild AD patients (52.2%) showed a more preserved awareness of cognitive deficits than the moderate group (17.2%). Most of the moderate patients (82.7%) do not recognize the impact of the symptoms. However, the assessment showed that 65.3% of the total dyads were aware of their emotional responses to the cognitive impairment and life changes. When compared by severity of disease there was no difference between CDR groups ( $p=0.47$ ). The most frequent explanation they presented was that anger, sadness, and/or anxiety were related to the current inability to say or do things correctly. **Conclusions:** Mild and moderate patients presented emotional responses to the perception of memory decline

and changes in life. Anxiety, sadness, and irritation were recognized as such in this group of patients, although awareness of deficits was more prevalent in the mild group.

**PC8 610 COULD THE REALIZATION OF MEANINGFUL PERSONAL GOALS PREVENT SUICIDAL IDEATIONS?**

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**Introduction.** Reasons for living and meaning in life are incompatible with suicide. Is it possible to increase these protective factors to improve psychological well-being and decrease depression among people with suicidal ideations? A 12-week goal management intervention program was offered to early retirees ( $M = 56.7$  years) with adaptation problems to the retirement transition. The objective of this program was to promote mental health and increase subjective well-being and quality of life after retirement. The weekly group meetings were centered on helping participants set, plan, pursue, and realize meaningful personal goals. **Method.** A sub-sample of 21 participants with suicidal ideas was identified from a larger sample ( $N = 354$ ) of retirees living in the community who took part in the study to evaluate the program. The experimental ( $n = 10$ ) and control ( $n = 11$ ) groups were compared on their answers to 16 goal and psychological well-being questionnaires. **Results.** To test the improvement hypothesis, we performed 2 (Group) X 3 (Time) repeated measures analyses of variance on these psychological variables. By the end of the program, the experimental group had improved significantly more than the control group on hope, goal realization, serenity, flexibility, and had a positive attitude toward retirement. The levels of depression and psychological distress significantly decreased. These gains were maintained six months later. **Conclusion.** These positive results, obtained with an intervention program centered on protective factors for suicide, could lead to an innovative way to help older adults with suicidal ideations. The program is easily adaptable to older adults living other types of losses or life transitions that require changes in goal priorities, like death of a spouse, chronic illness, divorce, or loss of abilities following a stroke.

**PC8 611 EVIDENCE UPDATE OF THE PSYCHOSOCIAL IMPACT OF VISION LOSS IN OLDER PEOPLE**

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**Introduction** Sight loss is common in old age and is projected to rise as a consequence of our ageing population. We systematically reviewed the literature that assessed the psychosocial impact of sight loss in older people. **Methods and materials:** An existing review (Burmedi et al., 2002) was updated. We identified 181 published quantitative papers in English from 2001 to July 2008 that included one or more of our eight outcome measures: depression / mental health, anxiety, experience of complex visual hallucinations, quality of life, social functioning, social support, loneliness, and psychosocial evaluation of rehabilitation and interventions ( $N=295$  outcomes analysed). Sight loss included both reduced vision and visual functioning. **Results** Reduced visual functioning was associated with an increased likelihood of depressive symptoms ( $OR=4.25$ ) more so than loss of vision (prevalence=23.4%,  $OR=1.88$ ). Vision loss was associated with more diagnoses of clinical depression (prevalence=20.57%,  $OR=1.53$ ), and high levels of emotional distress (prevalence=46.0-55.8% on GHQ), but not anxiety compared to sighted peers (prevalence=19.32%). Only with the vision-specific NEI-VFQ was sight loss associated with reduced mental health ( $MD=20.17/100$ ,  $r=0.37$ ) and social functioning ( $MD=18.37/100$ ,  $r=0.34$ ). A study found perceived adequacy of social support from family and friends was associated with lower levels of subthreshold ( $OR=0.77$ ) and major ( $OR=0.68$ ) depression. Two RCTs found promising results for group-based problem-solving and self-management training to prevent depression up to two and six months respectively. **Conclusion** Further research is required to investigate the longitudinal onset, development, and persistence of the psychosocial impact of vision loss in older people, how psychosocial variables are related, and how to best prevent and reduce the psychosocial impact of vision loss.

**PC8 612 THE EXPERIENCES OF ELEMENTARY STUDENTS OF THE ELDERLY HOSPICE**

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**Introduction** As the population ages a greater willing to elderly hospices is expected. However, the quality of care in these centers has not been studied enough. This research conducted with the aim of assessing the elementary students' experiences how visited of these centers or had a family member over there. **Methods** A qualitative study conducted using a purposive sample of 10 students who were studying in grade four of one of elementary schools in kashan, Iran. All had visited an elderly hospice or had a family member over there. The students' teacher wanted them to write their memories from such experiences. Content analysis method was used for data analyzing. **Results** All students defined the elderly hospice as a place for keeping the alone, ill and disabled people. They

had a sense of pathos to the people living there. They used phrases such as: "Desperate", "they have not anybody", "their chilides have no visit of them", "I want to cry when remember them". The students believed that "these elderly were disabled and had nobody to care them", "their breed are selfish and have forgot their parents sufferings". Some of students had experiences of transmitting of an aged people to the elderly hospice with his/her consent, but some others had experienced a transmission with japerity or obligation. Conclusion Overall experiences of students were negative to the quality of keeping in elderly hospices. Inappropriate arrangements of these centers, keeping aged people alongside with the handicapped people augmented such bad experiences. The authorities should pay more attention to the arrangement and quality of care within the elderly houses.

#### **PC8 613 ALCOHOL USE AMONG OLDER ADULTS IN FINLAND – PREVALENCE AND ASSOCIATED CHARACTERISTICS**

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Introduction: Recognition of alcohol use and its related health problems among elderly people is challenging. The aim of the study was to examine the prevalence and at-risk drinking patterns in community-dwelling older adults and their associations with sociodemographic and health related factors and older adults' own reasoning for their alcohol consumption. Methods: The data were collected with a postal questionnaire from a random sample of 2100 elderly people ( $\geq 65$ ). The response rate was 71.6% from the community-dwelling sample. We defined at-risk drinking by 1)having >7 drinks/wk 2)>5 drinks on typical day when alcohol is consumed or 3) using >3 drinks several times/wk. Results: Of the respondents, 8.2% (N=114) were at-risk drinkers. At-risk drinking was associated with younger age and male sex, higher level of education, good income, living with a spouse, good functioning and current smoking. Although frequency and quantity of alcohol consumption declined with age, 19% of men aged 71-80 years and one 10% of men aged 81-90 years could be defined as at-risk drinkers. At-risk drinkers had as often as the non-risk group comorbidities and multiple medications. A significantly larger proportion in the at-risk drinking group admitted they had fallen or injured themselves (5.3% vs. 0.7%,  $p<0.001$ ) or forgotten their medications because of the use of alcohol. Most common reason for using alcohol was for having fun (56%). At-risk drinkers reasoned their alcohol consumption more often than the non-risk drinkers as a relief for meaningless life (OR3.5), depression (OR5.8), anxiety (OR2.8) and loneliness (OR3.0). Conclusions: Alcohol use, including at-risk drinking among older adults is prevalent, particularly among males despite comorbidities and multiple use of medications.

#### **PC8 614 THE INFLUENCE OF PHYSICAL EXERCISE ON DEPRESSIVE SYMPTOMS AND FUNCTIONAL FITNESS IN ELDERLY RESIDENTS OF SOUTH BRAZIL**

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Introduction: The objective of this study was to investigate the influence of physical exercise on depressive symptoms and functional fitness in a sample of elderly people enrolled on a physical exercise program run by public sector Health Centers in Florianópolis, Brazil. Methods: The sample comprised a total of 118 elderly people (101 women and 17 men), who had been receiving treatment for up to 1 year and 4 months and were assessed at predefined intervals, up to a maximum of five times. Evaluations were carried out using the Geriatric Depression Scale (GDS-15); International Physical Activity Questionnaire (IPAQ) and the physical test battery proposed by AAHPERD (American Alliance for Health, Physical Education, Recreation and Dance). Results: A tendency for depression scores to reduce was observed. However, a statistically significant difference ( $p=0.008$ ) was only detected among those elderly people who attended 75% or more of the treatment sessions. Analysis demonstrated that the tendency for overall mean functional fitness to increase was statistically significant ( $p<0.001$ ). Inverse relationship were detected between functional fitness and depression scores at five assessment ( $r= - 0.235$ ,  $p=0.059$ ;  $r= - 0.206$ ,  $p=0.099$ ;  $r= - 0.158$ ,  $p=0.110$ ;  $r= - 0.068$ ,  $p=0.565$ ), although only one assessment had statistical significance ( $r= - 0.226$ ,  $p=0.033$ ). Conclusions: The results demonstrated a positive effect from physical exercise in reducing depressive symptoms and improving functional fitness, suggesting that there is an inverse relationship between these variables.

#### **PC8 615 A TRIAL FOR THE IMPROVEMENT OF DEPRESSIVE STATUS WITH THE IMPROVEMENT OF FUNCTIONAL CAPACITY IN THE ELDERLY**

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Introduction: Depression is the most common mental health disorder in elderly people. Depressive status is directly associated with the impairment elderly. The present study examined whether improvement of functional capacity brought about the improvement of depressive status based on an intervention study. Method: Subjects were 172 elderly

residents suspected of having depressive status according to the criteria determined by the Ministry of Health, Labor and Welfare (MHW) in N city of Niigata prefecture, Japan. Functional capacity was assessed by the MHW Checklist. The 172 subjects were assigned into two groups: the intervention group (n=62) and the control group (n=110). The intervention group underwent the program following the guideline as devised by the MHW for 6 months. The intervention groups were given Physical exercise and/or Oral Health Education and/or Cognition Improvement programs in small groups twice or fours a month. Control group received no intervention. The intervention group comprised the residents who wanted to undergo the program. Thus, the present study is not a randomized control trial. Results: ANOVA with repeated measures dealing with age as covariate revealed that the improvement of depressive status was directly associated with the improvement of functional capacity in the intervention group alone. On the other hand, this association was not found in the control group. Conclusion: It is suggested that the programs have a positive effect on both functional capacity and depressive status in the elderly living in the community.

#### **PC8 616 SOCIAL SUPPORT AND COPING STRATEGIES TO DEPRESSIVE SYMPTOMS FOR THE DISABLED ELDERLY**

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Purpose: This study aimed to investigate the effect of social support and different types of coping strategies on depression among the disabled elderly. Methods: Data was collected by face-to-face survey from long term care institution users who were aged 60 or over with physical disabilities. Totally 444 persons were analyzed in this study. Difficulties of physical function, coping strategies (problem solving coping behavior, emotion discharge and avoidance coping behavior, and seeking support coping behavior), and social support were hypothesized to have an impact on depressive symptoms. Pathway analysis was applied. Results: Among the three coping strategies, the elderly performed the problem solving and the venting and avoidance coping behaviors had higher depressive symptoms. The elderly having more physical disabilities were more likely to sow venting and avoidance coping behavior, and further increased the depressive symptoms. The elderly who had higher social support were more likely to use the seeking support coping strategy. Conclusions: Avoidance is not the best policy for the disabled elderly to cope with disability, which may influence their psychological health. In addition, the institutionalized elderly may hold too much expectation of problem solution but fail to recover totally from disability, and thus feel frustrated and depressed. Social support showed the direct and indirect effect through seeking help coping behavior of reducing depressive symptoms. The intervention for mental health of the disabled elderly are suggested.

#### **PC8 617 SPIRITUAL BELIEF, SOCIAL SUPPORT, PHYSICAL FUNCTIONING AND DEPRESSION AMONG OLDER PEOPLE IN BULGARIA AND ROMANIA**

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Introduction: Older people in Eastern Europe have suffered major losses since the fall of communism and this is reflected in higher mortality and morbidity rates. The present investigation examined whether spiritual belief might contribute to resilience to depression in older people in Bulgaria and Romania, two neighbouring countries of similar socio-economic status and cultural-religious background. Methods and materials: The investigation was carried out in two comparable sets of villages in both countries. Participants (160 in each country) were contacted by door to door knocking and were interviewed by means of a questionnaire involving measures of depression, physical functioning, recent life events, social support, and spiritual belief. Refusal rates were modest (20% in Romania, 34% in Bulgaria). Repeat interviews with the same participants were conducted a year later in Bulgaria. Results: Significantly higher rates of depression and lower rates of spiritual belief were found among older people in Bulgaria compared with Romania. Rates of spiritual belief in Romania were found to be especially high by European standards. Strength of spiritual belief could be shown to have a negative association with depression in Bulgaria even when age, gender, and levels of physical functioning and social support were taken into consideration, but this was not the case in Romania, perhaps because of the low level of variance. Social support was a more important factor in Romania than in Bulgaria. Conclusions: Spiritual belief and practice are significant factors in protection against depression in later life, and more work needs to be conducted on developing adequate measures of such variables, and investigation of the means by which they might influence resilience to depression. Spiritual belief varies greatly across the continent of Europe, even between countries with similar religious histories as Bulgaria and Romania. This is rarely taken into account in cross-European research.

#### **PC8 618 LONG TERM OUTCOMES OF OLDER ADULTS IN DRUG AND ALCOHOL TREATMENT**

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**Introduction:** The health and social consequences of drug and alcohol abuse for older adults are substantial. An increase in the proportion of older adults in the U.S. and Western Europe in coming decades, combined with greater drug and alcohol use in the cohorts approaching old age, is expected to increase treatment demand. Yet few investigations have examined clinical characteristics and treatment outcomes of older adults, long-term outcomes or gender differences. This study addresses these important issues. **Methods and Materials:** We report 9-year outcomes of chemical dependency patients ages 55 and over at treatment entry, compared with patients ages 40-54 and 18-39 in a large private outpatient program in a managed care health plan in Sacramento, CA, USA. Measures included alcohol and drug use and dependence, health status, psychiatric symptoms, length of stay in treatment; and outcomes and social networks at 9-years. The sample included 1204 participants at baseline and 808 completed telephone interviews at 9 years. **Results:** Older adults were less likely to be drug dependent and more likely to be alcohol dependent at baseline; had longer retention in treatment, and were more likely than younger adults to be abstinent at 9 years. Length of stay in treatment, which was greater for older women than for men, was associated with abstinence. Additional analyses examine age and gender differences in substance use patterns, depression and anxiety, and use of Alcoholics Anonymous. Multivariate analyses of interviews over 9 years consider treatment readmissions, mortality, medical and psychiatric services. **Conclusions:** Results demonstrate that older adults are responsive to chemical dependency treatment and that abstinence can be maintained over time. Clinical and social network differences between older, middle-aged and younger adults inform treatment strategies and aftercare for older women and men with drug and alcohol problems.

**PC8 619 WELL BEING, SOCIAL EXCLUSION, RACIAL AND ETHNIC DISCRIMINATION IN ELDERLY PEOPLE IN CANADA**  
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**Introduction:** Literature has consistently indicated the socioeconomic and health consequences of racial and ethnic discrimination, with little research focusing on elderly immigrants and ethno-cultural minorities. This study examined the relationships of racial and ethnic discrimination, social exclusion and well-being of immigrant seniors and ethno-cultural minority seniors in Canada. **Methods:** Data from the Ethnic Diversity Survey, a 2002 national telephone survey in Canada using a representative sample of the Canadian population, was analyzed. The survey collected information on the ethnic and cultural background of people in Canada and how it relates to their lives. Data from participants ( $n = 6,575$ ) 65 years of age and older were used. Racial or ethnic discrimination was measured by asking whether the participant had experienced discrimination or been treated unfairly by others in Canada because of their ethnicity, race, skin color, language, accent, or religion. Well being was represented by life satisfaction. Social exclusion included variables of voting in election, social group and organization participation, sense of belonging, feeling out of place, sense of trust, and worry about being victim of a hate crime. Hierarchical logistic and multiple regression analyses were used in data analysis to examine the effect of immigrant and visible minority status on discrimination and the effect of discrimination on the well being and social exclusion variables. **Results:** Immigrant and visible minority status were the most important correlates of discrimination. Consistent with previous literature, discrimination further reduced life satisfaction of immigrant and visible minority elderly people and further increased social exclusion. **Conclusion:** Immigrant status and colour does matter as they affect well being and social exclusion. Enhancing elderly people's well being should extend from addressing health and financial needs to racial or ethnic discrimination, particularly for immigrants and visible minorities.

**PC8 620 SEX AND INTIMACY ABOVE 50 YEARS OLD**  
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I. VAN DE VELDE

In 2007, the Higher Institute for Family Sciences, Lachesis (Office of Expertise on Ageing and Gender) and Sensoa have conducted a scientific descriptive research in Flanders concerning sex and intimacy above 50 years old. The main research questions were: how does their sexuality looks like? Who are they talking to about sex? Where are they looking for information when having problems? Are they informed about the physical changes in women and men? How satisfied are they about their sexual life? 1.147 respondents filled out a written questionnaire on a 50-plus fair in Antwerp. 1.037 questionnaires were valid for data collection (53% men and 47% women with a mean age of 60 years old). 50+ people do have sex. Most preferred sexual actions are caressing naked breasts, kissing.... Coitus is only the 8th most important sexual act. The older the persons, the less they talk about sex. For men and women: the partner is the most important interlocutor. 74% of the respondents are looking actively for information when needed. Males have their partner as primary source, females are looking into magazines. Men and women don't know each others bodies and the physical changes not very well. Most of the respondents are satisfied with their sexual life but men would like to have more sexual activity. There is a tendency that women appreciate more intimacy than men. As a conclusion: 50-plus people do have sex and they enjoy sex. The older they become, the less different sexual actions they have,

the less they speak about sex and the less they ask for information. But the majority of our respondents is happy with their sexual life.

**PC8 621 OUTCOMES IN PSYCHOSOCIAL WELLBEING OF ISRAELI CAREGIVERS OF STROKE SURVIVORS: A LONGITUDINAL STUDY**  
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C. GREENBERGER, Y. BACHNER

**Introduction:** Caregiving to stroke survivors can impact on physical and emotional health, due to caregivers burden, frustration and lack of confidence in their ability to fulfill their role. **Aims:** 1) to describe the socio-demographic characteristics of Israeli caregivers of stroke survivors; 2) to observe changes in caregivers' physical and emotional health, social support, burden and quality of life (QOL) during the first 6 months following stroke occurrence, and 3) to identify the predictors of caregiver's QOL for that period. **Methods:** 140 caregivers were interviewed within the first week of admission of their stroke survivors to the Geriatric Rehabilitation Ward (baseline data), and after three and six months. Instruments measured demographic variables, depression, perceived and objective of health status, burden, social support components, and QOL. Correlations, ANOVA with repeated measurements, and stepwise regression tests were used. Results revealed that during the 6-month period, caregivers' objective health status remained stable. After 3 months, depression, and the need for instrumental support decreased ( $p<0.01$ ;  $p<0.05$  respectively). Nevertheless, satisfaction with informal support and family relationships decreased ( $p<0.05$ ), as did QOL. Burden decreased consistently at 3 and 6 month intervals ( $p<0.01$ ). After 6 months, perception of health status and QOL increased ( $p<0.05$ ), the need for help and advice decreased ( $p<0.01$ ), while the others variables remained stable. These results indicate that overall, the caregivers adapted to their caring role over the 6-month period. At each of the 3 intervals, QOL was explained by the same 4 variables, although with differential weights: number of diseases, confidence in the support system, burden and sharing a household with the survivor. **Conclusion:** The results contribute to health providers' ability to identify caregivers at risk, and develop appropriately timed interventions for empowering caregivers in their role.

**PC8 622 CAREGIVING TO ADVANCED CHRONIC ILLNESS (CHF/COPD) PATIENTS**  
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**Background.** The cost and responsibility for much of the care of seriously ill, elderly persons living in the community with advanced, eventually fatal, chronic illness has been shifted onto family members. Chronic organ system failure presents a distinct illness trajectory with an erratic and unpredictable course characterized by episodes of acute illness and periods of relative stability set against a background of gradual, progressive decline. Current caregiving research has not yet described the challenges, stresses, and rewards that accompany caregiving for individuals with advanced chronic organ system failure. This project sought to describe the factors that influence caregiver outcomes in caregiving to advanced CHF and COPD patients. **Methods:** We conducted a series of 9 focus groups (3-10 adults each), 18 years or older, who were currently providing care for a patient with advanced chronic CHF or COPD. Focus group discussion topics were identified from the literature on cancer and Alzheimers disease caregiving , characteristics of the illness trajectory (e.g., the erratic pattern of CHF/COPD), patient/caregiver knowledge of prognosis/disease course, CG tasks, reactions to caregiving, and patient and caregiver interactions with the healthcare system. Initial analysis resulted in a classification system for major topics derived from the material and a second analysis by both researchers determined a final set of themes. **Results:** Five major themes were identified: (1) how caregivers describe their experience, (2) prognosis/uncertainty impacts, (3) objective burden (tasks), (4) role conflict/reversal, and (5) subjective burden. Findings from this exploratory work suggest that interventions should provide information about topics of specific relevance to CHF/COPD caregivers (e.g., disease processes, prognosis, what to expect, symptom and self-management), and should address caregiver/patient social isolation. Implications for future research and intervention policy will be discussed.

**PC8 623 THE ART GALLERY ACCESS PROGRAMME FOR PEOPLE WITH DEMENTIA**  
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**Introduction:** People with dementia often have decreased opportunities to engage in higher level intellectual or sensory activities. We sought to address this deficit by implementing the Art Gallery Access Programme. **Method/Materials:** Seven people with mild dementia from the community and eight with moderate to severe impairment from residential care attended the National Gallery of Australia (NGA) once a week for six weeks. They viewed and discussed artworks with NGA educators, who had received training in dementia skills. Sessions were filmed and level of engagement analysed using time sampling methods. Focus groups provided qualitative feedback. **Results:** Regardless of level of impairment, participants were engaged in the process from the outset, with no significant increase over

time. They became animated, gained confidence and were able to discuss and/or interact with the artworks and the social process. This included the more impaired groups from residential care, who were more withdrawn or behaviourally disturbed in their usual environment, raising the concept of excess disability. Community participants remembered the programme with pleasure and were surprised at what they had achieved in an intellectual and artistic activity. Educators spoke about how much they had learned; some had even changed their presentation style with other groups as a result. Conclusion: The Art Gallery Access Programme went beyond many common dementia activities. Despite lack of evidence for lasting effects, all participants wanted the programme to continue. The sense that a programme is worthwhile if it gives pleasure to people with dementia for the time it is running was encapsulated by a carer who said: "You do it for the moment". The finding that people with dementia could take part in and enjoy a "normal" if higher level activity has led to the programme being rolled out across other Australian sites.

**PC8 624 A MARRIAGE OF METHODOLOGY: WAYS OF EXAMINING SEXUAL DESIRE IN OLDER AGE**

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Introduction Improved social and economic environments have had a positive effect on health resulting in increased longevity and improved general health. Social stereotyping, ageism and negative attitudes towards older people have contributed, however, to the invisibility of the older person as a sexual being. Furthermore, research that explores the sexual desires of the older person and the implications for health remains virtually unknown. Illumination of the experiences of older age sexual desire will increase an understanding of the sexual needs of the older person that can be used as a basis for the provision of holistic health care in the future. Methods and Materials This paper will report on the methodology and methods developed to explicate and compare narrative and phenomenological themes from interviews about sexual desire experienced by a sample of older people in the community. In-depth interviews were conducted with 36 people (21 men and 15 women) aged 62 years and over. Results Several themes surrounding sexual desire experienced in older age were developed using a hermeneutic interpretive methodology to compare the results from a narrative and a phenomenological method of analysis. Each approach serves to validate the other. Conclusion A marriage of methodology between the presentation of narrative stories and the essential features of the phenomena was successful in providing a rich understanding of the experience of sexual desire and ageing; an under-researched area of the experience of ageing.

**PC8 625 SOCIAL NETWORK TYPES AND IMPLICATIONS FOR HEALTH AMONG AGEING NEW ZEALANDERS.**

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Introduction: International evidence has consistently demonstrated the physical and mental health benefits of engagement with social networks. Network type (not simply network size) assesses both support and social participation and is related to health outcomes. This study investigates the health effects of changes in network types reported by a representative sample of young-old in New Zealand. Methods and Materials: Longitudinal data were collected by questionnaire survey from a representative sample (N = 3,200) of the New Zealand population on two occasions: when they were aged 55-70 years and then 57-72 years. These data include categorisation of network types (using Wenger's 1997 categorisation), their relationships with self-reported health (SF 36 physical and mental health scores), interactions with structural factors such as age and ethnicity, and changes across time. Results: Analyses showed that most people are involved in social network types that are understood to be beneficial. Among those with restricted or potentially limiting social networks there are no effects on physical health. However, restricted networks are associated with poorer mental health and there are differences in these relationships according to ethnicity and age. The younger age groups were most likely to report more restricted networks and these trends continued across time. Conclusions: Findings suggest a cohort effect of increasing numbers of people with restricted networks in our society. These restricted networks are not related to poor physical health among the young-old but are already related to poor mental health. This has implications for the support and health for these people as they age. Our longitudinal study aims to clarify these relationships with future data waves.

**PC8 626 DIABETES, DEPRESSION, AND COGNITIVE DECLINE IN OLDER ADULTS**

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Introduction. Recent studies suggest an association between diabetes and decline in cognitive function. We evaluated changes in cognition in elderly with diabetes (compared with elderly without diabetes) from a national sample of otherwise healthy older

Canadians. Methods and materials. Data from the comprehensive clinical assessment in the first 2 waves of the nationally representative Canadian Study of Health and Aging provided neuropsychological data on cognitive functioning in 83 seniors with diabetes and 661 without. Measures of long- and short-term memory, abstract reasoning, judgment, language, agnosia, and construction skills were contrasted for the two groups using analysis of covariance with age and gender as covariates. A parallel set of analyses used test scores from wave 1 and the Geriatric Depression Scale score as additional covariates to predict scores from wave 2 among 385 individuals tested as cognitively intact on both occasions (5 years apart). Results. At the first wave, elderly with diabetes scored lower only on the construction test. In the second set of analyses, elderly with diabetes scored lower than those without on a measure of short-term memory. Age was a significant covariate for the measures of short- and long-term memory, language, and construction skills. Depression was a significant covariate for seven measures, excluding only two reasoning measures and a colour naming test, whereas the wave 1 measure was a significant covariate for 9 of the 10 variables excepting only one measures of agnosia. Conclusions. Diabetes was not associated with generalized cognitive dysfunction. With advancing age, the results suggest that measures of short-term memory are most sensitive to the influence associated with diabetes on cognition. As expected, depression influenced most of test scores. In this group, selected for good health, the presence of diabetes appears to have modest influences upon cognitive functions.

**PC8 627 MATERIAL DOMAIN AND LIFE SATISFACTION: THE ELDERLY LIVING ALONE**

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The material domain has impact in people's life satisfaction, but how it occurs depends in particular of ideologies regarding material possessions and money and how that is translated into behaviour. This exploratory study aims at characterize the material domain profile (values, attitudes and behaviors towards money and material possessions) of elderly men and women living alone (usually a more vulnerable group) and how it is affecting their life satisfaction. A questionnaire was administered to a sample of 96 elderly men and women, from the low, medium and high socioeconomic classes. Findings suggest that: the participants are moderately satisfied with life, tend to be not materialistic and focus their money ethic and behaviour on budget and savings. The satisfaction with life is not correlated to materialism or money ethic and behaviours; however the income is positively correlated with the satisfaction with life in particular in the high socioeconomic class. In old age people seem to be more attached to possessions symbolic and relational meanings.

**PC8 628 IMPORTANCE OF CONCEIVING LIFESTYLE AND AGENCY IN THE LIFE COURSE**

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Explanations in social gerontology frequently note the importance of socioeconomic status, structural local, and social network characteristics in determining well-being of aging individuals. Despite such statements, the mechanisms by which they color aging patterns is under-explored. Lifestyles are key to both the explanatory framework and to late life well-being. An array of personal and social resources comprise lifestyles and this paper conceives of these factors in terms of a personal resource model argued to be the mechanism by which macro- and micro-level attributes come together to influence personal well-being and sense of identity. Our personal resource model accounts for both indigenous and exogenous factors and how they are integrated to shape the experience of aging. Lifestyles are the active linkages between contextual variables and late life outcomes. The Weberian approach outlined in the paper brings together status groups and individual experience yet moves away from merely focusing on roles in the labor market or economically productive realm as global patterns of production shift the relative balance of factors influencing life course patterns.

**PC8 629 EFFECTS OF ANIMAL ASSISTANT LEISURE ACTIVITY TO REST HOME ELDERS' PSYCHOLOGICAL AND SOCIAL HEALTH**

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The purpose of this study is to determine the psychological and social effects by applying animal assistant leisure activity (AALA) and provide another choice of leisure activity to rest home elders. The researcher conducted a longitudinal AALA experiment to the experimental group one hour a time and 6 times a week for 6 weeks. Questionnaires, interview, and on-site observation were applied for both experiment group (participated in AALA) and control group (did not participated in AALA) in comparison. Based on the results, from the psychological health aspect, the experiment group's had improved much well than the control group. From the social health aspect, the behavior of the experiment group was better than the control group. The researcher concluded that the elders perceived

psychological and societal health benefits by applying AALA. According to the findings, the researcher suggests that rest home may be set in the community area for the convenience of visiting and may have animals or pets in the rest home for the companionship. For the government policy shall be proposed to encourage the AALA promotion, ministrant animal training and license certification. For the future research, the researcher suggested to apply AALA by different objects and the research techniques. Keyword: Animal assistant leisure activity, Rest home elder, Psychological and social health.

**PC8 630 COGNITIVE PREDICTORS OF UNSAFE DRIVING IN OLDER DRIVERS: A META-ANALYSIS**

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Introduction: Older drivers are at a higher risk of being involved in motor vehicle accidents. However, on-road assessments of all older drivers are impractical, highlighting the need for cognitive tests to identify potentially unsafe older drivers. This study undertook a meta-analysis of research examining the cognitive predictors of driving ability in older drivers in order to provide an evidence-based method for driver screening. Method: A comprehensive search of the PubMed, PsycINFO, and CINAHL electronic databases was undertaken to identify studies that examined the cognitive predictors of driving ability in older drivers. All studies were screened using detailed inclusion and exclusion criteria, with data from 21 studies undergoing analysis. Cohen's d effect sizes were used to measure differences in the cognitive performance of older drivers who either passed or failed a driving assessment (on-road driving, driving simulator, driving problems). 95% confidence intervals determined statistical significance, and Fail-safe N's assessed the potential impact of the bias toward publishing significant results. Results: The best predictors of on-road driving were the Ergovision and Useful Field of View (UFOV) tests, a complex RT task, Paper Folding task, Dot Counting, WMS Visual Reproduction, and Computerised Visual Attention Task. Simulator driving performance was best predicted by the Benton Line Orientation Task, Clock Drawing, a Driver Scanning task, the UFOV, WAIS Picture Arrangement and MMSE. Finally, the Trail Making Test, Stroop, UFOV, WAIS Block Design, and Automated Psychophysical Test were good predictors of driving problems. Conclusions: A number of different cognitive tests identify at-risk drivers who may be in need of a comprehensive driving assessment; the exact choice of which will depend upon the criterion measure for determining driving ability (on-road driving, driving simulator, driving problems) and whether a computerised or paper-and-pencil task is required.

**PC8 631 GRANDPARENT INFLUENCE AND INTERGENERATIONAL RELATIONSHIPS IN CHILDHOOD, ADOLESCENCE, AND EMERGING ADULTHOOD**

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Introduction: Research demonstrates that grandparents (GP) are important actors in grandchildren's (GC) identity development in adolescence and emerging adulthood (EA), including GC's development of life goals. The current study investigated two areas of GP-GC's relationships and GP goal influence. First, we examined developmental change in GP-GC shared activities. Second, we examined the contribution of shared activities in each developmental stage to current perceptions of GP goal influence. Methods: Data were collected from over 400 emerging adult GC using a nonprobability sampling method. In addition to demographic information, GP goal influence was assessed using goal categories from the Aspiration Index (Williams, Cox, Hedberg, & Deci, 2000), while GP-GC shared activities were measured using a modified version of the Shared Activities Scale (Kennedy, 1992). Results: Overall shared activities exhibited a positive linear relationship with GP influence. An analysis of the type of shared activity contributing to the regression models indicated that shared emotional activities exhibited a significant positive relationship with grandparent goal influence. For maternal grandmothers, shared emotional activities during adolescence exhibited a significant relationship with GC's perceptions of GP goal influence in EA. Shared emotional activities in adolescence and EA were positively and significantly related with maternal grandfather goal influence in EA. Although the models for paternal grandmothers and grandfathers were significant, the contributions of individual predictors did not reach significance. Conclusion: When examined across childhood, adolescence, and emerging adulthood, a trend emerged whereby shared emotional activities in adolescence and EA contributed more towards explaining the total shared variance in goal influence than shared behavioral activities in any age period, or shared emotional activities in childhood. Results are interpreted within a developmental framework.

**PC8 632 IMPACT OF CHRONIC DISEASE AND LIFE EVENTS TO SUCCESSFUL AGING**

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Introduction: Chronic disease and life events are two common health risks for the elderly in their later life. The purpose of this study was to examine the risks of the incidence of

chronic disease and life events to successful aging. Methods: A longitudinal data of 10-year follow-up was used. Successful aging indicators included basic and advanced physical function, depressive symptoms, cognitive function, emotional support, participation in productive activities, and life satisfaction. The stressors included life events and morbidity years of ten chronic diseases. Results: Loss of offspring increased the risk to of physical health, psychological health, and life satisfaction. Being newly widowed was related to depressive symptoms, while being newly divorced increased the risk of poor social support. Morbidity years increased the risk of failure in successful aging, especially for stroke, respiratory system disease, diabetes and cancer. Conclusions: Emotional health for the elderly should be carefully monitored after onset of life events and incidences of chronic disease. Helping the elderly with chronic disease not to lose further successful aging is important.

**PC8 633 COMPENSATION AND OPTIMISATION IN FUNCTIONAL COMPETENCE IN A SAMPLE OF LONG LIVED PERSONS**

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Introduction: One of the objectives of gerontology is to minimize the dependency as a result of disability and maximize competence in daily self-help skills in the later years of life. To make the later years as successful, it is important to maximize the gains and minimize the losses depending on the individual's resources. An attempt has been made in the present study to examine Paul Baltes concept of selective optimization and compensation in a sample of community dwelling elderly in India with special reference to ADL and IADLs. Method and Material: A sample of 120 older adults living in the community were randomly drawn from the panel of older persons available in the Centre for Research on Ageing. Persons who had low and moderate functional competence in the age groups of 70-79, 80-89 and 90+ years were drawn. Older adults with severe restrictions in ADLs were excluded. Their performances on ADL and IADLs capacities were assessed through standardized scales (Ramamurti et al., 1997) and also observed individually. They were interviewed to findout their physical and psychological resources towards optimization and compensation of their daily activities. Results: The results showed that 67 percent of the sample made successful compensation in ADL activity and optimized their functionality. Different people adopted different strategies of compensation showing wide individual variations. Subjects who are in their 90's show good selection, compensation strategies to optimize their functional capability. Conclusion: The methods of compensation and optimization varied across individuals indicating need for adoption of strategies through training.

**PC8 634 APPLYING A LIFE COURSE PERSPECTIVE TO MENTAL HEALTH PROMOTION FOR AGING COMBAT VETERANS**

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Introduction: Epidemiologists estimate the number of deaths in the 25 largest military conflicts of the 20th century at 39 million soldiers, most of whom died during WWI and WWII. Many more soldiers survived to become veterans. In addition to the experience of war zone exposure itself, it is well recognized that the transition from a combatant role to a civilian identity post-deployment can be associated with significant psychological distress. The Life Course perspective (Elder and colleagues) promotes a holistic understanding of lives within changing historical and social contexts. This paper explores the thesis that the Life Course perspective offers a useful paradigm for understanding and mitigating the risk of late life mental health problems for veterans. Methods: This paper presents a convergence of three lines of research: 1) the literature that documents that war-related experience is associated with increased risk of mental health problems; 2) studies that show numerous social and behavioural factors influence long term psychological adaptation for veterans; and 3) evidence that the processes of aging may increase vulnerability to mental health problems. This synthesis is interpreted within the framework of the Life Course perspective. Results: Each of the five main principles of the Life Course perspective – life span development, agency, time and place, timing and linked lives – has practical application for mental health promotion for aging and elderly veterans. Conclusions: Older veterans may be at particular risk for psychological distress in old age when the normal processes of aging interact with their history of combat exposure, however, the Life Course perspective offers a useful orienting framework to encourage research, knowledge exchange and policy development in the interest of mental health promotion for this population.

**PC8 635 QUALITY OF LIFE OF OLDER PEOPLE: CONTRIBUTIONS OF MUSIC.**

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Introduction: Despite the fact that there is a popular consensus about the benefits of music to improve quality of life, up to the present time we do not have knowledge of any research that demonstrates this influence with healthy older adults. The objective of this research is two-fold: 1. To evaluate and to compare the impact of three music programs (choir, music appreciation and preventive music therapy sessions) on the quality of life of older adults 2.

To identify the motivations as well as the difficulties that the seniors encounter to carry out this type of activities in order to come up with recommendations and strategies for the design of appropriate programs for older adults. Methods and materials: A pre-posttest quasi-experimental design without equivalent control group was used in this project. The sample included 83 persons, older than 65 years. The sampling was intentional. The data collection was carried out through an ad hoc questionnaire that included the four aspects of the construct of quality of life (physical health, subjective health, psychological well-being and social support), a questionnaire of motivations and one on satisfaction about the program. This last questionnaire was administered twice: at the beginning of the programs (pre-test) and at the end (posttest). Results and conclusions: The results of this study indicate that the participants perceived improvements in some aspects of their quality of life. In addition the main motivations to participate in these musical activities are to broaden their social net and to acquire new knowledge. The results are discussed in light of the challenges of the active and satisfactory ageing.

#### **PC8 636 CONTENTMENT AMONG THE ELDERLY IN COMMUNITIES: THE HAPPINESS; THI-15**

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Introduction: Happiness is an individual emotional or affective state that is characterized by feeling of enjoyment and satisfaction related to the elderly which means successful aging resulting in a good life. Method and Material: To study happiness in the elderly different regions of Thailand including reasons which affect the happiness in older adults, Thai Happiness Indicator (THI-15) was used in this study of 306 participants 60 years of age and older in rural, suburban, and urban regions. The elderly were chosen among those in Senior Thai Clubs by chance. Results: The elderly perceived their happiness as "Good", "Fair", and "Poor" respectively 12.4%, 37.9%, and 49.7%. There was a difference in happiness perception among the regions: poor happiness perception (64.5%, 61.2%, and 22.8% in rural, suburban, and urban areas respectively) ( $p < .001$ ). We also verified that there was a difference in poor happiness perception between male (57.9%), and female (42.2%) ( $p < 0.01$ ). There were differences in the happiness perception among people with different levels of education. ( $p < 0.01$ ). There was also difference between happiness perceptions as related to occupation: the results showed elderly who were not working had a better score of happiness perception than the elderly who had to work; the farmers had highest percentage in poor happiness perception. Conclusion: Happiness could be one of the indicators of mental health among the elderly in the community that health care providers should be concerned about using the proper interventions and/or activities in order to alleviate the mental health problems among the elderly in the community, especially the elderly who were indicated with "Poor Happiness".

#### **PC8 637 MARITAL SATISFACTION OF JAPANESE ELDER COUPLES- CAN THEY STAY MARRIED HAPPILY EVER AFTER?**

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When the average life span gets longer, Japanese elder couples spend longer years together, happily or unhappily. When elder couples spend more time together after retirement from work, their marital satisfaction will be the key element to determine their quality of life, to make the remaining life a pleasure of golden age or burden of in-house divorce. Consequently, the marital satisfaction of elder couples is getting even more important. Previous studies found marital satisfaction factors such as financial situation, living condition, life stage, health condition, but these factors are not easy to be controlled for elder couple themselves. This study focused on finding self-controllable factors that increase or decrease marital satisfaction. The semi-structured interviews were conducted on eight Japanese elder couples, who have retired from work, are in empty nest period, are living in urban community. Marital Needs Satisfaction Scale, Transactional Analysis evaluation sheet (egogram), Solitude Scale, and Depression Scale are used. Interviewees are encouraged to talk freely about their marriage. Questions including address terms, communication styles are asked at the interview to find out ingredients of marital satisfaction, especially self-controllable factors. In search of the relationship between personality and marital satisfaction, couples' egogram patterns are studied as well. The study found 1) wives are more satisfied, 2) neither address terms nor communication styles have much to do with marital satisfaction. The interview also revealed they share and practice traditional gender roles. Because of small number of samples, the outcome of this study cannot be generalized, but it shows traditional Japanese values die hard. The second stage of research is followed.

#### **PC8 638 IMPROVEMENT OF SELF-MANAGEMENT IN FRIENDSHIP: EFFECTS OF A FRIENDSHIP ENRICHMENT PROGRAM FOR OLDER WOMEN**

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Introduction: Previous research has demonstrated that participants in a Friendship Enrichment Program for older women were able to improve their friendships and subjective well-being within six months and reduce rather high levels of loneliness within a year after following the program. This study examines whether improvement in self management abilities in friendship is characteristic of participants. The theory of self management of well-being identifies six self-management skills or attitudes that contribute to well-being: self-efficacy, a positive frame of mind, taking initiative, investment behaviour, achieving multifunctionality and variety in resources. Five of these skills are emphasized in the friendship enrichment program. Methods and materials: Data from a pre-test post-test follow-up control group design was examined to compare outcomes on self-management abilities. Sixty women over age 55 took part in the intervention; 55 women of similar age were involved in the control group. Instruments included personal convoys, questions on companionship, emotional and instrumental support from friends, a control-orientation in friendship questionnaire, and the Inventory of Interpersonal Situations. Data was collected at baseline, at the end of the program (3 months later), and 6 months after the program (9 months later). Results: Participants improved significantly on four of the five relevant abilities (taking initiative, investment behaviour, achieving variety in friendship and self-efficacy) at the 6 month follow up, compared to members of the control group. Conclusion: This study demonstrates that older women are able to improve self-management abilities in friendship and that the Friendship Enrichment Program is effective in stimulating self-management abilities.

#### **PC8 639 THE EFFECTS OF AEROBIC EXERCISE ON HEART RATE VARIABILITY AND EXECUTIVE FUNCTION IN THE ELDERLY**

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INTRODUCTION: Aging is associated with decreased heart rate variability (HRV), notably high-frequency (HF) power, and reduced executive functioning. Moreover, recent research has suggested that better aerobic fitness is linked to high HRV and that high HF power could lead to better executive performance. The aim of this study was to assess the influence of a 12 weeks aerobic training program of on various HRV parameters and on executive functions in previously sedentary elders. METHOD: Twenty-four (13 women, 11 men) sedentary older adults ( $70.7 \pm 4.2$  years) were randomly assigned to an aerobic or a stretching program for 12 weeks (3 times a week). Resting HRV and Wisconsin Card Sorting Test (WCST) performance were evaluated before and after the physical activity programs. RESULTS: There was no effect of gender on HRV parameters. A significant Test X Group interaction ( $p < 0.05$ ) was revealed for HF power. HF power increased from pre-test to post-test for the Aerobic group, but decreased for the Stretching group. Only women in the Aerobic group improved their performance on the WCST from pre-test to post-test ( $p < 0.05$ ). They reduced their total number of trials and number of errors to complete the task. Performance for all the other participants did not vary after the 12 weeks programs. DISCUSSION: A 12 weeks aerobic program can increase HRV and particularly HF power in older previously sedentary adults. A concomitant increase in executive performance was only seen for women who participated to the aerobic program but not for men. These results will be discussed in light of recent data concerning gender differences in the exercise/cognition relationship.

#### **PC8 640 SUBJECTIVE WELL-BEING AND DEPRESSION LEVELS OF WORKING VERSUS RETIRED OLDER ADULTS BETWEEN THE AGES 65-75.**

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Introduction: This research examined the effect of employment status on subjective well being (SWB) and depression in older adults after the age of retirement. Method: This study used the Health Retirement Studies (HRS) and RAND archival data. The final sample consisted of 1065 individuals between ages 65-75, who are currently working or have a history of working, and completed the related questions. Results: The results indicate a strong relation between work and depression levels. Retirement-age adults who are employed demonstrated significantly fewer depressive symptoms ( $M = .81$ ,  $SD = 1.34$ ) than retirement-age adults who are not working ( $M = 1.41$ ,  $SD = 1.94$ ). The results indicated that employment status did not significantly contribute to SWB when all other independent variables were considered ( $\beta = -.17$ ,  $p = .05$ ). This finding supports Atchley's (2003) Set-Point theory which implies that subjective well-being is relatively stable over time. Important information was found! in the analysis of the factors related to SWB and depression. Self perceived health was primarily related to depression ( $\Delta R^2 = .15$ ,  $p < .01$ ) and subjective well-being ( $\Delta R^2 = .12$ ,  $p < .01$ ). In previous research self perceived health and health condition had been used interchangeably. However, this research had shown that individuals rated their self perceived health differently than their health condition. Conclusion: The results indicates that it is better for older adults to work during the retirement age, as working adults demonstrated lower levels of depression. Analysis of factors showed that personal perception of one's health was primarily related to depression and subjective well-being. In previous research, self perceived health and diagnosed health

condition had been used interchangeably. However, this research had shown that individuals rated self-perceived health differently than their diagnosed health condition.

**PC8 641 WHEN INDIVIDUAL DIFFERENCES MATTER: INTERDEPENDENCE MODERATES AGE DIFFERENCES IN SOCIAL RELATIONSHIPS AND COGNITIVE PROCESSING**

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The psychology and aging literature usually describes the processes of aging as static and universal. This paper challenges this assumption by reporting two studies whose results show that the typical patterns of age differences in social relationships and memory can differ, according to individual differences in interdependence (seeing the self as interconnected with others). Study 1 examined age differences in social network composition among 596 Hong Kong Chinese, ranging in age from 18 and 91 years. The stability of the number of emotionally close social partners in social networks across age, typically found in Western studies, was replicated only among Hong Kong Chinese with lower interdependence. In contrast, those with higher interdependence exhibited a positive association between age and the number of emotionally close social partners. Conversely, the negative association between age and the number of peripheral social partners, well-documented in the Western literature, was found only among Hong Kong Chinese with lower interdependence but not those with higher interdependence. Study 2 examined recall and recognition memory for positive, negative and neutral images among 114 younger (18 - 31 years old), 94 middle-aged (38 - 58 years old) and 103 older (64 - 95 years old) Hong Kong Chinese. Older Hong Kong Chinese with lower interdependence showed both the positivity enhancement effect (i.e., remembering the positive better than the neutral) and the negativity reduction effect (i.e., remembering the neutral better than the negative), like their American counterparts did in prior studies. Yet, older Hong Kong Chinese with higher interdependence showed the positivity enhancement effect only, but not the negativity reduction effect. Findings are discussed in terms of the plasticity of adult development.

**PC8 642 PSYCHOSOCIAL AND ANTHROPOMETRIC PREDICTORS OF THE MINI NUTRITIONAL ASSESSMENT**

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Introduction. The purpose of this study was to examine predictors of nutritional status in 155 community-dwelling elderly in the Midwest, USA. Methods and Materials. Our outcome variable, the Mini-Nutritional Assessment (MNA), assessed the overall quality of participants' nutritional status. To identify whether measures of anthropometric and psychosocial predictors were associated with the MNA measure, we conducted a hierarchical regression on MNA total score with three blocks of predictors, entering first, a block of demographic or control variables before assessing the influence of other predictors. Results. Collinearity tests and other diagnostics revealed that no OLS assumptions appeared to be violated. In our model, the first block consisted of six control variables (age, gender, race, education level, marital status, and mental status). Results for this block were  $F(6,116) = .473$ ;  $p = .827$ . None of the control variables were significant individual predictors. The second block consisted of three unrelated anthropometric predictors (waist circumference, fat-free mass index and body fat percentage). For this block,  $F$  change ( $3, 113$ ) =  $.753$ ;  $p = .534$ ; and again, no individual predictors were significant. Our last block introduced two psychometric assessments; one for depression (GDS), and one self-report of health, activities and anxiety (SF-12 Health Survey). The  $F$  change was significant;  $F(2, 111) = 20.178$ ;  $p < .001$ . When this block was added to the overall regression model,  $R^2$  was .298 and the overall model fit was  $F(11,111) = 4.28$ ;  $p < .001$ . SF-12 was a significant predictor ( $\beta = -.449$ ;  $p < .001$ ) and both GDS ( $\beta = -.17$ ;  $p = .096$ ) and MMSE ( $\beta = -.182$ ;  $p = .062$ ) approached statistical significance. Conclusion. Thus, we suggest SF-12, and possibly GDS and MMSE be included in routine community assessments of elderly nutritional status in addition to MNA to assist in planning interventions.

**PC8 643 ONE BODY, THREE HANDS AND TWO MINDS: THE INTERTWINED EVERYDAY ACTIVITIES OF AN OLDER COUPLE AFTER STROKE**

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Introduction Following a stroke, a person's pattern of activities is disrupted and he/she will often obtain help from his/her partner. This care giving can have a great impact on the partner's health. Little is known about the everyday activities for both partners following a stroke. However, it is important to gain an understanding of everyday activities after a stroke from a couple's perspective, because performing meaningful activities positively influences the health and well-being of both partners. This exploratory case-study aims to understand an older couple's experience of their everyday activities following a stroke. Methods The participating couple were both over 80 years old. Data were collected with 10 individual and joint in-depth interviews through multiple home visits over a period of seven months, three years after the wife's stroke. Analysis followed a narrative approach, resulting in the construction of two personal stories and one joint story, showing the meaning they both attached to their experiences. The validity of the findings was optimised

through data triangulation, the use of a research diary, by a peer-review and through a member-checking process. Results The main finding is that the couple functioned like one entity with coordinating parts. For almost 24 hours a day, their everyday activities were fully intertwined. Their functioning as one entity was conceptualised as 'one body, three hands and two minds'. The timing, coordinating, balancing, orchestrating and assisting of their everyday activities was done by this entity and together they maintained their independence at home. Conclusion The findings suggest that in practice more attention should be given to the interdependency of people and their close social environments. The findings also point towards the need for the development of assessments and interventions that address these complex family systems.

**PC8 644 THE OLD FOLKS AT HOME: VIEWS OF AGING IN CHILDRENS LITERATURE**

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Introduction: Attitudes toward aging develop early in life. Researchers found negative attitudes toward the elderly even among preschoolers. Children's books can promote realistic, positive views of what it means to be "old," particularly in cultures where intergenerational interaction is limited. Unfortunately, in many children's books, the elderly play secondary characters who are irritable and frail, living unexciting lives. Older "characters" situations are also frequently negative (e.g., illness, social isolation, depression). This paper examines children's literature and: 1) summarizes the research on portrayals of aging; 2) reviews strategies for identifying ageism; and; 3) describes how children's literature fails to reflect accurately the contemporary ecology of aging. Methods: Fifty picture books were selected from the bibliographical sourcebook, A to Zoo: subject access to childrens picture books. Only books currently in circulation at the local public library were included. Portrayals of aging in these books were rated using the Ageism in Literature scale. Elements of plot and social contexts were also analyzed. Results: Negative themes and attributes related to aging are disproportionately represented. Loss, disability and separation are common storyline elements, and characters reside in nursing home in greater numbers than their "real world" counterparts. The differential effects of socioeconomic class and ethnicity on the aging experience are not well-delineated. In addition to the restricted range of social roles in which older characters are cast, the books illustrations also represent a relatively narrow range of the continuum of physical appearance and ability. Conclusions: Meaningful disparities exist between the literary picture of aging and its reality that remain to be resolved. One is left with significant questions about how broadly the concepts, "aging" and "elderly," are even defined. Recommendations are included to assist authors in understanding and incorporating the new patterns of aging anticipated among baby boomers.

**PC8 645 SOCIAL RELATIONSHIPS AND DEPRESSION AMONG PEOPLE 65 YEARS AND OVER LIVING IN RURAL AND URBAN AREAS OF QUEBEC**

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Introduction: Studies on prevalence of depression in the elderly population have produced conflicting results with respect to context of daily living. This study compares the prevalence of depressive disorders in the elderly living in rural, urban and metropolitan area of Quebec and examines the association between social networks and depression, according to area of residence. Methods: We used data from the ESA survey, conducted in 2005-2006 on a representative sample of 2670 community dwelling people over 65 in Quebec. Depressive disorders (including major and minor depression) were measured by the DSM-IV criteria using the ESA questionnaire developed by the research team. Social relationships were measured by aspects of social networks (marital status and diversity of ties), engagement in community social activities (religious attendance, frequenting social centers, volunteerism), social support, perception of usefulness and presence of conflict in the relationships with spouse, children, siblings and friends. Multiple logistic regressions were adjusted to estimate odds ratios and their 95% confidence intervals. Results: Prevalence of depression was higher among those living in rural (17%) and urban areas (15.1%) of Quebec compared with metropolitan Montreal (10.3%). Social relationships did not modify these differences between areas. Volunteerism, social support and not having conflict with the spouse were associated with lower frequency of depression independently of the area of residence. Independently of all factors considered, those living in urban areas (OR:1.75; IC95 %:1.25-2.45) and those living in rural areas (OR:2.01; IC95 %:1.59-2.68) were more depressed than those living in the metropolitan area. Conclusion: Given the scarcity of Canadian studies on depression prevalence among the elderly population, these results on depression and its associated factors provide important information for clinicians and decision makers for planning and targeting of services by area of residence

**PC8 646 THE EFFECT OF LIFE REVIEW GROUP PROGRAMS IN THE ELDERLY IN TAIWAN**

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Objective: This study was aimed at evaluating whether a Life Review Group Program (LRGP) improved the self-esteem and life satisfaction in the elderly. Methods and

materials: This randomized, controlled trial consisted of 75 elderly males from a Veterans' Home in Northern Taiwan, 36 of whom were in the experimental group and 39 of whom were in the control group. The subjects in the experimental group participated in an 8-week LRGPs. Data were collected before and after the LRGPs and again 1 month after the end of the program. Results: The study subjects had a mean age of 78.13 years. The generalized estimating equation was used to compare alterations in the self-esteem and life satisfaction of the elderly before and after the intervention. The alterations in self-esteem and life satisfaction in the experimental group after the LRGPs were significantly improved compared to the control group. One month after the LRGPs was completed, the self-esteem and life satisfaction of the experimental group continued to improve when compared with pre-intervention levels. Conclusions: Based on these results, the LRGPs can potentially improve the self-affirmation, confidence, and self-esteem of the elderly and promote short-term life satisfaction. The results of this study provide a model for clinical evidence-based therapy, serving as a reference for related studies and evaluation of health-promoting programs, as well as improving the health and quality of care of the elderly.

**PC8 647 SUCCESSFUL AGEING: LIFE SATISFACTION AND EXERCISE IN OLDER ADULTS (50-80 Y.O)**  
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Introduction In view of an internationally ageing population it is important to attend to the generally negative perception of the ageing process and how this process can be improved in terms of life satisfaction. Various models of successful ageing have been presented to date and definitions include aspects such as freedom from disease, continuing autonomy and personal development. The WHO in its Active Ageing Policy has highlighted the relevance of a biopsychosocial model of successful ageing rather than a biomedical model. As there is no current valid and accepted measure of successful ageing, it was decided to apply existing measures of life satisfaction as the most suitable instrument. The present study was conducted to investigate whether high levels of exercise engagement results in significantly higher scores for life satisfaction, meaning, self-concept and goal orientation in comparison to moderate or no exercise engagement. Method and Materials: The study involved 121 participants, male/female, 50-80 y.o. from Outer East Melbourne, Australia. Three levels of exercise engagement were established: heavy, moderate and non-exercisers. The questionnaire package included the Satisfaction with Life Scale (SWLS) and the Life Satisfaction in Elderly Scale (LSES) with subscales meaning, self-concept and goals orientation. Results: More women than men were involved in exercise. Aerobic exercise participation outweighed participation in strength/stretch exercise. Engagement in heavy exercise was present across the 50-80 y.o. The scores for LSES and meaning of heavy exercisers were statistically significantly higher than those of non-exercisers. However, scores for the SWLS, self-concept and goals were not significantly different. Conclusion: Higher levels of exercise engagement are positively related with higher levels of life satisfaction and meaning. However a positive relationship between higher levels of exercise and global life satisfaction (SWLS), self-concept and goals was not supported.

**PC8 648 ARE BENEFITS OF PHYSICAL ACTIVITY ON COGNITIVE FUNCTIONS THE SAME FOR YOUNG AND OLDER ADULTS ?**  
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Introduction: The present study was conducted to examine whether the impact of physical activity on cognitive functions in older and younger adults is dependant of the presence of a time constraint in a cognitive test. Methods and materials: Thirty-one young adults and 31 older adults, assigned to active or inactive groups, according to their amount of regular physical activity were tested on 2 performance cognitive tests, having no time pressure or constraint and 2 speed of processing cognitive tests, presenting high time pressure. Results: For older participants, results revealed that performance scores on the four tests were significantly higher for active older adults than for their inactive counterparts. For younger participants, results showed that young active participants did not obtain higher performance scores than young inactive participants on performance cognitive tests but obtained higher performance scores on time constraint cognitive tests. Conclusion: This preliminary study suggests a dual intervention of physical activity, dependant of cognitive functions characteristics. Physical activity would allow a general alleviation of age-related cognitive deficits and a specific optimization at all ages of cognitive functions requiring high speed processing component.

**PC8 649 A PSYCHOANALYTIC INTERVENTION FOR ADULTS OVER 65 YEARS WHO ARE DEMENTIA CAREGIVERS**  
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Existing caregiver interventions fall into two general categories: interpersonal peer to peer support and instruction based support. Peer to peer support involves learning from others in an informal, discussion oriented setting. Most Alzheimer Association support groups are built around this experience. Instruction based support, in contrast involves focused and

organised discussion around an instrumental or psychoeducational topic or theme. What has not been looked at in any great detail is a psychoanalytic intervention looking specifically at the notion of loss, which has only recently been identified as the single biggest barrier for dementia caregivers even before hands on care, lack of support and financial burden is taken into account. This notion of loss and how it is represented via the ageing caregiver and the articulation of their experience is what the focus of this research rests on. How the articulation of this often traumatic experience can aid in the reduction of overall felt burden is the question and if it does what are the implications for future treatment. This research looks at a short-term psychoanalytic intervention in adults over 65 years who are caregivers to spouses with dementia.

**PC8 650 INTEREST OF VISUAL RECOGNITION MEMORY TASK TO DIFFERENTIATE CORTICAL AND SUBCORTICAL PATTERNS OF DEMENTIA.**  
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INTRODUCTION: to determine the ability of DMS48 test to differentiate cortical and subcortical patterns of dementia. METHODS AND MATERIALS: 11 Alzheimer's disease patients (AD) (cortical dementia), 10 Parkinson patients with dementia (PDD) (subcortical dementia) and 10 Parkinson patients without dementia (PD). RESULTS: Patients with AD had poorer performances than patients with PDD ( $p<0.01$ ) or PD ( $p<0.001$ ). PDD and PD patients had similar performances. Comparison showed a tendency for PDD patients to make more errors than PD patients when unique items were presented ( $p<0.0505$ ). CONCLUSION : The DMS48 is a useful test for differentiating patterns of dementia.

**PC8 651 AWARENESS OF ONE'S FUTURE LIMITATION AND WELL BEING TESTING CARSTENSEN'S MODEL IN 23 EUROPEAN COUNTRIES**  
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Introduction: As people move through life they become increasingly aware that time is in some sense "running out." According to the socio-emotional selectivity theory (Carstensen, 1991) those who have a limited perspective about their future (as opposed to those who see their future as open-ended) have to adapt in order to optimise their resources. The perception of time plays a central role in the prioritisation of social goals and subsequent preferences for social partners. Although there is an association of this FTP with age, this is a variable with a distinctive path, as the same pattern of results is found in young samples with health problems. Methods and materials: Using some questions of the European Social Survey (ESS3, 2006) on 43000 subjects from 23 European countries, an indicator was constructed to discriminate between those with different FTP. Results: An open-ended FTP is negatively associated with age ( $r=-.200$ ;  $p<.001$ ) and sickness ( $r=-.217$ ;  $p<.001$ ). This open-ended vision of the future is associated with social acceptance and autonomy, while a limited vision of the future promotes emotional regulation and the transmission of knowledge and values to the next generations (generativity). These results reproduce quite well those obtained by Lang et Carstensen (2002). The association between FTP and well-being (controlling for age) was also considered. Although those with an open-ended FTP show slightly higher levels of subjective well-being ( $M=7.2$ ) as compared to those with a limited one ( $M=6.9$ ), the effect size of this variable is neglectable ( $\eta^2=0.001$ ) as compared with the congruence of goals ( $\eta^2=0.11$ ). Conclusion: Those with open-ended FTP, autonomous and with a strong social life, and those with a limited FTP who can implement generativity and emotional regulation strategies are equally happy.

**PC8 652 NEIGHBORHOOD ENVIRONMENT AND PHYSICAL ACTIVITY OF OLDER ADULTS: DEVELOPMENT OF AN AUDIT TOOL AND USE OF PHOTVOICE**  
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Introduction: Interest in environmental determinants of physical activity has prompted development of instruments to measure physical environmental features in neighborhood settings. However, the majority of the existing audit tools are not designed to address the specific needs and issues of older adults. Also, there is no study examining the interrelated role of the neighborhood's physical and social environments on physical activity for older adults. The goal of this study was to examine the effect of neighborhood physical environment and social capital on the physical activity of older adults. Methods: Eight neighborhoods were selected across Vancouver, British Columbia and Portland, Oregon regions that represent variation in residential density and mixed land-use. Phase I entailed development of an environmental audit tool "SWEAT-R" (Seniors Walking Environmental Audit Tool – Revised) and assessment of 160 and 197 street segments in the selected Portland and Vancouver neighborhoods, respectively. Phase II employed photovoice technique whereby older adults directly engaged in the research process by photographing and journaling their unique perceptions of their neighborhood environment in relation to

physical and social barriers and facilitators to being physically active. Results: Inter-rater reliability of the revised Seniors Walking Environmental Assessment Tool (SWEAT-R) indicate that percent agreement between paired observers was 95% or higher for more than 80% of SWEAT-R items across both regions. SWEAT-R reliability was highest for Safety and Destination items and lowest for Aesthetic items. Photovoice-based themes identify neighborhood settings that are multipurpose, such as malls, community centres, etc. that attract older adults for socialization, shopping, walking etc., and importance of transportation options. Conclusion: SWEAT-R is a reliable environmental audit instrument that can be used in different regional contexts and neighborhoods. Also, photovoice data indicate the interrelated nature of neighborhood physical and social aspects in affecting physical activity.

**PC8 653 MAIN FACTORS EVOLUTION OF THE MINI-MENTAL STATE EXAMINATION (MMSE) IN THE COGNITIVE IMPAIRMENT**

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Introduction: The items of the MMSE protocol link themselves to reveal latent factors of dementia process. Some factors are more important than other ones in the explanation of the process. This study investigates the main factors present in the scores of MMSE for old people classified as no dementia, questionable dementia and mild dementia. Methods and materials: A sample of 180 aged people classified as no dementia, questionable and mild of the Clinical Dementia Rating had the underlying factors of MMSE identified through the Factor Analysis of Principal Components. Results: Preliminary results show no dementia with low scores because of temporal disorientation (Year, Day of the Month, Day of the week and Month), questionable dementia with commit items of the most refined tasks of Language (reading, writing and copying) and mild dementia with commitment of items of temporal-spatial orientation (Place, specific Place, Week, Year, Month). Conclusion: The last three items of MMSE Language section constitutes the main factor of identification of dementia questionable cases. Items of temporal and spatial orientation constitute the main factor for mild dementia. The analysis of the evolution of the factors allows notice the evolution of MMSE items that are committed with the process evolution.

**PC8 654 THE MEDIATING ROLE OF COPING STRATEGIES ON GERIATRIC MENTAL HEALTH AND QUALITY OF LIFE**

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Old age is the most challenging period of one's life that coalesce physical, social, emotional, and spiritual challenges. Successful and meaningful aging involves psychological well-being, life satisfaction, and a health-promoting lifestyle. All of it demands continued growth despite overwhelming odds. This remarkable ability, referred as resilience, also seems to have spiritual anchor in various cultures. Although an individual's emotional and psychological well-being has been correlated to resilience and spirituality, the dynamics of it needs to be explored, especially in civilizations with strong religious underpinning. The aim of this study was to explore the mediating effect of coping strategies on the relationship between resilience and bent towards religion and two indicators of mental health (cognitive competence and fear of aging) and quality of life. Resilience and bent towards religion were the independent variables whereas mental health (cognitive competence and fear of aging) and quality of life were the dependent variables. Coping strategies were the mediating variable in this study. 390 subjects (198 males and 192 females) with the age ranging from 50-90 years ( $M = 64.85$ ,  $SD = 9.63$ ) participated in the study. The resilience scale, ways to religious coping, proactive coping inventory, clinical assessment scale for the elderly and quality of life index were administered to them. The data was analyzed to see the mediating effect of coping strategies on the relationships between the independent and dependent variables through regression analysis. Results showed that preventive, strategic and reflective coping strategies mediated the relationship between resilience and mental health (cognitive competence and fear of aging) whereas proactive coping strategy mediated the relationship between resilience and quality of life. Preventive and emotional coping strategies emerged as mediator between religiosity and mental health. None of the coping strategies mediated the relationship between religiosity and quality of life.

**PC8 655 THE MEANING OF FEAR OF FALLING AMONG COLOMBIAN ANDES-MOUNTAINS ELDERLY PEOPLE**

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Background: Fear of falling ranks as the most important fear of older adults living in community dwellings. Even though fear of falling is a significant health problem among the elderly, little reported research was published that investigated this issue in participants' viewpoints and the meanings and perceptions of the elders' experiences of the fear of falling. Objective: The purpose of this study is to explore the underlying theoretical framework of fear of falling among Andes-Mountains elderly people. Methods: A

grounded theory approach was used. Theoretical sampling was used to saturate the emergent concepts. Individual open, semi-structured and in-depth interviews were conducted with 32 community-based participants who reported fear of falling. Interviews were audiotaped as agreed by the participants. Analysis: Data was analyzed following the grounded theory principles: open coding and memos for conceptual labelling, axial coding and memos for category building, and selective coding for model building. Results: Fear of falling is described as an experience often linked with fear of incapacitation, fear of disability, fear of dependence and lack of autonomy. Four themes emerged from data analysis: aging process, activity restriction and limitations in social activities, adjustment of behavior and geographic and architectural environment. Conclusion: This study's findings reveal that fear of falling is not related to the physical functioning. Furthermore, fear of falling does not only has negative aspects, such as psychosomatic symptoms and activity restraints, but it has also positive aspects, such as risk prevention, behavioral and environmental adaptations,, and new resources development by seeking help.

**PC8 656 THE ROLE OF COGNITIVE FUNCTIONING IN OLDER ADULTS' TERROR MANAGEMENT STRATEGIES**

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Terror management theory posits that awareness of death influences diverse human behavior. In research with younger adults, reminders of death result in diverse outcomes including harsher judgments of moral transgressors. Recent research has shown that contrary to these findings with younger individuals, older adults respond to death reminders by making more lenient judgments. Based on diverse theories that posit developmental accommodations to cope with increasing age, we interpreted this as suggesting that more tolerant and open attitudes might help older adults cope with their increased proximity to death. If this leniency is part of an adaptive accommodation, it would be most prominent among persons with superior cognitive functioning. However, if it is a result of cognitive decline, it would be most prominent among those with cognitive impairments. Older adults who had previously completed a diverse array of cognitive measures were randomly assigned to reminders of either death or an aversive control topic. Next, participants read vignettes describing violations of social norms and were asked to indicate the severity of the wrongdoing and harshness of an appropriate punishment. Level of executive functioning was of particular interest, as this includes complex cognitive tasks, such as inhibition and moral reasoning. Following reminders of death, older individuals with higher levels of executive functioning (as measured by the artificial grammar and self-ordered pointing tasks) were significantly less punitive than controls; those lower in executive functioning tended to be more punitive than controls. Executive functioning appears to contribute to the development of new strategies for coping with mortality. The present results raise the possibility that older adults with greater capacity for complex thought and reasoning, as suggested by higher scores on tasks of executive functioning, may be better equipped to accept their mortality, or at least respond to it with more tolerance of deviant others.

**PC8 657 MORTALITY SALIENCE EFFECTS ON CONCERN ABOUT COGNITIVE IMPAIRMENT AND PERFORMANCE**

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Many older adults worry about cognitive problems. Terror management theory suggests that humans' cope with their awareness of death, in part, by exaggerating their well-being. This suggests that death-related fears might encourage denial of fear of cognitive decline among older adults. Previous research has shown that older adults typically do not show the same defenses against death reminders that younger adults do. This study investigated the possibility that older adults are still threatened by death, but defend against this fear in domains of particular relevance to their lives. We hypothesized that death reminders would influence older but not younger adults' concern about cognitive impairment and performance on a cognitive screen. Younger and older adults (from communities that either encouraged continued intellectual engagement or did not) were randomly assigned to death reminder or control conditions and rated their fear of developing cognitive impairment. Older participants were given a brief cognitive screen following the study. Older adults reported greater concern about cognitive impairment. The age x prime interaction was significant. Older adults reminded of death reported lower concern about cognitive impairment compared to older adults in the control condition. Younger adults were unaffected by this prime. Older adults from the community emphasizing education made fewer errors when reminded of death, while older adults from the community without requirements made more errors when reminded of death. The reduction in concern about cognitive impairment after reminders of death in older adults likely reflects a defensive denial of this concern, which helps minimize existential anxiety; this was not found in

younger adults because cognitive decline is likely less threatening for them. The fact that older adults in an environment that encourages cognitive engagement responded to death reminders with improved cognitive performance provides further evidence of the importance of cognitive functioning for existential security.

**PC8 658 MEANING OF SEXUALITY AND SEXUAL WELL-BEING IN INDIVIDUALS AGED BETWEEN 65 AND 78 AND LIVING IN COUPLE IN QUEBEC, CANADA**

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**Introduction:** In the Western society, values of productivity, youth and beauty are deeply rooted in the everyday life of people of all ages, stressing out the necessity of sexual activity and performance, even in old age. Also omnipresent in research and clinical gerontology, this attitude is jeopardizing the development of senior's sexual well-being, which is nevertheless known to be a key component of healthy personal development, overall well-being and happiness (APA, 2007). The lack of studies on sexuality and sexual well-being in aging generates the need for an intimate, comprehensive analysis of this reality. **Methods and materials:** This study explores the meaning given to sexuality and sexual well-being in in-depth individual interviews conducted with five healthy, retired individuals aged between 65 and 78 and living with their spouse in Quebec, Canada. Data are analysed qualitatively according to the iterative technique of Miles and Huberman (2006). **Results:** Sexuality has meaning into a loving relationship, and encompasses self-giving behavior, feeling of intimacy, sexual intercourse, caresses and kisses, and communication. Seniors reported that feelings of sexual well-being were created by emotional and physical sexual satisfaction, self-esteem and esteem of the loved one, as well as affection and tenderness. **Conclusion:** Among the elderly, meaning given to sexuality is very broad, sexual well-being going much beyond feelings of physical satisfaction related to sexual activity. Sexual well-being is conceived as an important element of love, life meaning and happiness.

**PC8 659 THE LONGITUDINAL ASSOCIATIONS BETWEEN FUNCTIONAL DISABILITIES, GOAL ADJUSTMENT CAPACITIES AND DEPRESSIVE SYMPTOMS IN OLDER ADULTS**

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**Introduction:** The rising life-expectancy in industrialized nations creates an increased potential for the experience of age-related challenges in older adulthood. One important aspect of older adults' lives that may be affected by age-related challenges, such as functional disabilities, is their ability to pursue goals. While making progress towards goals can contribute to subjective well-being (Carver & Scheier, 1990), goals that have become unattainable may lead to emotional distress (Wrosch et al., 2003). Therefore, individuals must be able to adapt to changes in opportunities across the lifespan, and adjust their goals accordingly in order to avoid the negative consequences associated with failed goal progress. In this way, goal disengagement capacities ("letting go" of unattainable goals) and goal reengagement capacities (identifying and pursuing new goals) may help older adults adaptively cope with age-related challenges and maintain their emotional well-being. Such emotional resources may, in turn, play an essential role in maintaining older adults' capacities to adjust to subsequent challenges. **Method:** We examined the longitudinal associations between older adults' goal disengagement and goal reengagement capacities, depressive symptomatology (CES-D), and functional disabilities (ADLs). Three waves of data, spanning four years, were collected using questionnaires from a sample of community-dwelling older adults (NT1=215, NT2=184, NT3=164), aged 63 and older. **Results:** Regression analyses indicated that baseline difficulty with goal disengagement contributed to two-year increases in depressive symptoms, particularly among those older adults who experienced an increase in functional disabilities. Additionally, older adults who developed greater depressive symptoms over the first two years subsequently experienced more difficulty disengaging from unattainable goals. These findings indicate that self-regulation capacities and emotions can reciprocally influence each other: Problems with goal disengagement can contribute to depressive symptomatology, and these depressive symptoms may subsequently deplete older adults' capacities to disengage.

**PC8 660 ITEM STORAGE VS ORDER PROCESSING IN OLDER ADULTS' PERFORMANCE ON SERIAL RECALL TASKS**

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**Introduction** Forward and backward serial recall tasks frequently appear in tests of cognitive function. Although it has been shown that forward recall is easier than backward recall, and that both show a decline with ageing, the memory processes involved in such tasks remain little understood. Specifically, it is not known to what extent any decline in performance on serial recall in ageing is due to a decreased ability to retain items in short-term memory, and/or to the ability to retain or manipulate the order of the items. **Methods and materials** Participants are 30 adults aged 17-29 and 30 healthy adults aged 60-75. To investigate the relative demands of item storage and order processing in both forward and

backward serial recall, their performance is compared on two task formats: (i) a standard serial recall format, in which the words to be repeated (or re-ordered) must be remembered; and (ii) an order reconstruction format, in which the words remain visible during production of the required sequences. **Results** Data will be presented showing the difference in performance between younger and older adults, and the extent to which older adults' recall of word sequences is facilitated by provision of the items to be reproduced. The demands of item storage will thus be teased apart from the demands of order repetition (in forward recall) or order manipulation (in backward recall). **Conclusion** The results will provide insight into specific memory processes affected by age-related change, and implications will be drawn for the provision of environmental support to maximise memory function in ageing.

**PC8 661 DYSFUNCTIONAL ALCOHOL CONSUMPTION IN THE CONTEXT OF DEPRESSIVE SYMPTOMS, LEISURE ACTIVITY, AND 4-YR CHANGES IN PHYSICAL HEALTH SYMPTOMS AMONG ELDERLY MEN**

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The adverse impact of depressive mood on physical decline and increased mortality risk can be more pronounced among elderly men as compared to women (Kaarin, 2002). Furthermore, the association between depressive symptoms and physical health may be influenced by individuals' engagement in lifestyle activities. In this regard, depressed men but not depressed women have been shown to regulate their mood by participating in leisure activities that co-occur with health-compromising behaviors (e.g., alcohol abuse, Angst et al., 2002). Since alcohol consumption can predict increases in physical symptoms over time (Moore et al., 2003), any health benefits gained through leisure activities may be undermined among depressed men. Thus, in order to identify factors that influence the association between depressive symptoms and health decline among elderly men, the aim of this study was to investigate the impact of depressive symptomatology and leisure activities on their physical health. We hypothesized that only those elderly men who report low levels of depressive symptoms, but not those who report high levels of depressive symptoms, would benefit from the positive impact of leisure activities on physical health. Further, it was hypothesized that the interaction effect between depressive symptoms and leisure activities on physical health would be mediated by levels of alcohol consumption. To test these hypotheses, 164 older adults from Montreal were examined three times over a period of four years. This study assessed physical symptoms, depressive symptomatology, leisure activities, alcohol consumption, and sociodemographic characteristics. In support of the hypotheses, men who reported low levels of depressive symptoms and engaged in leisure activities showed significant lower increases in physical health problems over time, as compared to their counterparts who engaged in leisure activities but reported high levels of depressive symptoms. Moreover, the analyses showed that this interaction effect was mediated by alcohol consumption.

**PC8 662 ART OF LIVING IN OLDER ADULTS: A CONCEPT EXPLORATION AND CONSTRUCTION OF A MEASUREMENT INSTRUMENT**

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**INTRODUCTION** The concept Art of living reflects the way people live their lives gracefully. This study aims to explore the concept Art of living [In Dutch: Levenskunst] and construct an Art of living scale that can be used in research that may reveal the ingredients of a good life. **METHOD** In three studies we aimed to obtain answers to our questions: 1. In a qualitative study participants and program coaches of four Art of living programs were interviewed and observed. 2. A concept map meeting was organised to explore the concept art of living. This mapping group discussion resulted in a working definition that was used for the construction of an Art of living scale. 3. This Art of living scale was used in a survey with older adults and in a web based survey amongst national newspaper readers. **RESULTS** Two groups of older adults participate in Art of living programs: "Life artists" and "Seekers". Two Art of living dimensions were distinguished: "control" and "receptiveness". The concept map study resulted in definitions with nine related dimensions. The survey (n=173) and web based data show that older adults rate their personal Art of living positively. Art of living is not associated with age, sex or education. A positive (high) Art of living score is associated with less mental health complaints and high Mastery and Happiness scores. **CONCLUSION AND DISCUSSION** Art of living has various dimensions that can be translated into an Art of living questionnaire with acceptable psychometric characteristics. Art of living thus quantified is related to concepts as Mastery and Mental Health, but can also be clearly distinguished from them. Further research into Art of living as a concept and scale can be of use in interventions based on positive psychology approaches.

**PC8 663 QUALITY OF CARING RELATIONSHIPS IN SOMATIC NURSING HOMES: THE RELATION OF NEED-FULFILLMENT WITH WELL-BEING OF RESIDENTS.**

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Introduction: Quality of life in nursing homes is becoming more important in both research and practice. Although it is assumed that quality of life is highly influenced by caring relationships, there are still few empirical studies on long-term care for somatic patients. In the present study this topic was investigated using the self-determination theory. Satisfaction of the basic psychological needs of autonomy, relatedness and competence in the caring relationship was expected to relate positively to the subjective well-being of residents. Methods and materials: 81 residents (50- 97 years old), residing in six nursing homes in the Netherlands, were interviewed. Subjective well-being was measured using the Geriatric Depression Scale and the Satisfaction With Life Scale. Residents' perceptions of need fulfillment in the caring relationship and need fulfillment in general were measured with Dutch translations of the Basic Need Satisfaction in Relationships Questionnaire and the Basic Need Satisfaction in Life Scale. Results: The mean perceived amount of need fulfillment in the caring relationship is relatively high. Need fulfillment in the caring relationship is positively related to need fulfillment in general, as well as to subjective well-being. Need fulfillment in general partially mediates the relation of need fulfillment in caring relations with subjective well-being. The relations remain significant after controlling for personality, health status and demographic variables. Conclusion: Satisfaction of residents' needs for autonomy, relatedness and competence is related to their subjective well-being. The quality of caring relationships is thus an important topic for further study. However, residents appeared to be hesitant to criticize their caregivers. Therefore observational studies are needed to contribute to our knowledge about the quality of caring relationships and its effects on well-being of residents. A longitudinal observational study concerning the three needs in caring relationships is presently being carried out.

**PC8 664 IMPACT OF LIFELONG EDUCATION ON QUALITY OF LIFE AT LATE ADULTHOOD: A BASELINE REPORT OF THE 3-YEAR LONGITUDINAL STUDY**

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Introduction Capacity Building Mileage Programme, a project for enhancing the quality of life of adults, was launched in Hong Kong in 2004. Up to March 2008, 6,541 students enrolled to study in the programme, and 720,000 audiences listened to the radio broadcasts. Methods and materials The longitudinal study, started in 2008, examines the changes of participants' quality of life over time. Measurements included General Self-Efficacy Scale, Sociopolitical Control Scale, Quality of Life Ladder (QoLL), Somatic Complaint Scale, Perceived Health, and List of Threatening Experience. Results 15.3% of the participants (n=1003) returned the questionnaire. The mean age was 50.6 (SD=7.8, range: 18-78), and 96.9% of them were female. On average, they studied 6.3 courses (SD=7.5, range: 1-49) since 2004. Respondents age 55 to 59 took more courses ( $p<.001$ ), but those age 60 and over had more interest for further study after graduation than others ( $p<.001$ ). 33.1% of them perceived their health better than before. Respondents reported, on average, having 8.6 somatic complaints (SD=3.2, range: 1-12), and those at late adulthood suffered fewer numbers of somatic complaints ( $p<.05$ ). The mean score for QoLL is 6.4 (SD=1.6, range: 1-10), and those age 55 to 59 achieved better than others ( $p<.05$ ). Multiple regression analysis shows that a higher score of QoLL of those respondents age 60 and over was attributed to their higher score in leader competence ( $p<.01$ ) and planning for further study ( $p<.05$ ) (adjusted  $r^2=.11$ ,  $p<.001$ ). Conclusion Findings suggest significant relationships between older adults' quality of life with self-efficacy and interest for further study. Lifelong education to older persons may be effective to enhance their biopsychosocial well-beings.

**PC8 665 IMPROVING OUTCOMES OF DRIVING CESSION FOR OLDER PEOPLE: EARLY RESULTS FROM A RCT OF THE UQDRIVE GROUPS.**

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Introduction: Driving cessation has been recognised as having substantial negative impact on the community mobility, role participation, health and wellbeing of older people. The UQDRIVE (University of Queensland Driver Retirement Initiative) group program was developed based on interviews with over 250 older drivers, retired drivers, family members and health professionals. It includes community based interventions to improve lifestyle and quality of life of older people facing driving cessation. A randomised controlled trial of UQDRIVE is underway in South East Queensland, Australia. Methods and materials: People aged 60 years and above, living in the community, who had permanently ceased driving or were planning to do so were randomised to either the UQDRIVE intervention or current practice (no intervention). Measures of wellbeing and lifestyle outcomes were undertaken prior to the intervention, immediately after the intervention and three months later. For intervention participants, individual transport and lifestyle goal setting and evaluation using the Canadian Occupational Performance Measure (COPM©) were

undertaken pre and post the intervention. Results: Preliminary results after 12 months of data collection will be described. Goals set by group participants included adjustment to driving cessation, driving safety, and role participation. Preliminary analyses of COPM scores indicate significant differences pre and post in perceived performance (mean difference = 3.22 points;  $t = 7.11$ ;  $df = 19$ ;  $p < 0.0001$ ) and satisfaction with performance (mean difference = 3.53 points;  $t = 6.52$ ;  $df = 19$ ;  $p < 0.0001$ ) scales. Comparison between control group and intervention group scores on episodes away from home, depression, anxiety and life satisfaction will also be reported. Conclusion: This paper provides an overview of the UQDRIVE program, the randomised controlled trial currently underway and presents preliminary findings.

**PC8 666 AGE EFFECT ON MEMORY SELF-CONFIDENCE**

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[Introduction] The purpose of this study was to develop a metamemory scale on memory self-confidence which could apply to the elderly in comparison with young adults. Then we will examine other memories using this scale. [Methods and Materials] Participants were 277 young university students ( $20.6 \pm 0.5$  years of age) and 94 old-age students learning at school for the elderly ( $72.0 \pm 0.4$  years of age). We used a newly-developed scale measuring the degree of self-confidence on subjective memory performance called metamemory (15 items, 4 judgments: Metamemory Scale of Self-Confidence, MSSC). At the same time, we examined each of the highest three items in factor loadings from five factors (totaling 15 items) in a multiphasic metamemory questionnaire by Kawano (1999). [Results and Conclusion] Factor analyses of MSSC: We examined three factor analyses for the data set of young participants, elderly participants and all of participants. In every analysis, one factor structure was appropriate. Item analysis of scale: We examined items by mean (and SD) of each item, item-total relationships, coefficient of determination (multiple correlation coefficient of square), Cronbach's alpha, and factor loadings. The results showed that two items were somewhat problematic, but we did not delete them immediately. Cronbach's alpha of MSSC for all of participants was 0.82 (young participants: 0.81, elderly participants: 0.86). Investigation between age and sex: An analysis of ANOVA on age (young, elderly)?sex (male, female) as a dependent variable used the total item score. Only the main effect of age was significant ( $F(1, 367)=7.94$ ,  $p<.01$ ). The result suggested that old-age students had higher self-confidence on memory performance than young university students.

**PC8 667 LIFE SATISFACTION OF OLDER PERSONS: DOES DAILY ACTIVITY PARTICIPATION MATTER?**

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The daily activity participation refers to the varieties and categories of productive activities participated by older persons in a typical day. Productive activities include paid and non-paid activities. The activity theory developed by Robert Havighurst in 1960s postulates that regardless of types of activities, older persons who are active will be more satisfied with life than less active older persons. The purpose of this paper is to determine the effect of the varieties and categories of daily activity participation on life satisfaction of older Malaysians living in the community. Data from the 1999 Survey on Perceptions of Needs and Problems of the Elderly on older persons aged 60+ were used. The varieties of daily activity participation is computed by counting the number of productive activities participated in a day, while the categories of daily activity participation refers to the combination of productive activities participated in a day. The life satisfaction score is constructed based on the respondents' responses to 10 questions adopted from LSIA. Multiple regression analysis is used to estimate the expected life satisfaction of respondents according to the varieties and categories of daily activity participation, controlled for socio-demographic factors and self-esteem. The multiple regression analysis showed that the varieties of daily activity participation had a statistically significant positive coefficient, indicating the more the varieties of daily activity participation, the higher the life satisfaction. Thus, the results supported the activity theory. The participation in different categories of activities yielded different level of life satisfaction. On average, daily participation in paid work only achieved the lowest life satisfaction, while higher life satisfaction was achieved by participating daily in leisure activities only or together with other activities. It is concluded that the varieties of daily activity participation, and daily participation in leisure activities had positive effect.

**PC8 668 THE PSYCHOLOGICAL, COGNITIVE AND PHYSIOLOGICAL EFFECTS OF HORTICULTURAL THERAPY ON ELDERLY PEOPLE LIVING IN A NURSING HOME IN JAPAN**

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Introduction: Previous research reports have shown that horticultural activities therapeutically improved psychological functions. In Japan, horticultural therapy (HT) has

been used since the 1990s. However, no empirical research has been undertaken to evaluate the immediate and sustained inclusive effects of HT. The purpose of this study was to examine the psychological, cognitive and physiological effects of HT for the elderly. Method: We conducted HT for 10 subjects and the control group without any intervention included 8 similarly matched subjects. The study design of this research formed a quasi-experimental design that we believe could be used in a clinical setting. We assessed the psychological and cognitive functions before and after once-a-week therapy during a three month period with The Philadelphia Geriatric Center Morale Scale (PGC), the Geriatric Depression Scale (GDS), and the revised version of Hasegawa's dementia scale (HDS-R), and the Frontal Assessment Battery at the bedside (FAB). Chromogranin A (CgA) was used as the physiological evaluation. Results: The post scores of all assessments in the HT group were significantly better than the initial scores. These results suggested that contact with the natural environment and plants made all subjects lively, and reduced the depression which they felt in their everyday lives. A significant numerical decrease of the CgA was shown in the HT group. On the other hand, some numerical values rose in the control group. It means that stress could be reduced during activity using plants of horticultural therapy. Conclusion: This study suggests that the elderly people who participate in the horticultural therapy show positive results scores of quality of life and the effects of the HT group represent an activity with real meaning for the care of the elderly.

**PC8 669 ANGER AND RELIGION/SPIRITUALITY: THE RELEVANCE OF TWO UNDERSERIALIZED ELEMENTS IN CAREGIVERS' STRESS PROCESS**

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Introduction. Dementia is commonly associated with distressing behavioural problems. Past research has clearly documented the high prevalence of depression among caregivers; however, the extent of anger feelings needs more research. Although it's widely recognized that religion is an underexplored area in scientific research, the majority of caregiving studies report no or a mixed association between religion and depression. However, there has been less focus on the role that religion might play in caregivers' anger. Methods/materials. A cross-sectional design was employed. The sample consisted of 128 dementia caregivers who were assessed by standardised questionnaires. Self-reported levels of anger were assessed with State-Trait Anger Scale (Spielberger et al., 1983), spiritual meaning was assessed with Ultimate Meaning Subscale (Farran et al., 1999) and support obtained from the religious or spiritual community was assessed with Social Support Subscale (Holland et al., 1998). Path analyses were used to explain the influence of anger and religion/spirituality on caregivers' stress consequences. Results. Positive and significant associations were found between frequency of behavioural problems and depression, on the one hand, and appraisal of behavioural problems and anger, on the other hand. Negative and significant associations were found between spiritual meaning and appraisal of behavioural problems and between support from the spiritual community and anger. Conclusion .Support from the spiritual community might provide a way to canalize anger feelings. With regard to spiritual meaning, its association with anger is more distant and it is mediated by caregivers' appraisals of problem behaviours. This finding suggests that spiritual attributions might help caregivers to appraise care recipient's behavioural problems as less stressful. Our data also suggest that the relationship between appraisal of problem behaviours and depression is mediated by anger. So, developing interventions that reduce angry feelings might help to alleviate caregivers' depression.

**PC8 670 PARTICIPATING IN THIRD AGE UNIVERSITIES: MOTIVATIONS AND GAINS**

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Introduction Higher education programs for older people have been increasingly popular in the last decades. This research is aimed at exploring the motivations to attend, how older learners evaluate these university programs, and what kind of gains in their life have been stimulated by program attendance. Methods and material The sample was composed of 40 people of 55 years old and over with at least one year of experience in third age universities. Participants were interviewed, their answers were recorded, transcribed and analysed using NVivo qualitative analysis software. Results For some people, reasons to attend university courses were related to vital transitions (retirement, widowhood, care of frail relatives) and attendance were a kind of therapy to manage new situations or forget problems. However, most people emphasized motivations that had nothing to do with loss: desires of fulfilling a long-lasting dream to attend university or growing and accumulating more knowledge and culture. In relation to gains, apart from the knowledge-related gains, participants highlighted gains in social relationship (e.g. creating new social networks, improving their relationship with family members, and particularly with grandchildren) and emotional and motivational gains (e.g. finding new meaning and new goals in life, changing their attitude towards life). Conclusion Our results suggest that, far from being only a way to fill time after retirement, higher education in older age might be a changing-

life experience and motivate gains in many domains, ranging from increasing skills and competences to promoting a more engaged and active style of living

**PC8 671 RESIDENTIAL TRANSITIONS AMONG OLDER COUPLES IN THE AUSTRALIAN LONGITUDINAL STUDY OF AGEING**

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Introduction: There is little research examining how changes in living arrangements amongst older people are impacted on by the couple relationship itself, and the transitions that occur within this relationship over time. Furthermore, little is known about how intentions to move predict subsequent re-location. Methods: Data from couples in the Australian Longitudinal Study of Ageing (ALSA) (n= 565, mean age 76) were examined to determine how intentions to move were associated with subsequent residential location over a period of 2 years. Of particular importance was the influence of the transition to widowhood, changes in health status and contextual influences such as socioeconomic status and social support. Results: Overall, there was considerable concurrence in terms of husbands and wives' intentions to move, with most not planning to move. In most cases couples' intentions matched subsequent outcomes, e.g. they either planned to move and moved or were not considering moving and stayed in their current residence. However, the group whose intentions were not met tended to be somewhat older, widowed, and to have moved into residential care. Socioeconomic characteristics and availability of social support did not tend to play a role in whether residential objectives were met. Conclusions: These findings suggest that most older couples' plans for residential location and actual outcomes tend to be fulfilled, at least in the short-term. The transition to widowhood appears to be the main catalyst in the disjunction between plans and outcomes.

**PC8 672 SUCCESSFUL AGING: RESOURCES AND PATTERNS OF COPING WITH LOSSES AT THE FOURTH AGE**

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Introduction One of the main challenges of aging societies is maintaining quality of life in the face of unavoidable losses of old age. The purpose of this study was to examine the role of the elders in shaping their future by exploring the contribution of various accumulated personal resources and the coping patterns to their successful aging, while facing decline in health/functioning. Methods The study was based on a sample of convenience, comprised of 262 persons aged 75 and above, community-dwelling and functionally independent. Data were collected by two home interviews, carried out at an interval of 12 months (only 16 persons dropped out from the second interview). The structured interviews were based on a questionnaire consisting of closed-ended questions. The dependent variable was successful aging assessed by a number of measures, and the independent variables included decline in health and functioning, personal resources (education, economic status, self-efficacy) and coping patterns (proactive and reactive). Results Personal resources, especially general self-efficacy and loss-based self-efficacy, had a positive effect on successful aging in the presence of a decline in health and function. Resources had an indirect effect by way of their association with coping patterns. Among such resources, high self-efficacy was significantly associated with the use of reactive coping, and with an avoidance of proactive behaviors. Reactive coping had a positive effect on successful aging, whereas proactive coping had no effect on successful aging. Consistently, avoidance of proactivity had a positive effect on successful aging. Conclusions Findings indicate that elders have the ability to shape their futures by their personal resources and by using the appropriate coping patterns. Controlled and supervised interventions can help the aged obtain these important resources and coping skills, hereby promoting a more successful aging process.

**PC8 673 EMOTIONS IN ELDERLY INSTITUTIONALIZED PEOPLE**

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Introduction: emotions, in old people living in nursing home, often don't receive deep listening and attention, which could promote a better communication. This paper examines the emotions and quality of life in elderly institutionalized people. Methods: Hypotheses: a) men present less maladjustment than women; b) over eighty years old have a better adjustment. Materials: 1) Questionnaire presented in semistructured interviews; 2) Self Depression Scale of Zung W.W.K. (SDS); 3) Geriatric Depression Scale (GDS); 4) Mini-Mental State Examination. 74 over seventy-five years old, classed by sex (39 F., 35 M.), age (< or >80 years old), living in nursing home of North Italy, were interviewed. Not autonomous people were excluded. Results: 60,16% are satisfied of autonomy, 52,70%, mostly men, of health, 70,27% of sleep quality; 48,65% taking hypnotic drugs. Sickness is felt as a natural experience (especially over eighty years old), misfortune (especially women under eighty years old), handicap. The present condition of life stimulates self-acceptance and serenity. 64,86% are glad of life, 74,32% of grandchildren and sons, 60,81% of friends. Future evokes worry (36,48%), serenity (24,32%, mostly men), sadness and fear. It is wished a good death (especially oldest-old), health and consciousness (mostly oldest-old women), desires and emotions are expressed. Sexual attraction is mostly

indicated by men. 36,67% express angry (especially men); women fear incomprehension, aggression and abandonment; 60,81% feel consideration by other people. Many people would be more young, healthy and efficient. SDS and GDS present more depression in women. Conclusions: elderly people express their emotions in according to gender, experiences, culture and age. Men have a better adjustment to nursing home, feel more reassured about their life needs; women seem to be more sensible and conscious about their condition.

#### **PC8 674 THE LAST CREATIVITY**

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Introduction: life-span represents a creative way, from the beginning to the end. Every day we write our biography. Creativity makes up our mind to learn, to face unknown and new things. At the end the last creativity appears. Methods: we have examined the works of many great scientists and artists: musicians, writers, painters, sculptors, architects. In this paper we present the last creativity of some great painters and sculptors. Results: Donatello: his last work, at 80 years, is The pulpit of S. Lawrence (Florence), where he sculputres the resurrection of Christ by a new conception; not a resurrected triumphant, glorious Christ, but Jesus appearing tired, suffering. Michelangelo, at 89 years, realizes the Pietà Rondanini (Milan); two days before his death, he inserts the body of the son in that one of his mother. Tiziano, almost blind, paints using directly fingers his last masterpieces (The Pietà, The punishment of Marsia) at 84 years. Goya, at the end of life, with serious problems of sight, realizes masterpieces as The milkwoman of Bordeaux, at 81 years. The old Monet, becoming blind, paints masterpieces as The house between the roses, at 85 years. The clouds, at 86. Matisse, sick, realizes, at 82 years The tree of life, considered his masterpiece. The old Picasso changes the interpretative and expressive patterns of the painting: at 87 years he realizes 347 engravings; at 91 years he paints The Musketeer, a work that represents his desire to dare fate. Chagall, at 93 years paints The painter and his fiancée, expressing feeling of opening and novelty. Conclusions: in the last years of life, many great artists have realized masterpieces, with innovations, often introducing a new style. Until the end they have expressed their last creativity, their self-realization.

#### **PC8 675 A CROSS-CULTURAL STUDY OF SPORT, PHYSICAL ACTIVITY AND ELDERLY SUBJECTIVE WELL-BEING**

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Given the growth of older populations in most nations and the importance of subjective well-being (SWB) to the lived experience of elders, continued research is merited on factors related to elderly SWB. Much research links sport and physical activity participation to better health, and better health to SWB. In this study we directly compare levels of sport and physical activity participation to SWB in a self-administered survey of younger (age 60-74) and older (age 75+) Portuguese, Thai, and Americans. Data came from the Satisfaction With Life Scale (SWLS), the Positive and Negative Affect Schedule (PANAS), and the Behavior Inventory from the University of Porto's Sport Psychology Laboratory. Preliminary statistically significant ( $p < .05$ ) findings include: 1) a decline in sport/physical activity with age; 2) younger subjects had higher positive affect scores than did older subjects; 3) sport participation was positively related to higher SWLS and positive affect scores; 4) age-group differences in the relationship between physical activity and positive/negative affect; 5) age-group differences in the relationship between sport participation frequency and positive/negative affect. The results are interpreted in the context of cultural differences (e.g., religion: Thailand is predominantly Buddhist, Portugal predominantly Catholic, America predominantly Protestant). Implications for the role of sport and physical activity in overall health promotion for elders, recommendations for promoting sport and physical activity in different cultures, and the potential effects of sport and physical activity on elderly SWB in different cultures, are presented.

#### **PC8 676 FAMILY INTEGRITY IN LATER LIFE: THE IMPACT OF INSTITUTIONALIZATION**

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The topic of elderly institutionalization has generated significant research; however studies have miss to explore its consequences on the sense of family integrity. Family integrity (vs. disconnection and alienation) refers to an older adult's ultimate sense of meaning, connection and continuity within the multigenerational family. It constitutes a normal developmental challenge that is crucial to elderly person's well-being and highly influenced by family relational processes. This study aims to explore the impact of institutionalization in the construction of a sense of family integrity among institutionalized elderly. Data were collected through a semi-structured interview (based on King and Wynne, 2004) to 21 institutionalized elderly living in four residential care facilities. Interviews were submitted to content analysis and involved two independent judges. Main

findings suggest that: (i) the older persons moving towards family integrity recognize neutral or positive impacts of institutionalization, as it maintains or increases emotional proximity and the frequency of contacts; they feel that they preserve a respected and meaningful place within the family; besides, they accept and adjust positively to the current living arrangement by searching and valuing positive aspects of institutionalization; (ii) the older persons moving towards family disconnection or alienation perceive neutral or negative impacts, mainly because institutionalization maintains or increases emotional distance, promotes new conflicts and makes them feel in an non-meaningful place within the family; the adjustment process is difficult, and feelings of sadness, loneliness, and uselessness occur; however, some of the elderly considered institutionalization as an opportunity to replace emotional ties. These findings highlight important challenges to residential care dynamics and practices in order to help and assist residents and families to identify ways of improving a sense of family integrity, otherwise disconnection and despair become increasingly salient and may adversely interfere in elderly well-being.

#### **PC8 677 CONTINUITY AND DISCONTINUITY OF INTIMATE RELATIONSHIPS AMONG ELDERS: THE CASE OF SECOND COUPLEHOOD IN OLD AGE**

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Alongside the increase in life expectancy, the need for alternative intimate relationships in old age is expected. While this takes place more and more, it is still not the normative path in old age (Koren & Eiskovits, under review), and not perceived as continuous with older persons' life plan. This paper examines how those who created second couplehood in old age perceive it as continuous and/or discontinuous to their first couplehood and to the rest of their life course. It is based on a larger qualitative study on second couplehood in old age designed in existential-phenomenological tradition. A theoretical sample of twenty couples was chosen according to the following criteria: men who created second couplehood at age 65+ and women at age 60+, following termination of first couplehood due to death or divorce. Forty individual semi-structured interviews were conducted, recorded and transcribed verbatim. The findings are arranged along a continuum with continuity at one end and discontinuity at the other. Most participants perceive the phenomenon as discontinuous of their first couplehood with continuity being an exception. Most participants perceived second couplehood either positively or simply different. Continuity and discontinuity were identified by three themes: 1. the meaning and purpose of second couplehood compared to the first by: a) Fulfillment of the fantasy of an optimal couplehood, b. Change and/or preservation of "self", c. Choice and love versus obligation and commitment. 2. The meaning attributed to spouses offspring. 3. Sex life and sexuality. These finding raise questions related to what can be considered developmental change in relation to the concepts continuity and discontinuity. Issues such as continuity being perceived as normal ageing and discontinuity as pathological ageing will be discussed in relation to theories such as Atchley's (1989) continuity theory and Lomaranz's (1998) a-integration perspective.

#### **PC8 678 SEXUALITY, DYADIC ADJUSTMENT AND PSYCHOLOGICAL DISTRESS IN ELDERLY COUPLES**

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This presentation examines the link between psychological distress, marital and sexual aspects in elderly couples. Many studies have examined the relationship between psychological distress and marital life. It seems that there are higher levels of psychological distress in the presence of marital discord. Other authors have discussed the link between marital and sexual functioning. Satisfactory sexual aspects (e.g. sexual communication, satisfactory orgasm) were related to positive marital functioning. However, few of these studies have examined these relationships in the elderly. In view of this lack of information, the following presentation gives preliminary results about the association between psychological distress, sexual and marital aspects from the Quebec Survey of Health in Elderly (Enquête sur la santé des aînés au Québec). In this study, 511 francophone couples (511 women, 511 men) aged 65 years old and over answered many questionnaires about psychological distress (e.g. Psychological Distress Index), marital (e.g. Dyadic adjustment scale) and sexual aspects (e.g. Derogatis Sexual Functioning Inventory, International Index of Erectile Function, Female Sexual Function Index). Participants answered at home in the presence of the interviewer and they answered the questions on their own on a computer to assure confidentiality between spouses. We expect the sexual variables to be directly related to dyadic adjustment in elderly and psychological distress to be related to marital functioning and satisfaction and sexual functioning and satisfaction. The final results will be presented at the congress. These results will allow for a better understanding of marital dynamics in elderly couples who live together.

## Track D – Social Research, Policy and Practice

### PD8 679 SOCIAL IMAGES AND FEAR OF OLD AGE IN CHILEAN UNIVERSITY STUDENTS

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Introduction: Chile, with a population of 16.3 million, is undergoing major demographic changes. It is aging quickly and in this matter stands out in Latin America. In societies such as ours, which have not given the new senior citizens a role in society and which are dominated by individualization processes with perceptions of uncertainty, the presence of negative social images on old age should not surprise. In this scenario, we wondered what images the senior citizens of the future, today's youth, have of old age and whether these perceptions are associated with a fear of reaching this stage of life. This work deals with the link between the social images that young Chilean university students attribute to old age and their fear of aging. Methods and materials: A study was carried out that applied an adaptation of the Osgood's Semantic Differential to 682 university students of both sexes and later with two focal groups. Results: The results indicate an extended negative image projected onto old age that is associated with the fear of aging that the students reported in the study. Conclusion: The analysis was based on currents of gerontological thought that emphasize that most of the handicaps of older people come more from their social exclusion than from factors associated with the condition of their organisms or mental state. We suggest that this exclusion is generated by a society that doesn't know how to give meaning to and integrate a stage of life that has expanded considerably in the last decades. The evidence obtained shows the importance that social stereotypes have on the way in which today's young students imagine their own future, affecting their expectations of well-being and reinforcing the cultural idealization of youth and non-aging behaviors of a "gerontophobic" society.

### PD8 680 SITUATED AGE – SITUATIONS THAT MAKE ELDERLY PEOPLE FEEL ESPECIALLY OLD AND/OR YOUNG

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Introduction It is important to know more about elderly peoples possibilities and limitations as it appears to them in relation to their own agendas, expectations and emotions. One aspect is to highlight situations that make elderly people feel old and/or young. What situations make 65- and 75-year olds feel particularly young or especially old in Sweden and Finland? What are the key aspects of feeling young and/or old among the sample of elderly? Methods and materials The empirical material contains the answers from two different but corresponding open questions in the GERDA-survey. The respondents were asked to verbalize situations in which they feel especially old and situations in which they feel especially young. A qualitative situational analysis was applied on the material with a focus on perceptions of feeling young and/or old. Results The survey questions gave 407 open answers about "feeling-young-situations" and 282 "feeling-old-situations", 111 individuals answered both open questions. Totally 689 age related situations to deal with in the material given by 578 different individuals. The results reveal a complex pattern of "feeling old-situations" and "feeling young-situations" containing the mind-body self as much as other people and activities. Conclusion Situations in which elderly people feel especially young contains interaction with other people and managing to live smoothly. To feel young is much about freedom and success within the mind-body self and in interactions with others. Situations in which elderly people feel especially old often contains frustration and otherness in relation to the mind-body self and to the society in several different ways. Feelings of being old are analysed as a risk of feeling alienated in ones own eyes or in the eyes of others. To feel old is much about representing otherness.

### PD8 681 THE EFFECTS OF SPECIFIC EDUCATION AND DIRECT EXPERIENCE ON IMPLICIT AND EXPLICIT MEASURES OF AGEISM

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There are two attitude subsets; implicit which are formed through the sum of evaluations associated with salient outcomes of observed behaviours and explicit which are formed through a process of normalisation. Commonly, Likert scale measures have been employed taking a measure of explicit attitudes and not the underlying implicit beliefs. More recently, Implicit Association Tests (IAT's) have been used to measure implicit attitudes in ageing and together with explicit measure studies indicate pervasive wide reaching ageist attitudes. With this negative attitude being held in the social conscious, research has illustrated that care of older people may be less than that given to younger people. Of concern is that medical students' implicit and explicit scores were no different from those negative attitudes held by the general populous and did not improve after completion of medical training. This study investigates the strength and prevalence of implicit and

explicit attitudes amongst several populations. The primary longitudinal investigation will assess implicit and explicit attitudes held by 40 psychology students and 34 nursing students upon commencement, midpoint and completion of their degree programmes (age range of 18-40 years). This investigation uses a bespoke IAT measuring implicit attitudes and the Fraboni scale for explicit attitudes, assessing effects of gerontological education and nurse training. Analysis from the course commencement data indicates no correlation between explicit/implicit measures ( $-0.73$ ,  $p=0.538$ ) with implicit results being significantly more negative ( $F = 10.162$ ,  $p \leq 0.002$ ). Nursing students demonstrated significantly more positive attitudes in both explicit and implicit measures. Findings illustrate a stark difference between implicit/explicit measures of ageing where individuals can employ impression management and self monitoring techniques. Midpoint data indicates no implicit benefit of current age specific education suggesting a need for more effective intervention measures to address negative attitudes and associated behaviours.

### PD8 682 THE IMPACT OF THE AUSTRALIAN AGE DISCRIMINATION ACT 2004 ON HEALTH CARE FOR OLDER PEOPLE

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Introduction Ageism can directly influence the quality of health care that older people receive. Greater choice and control for older people should be key components of measures to reduce ageism in health care. The Age Discrimination Act 2004 (ADA) was enacted as a catalyst for attitudinal change and to address individual cases of age discrimination throughout Australia. Methods and materials Scrutiny of the ADA was undertaken to analyse its impact on the wellbeing of older people. Results The emphasis of the ADA is the protection of workers older than 45 against discrimination in the workforce. It contains some provisions, ss 28 and 29, relevant to health care for older people which allow positive discrimination such as the provision of services specifically for older people e.g. Transition Care. The Act also provides an exemption (s42) which can be construed as an extension to positive discrimination rather than an opportunity to (lawfully) discriminate against older people for economic or other reasons including perceptions of their relative worth or the needs of other people. The determination of discrimination is to be based on the ability of the older person to "benefit" from goods or services rather than be disadvantaged. However s42 can also be construed as permitting discrimination due to uncertainties surrounding the standard of evidence and professional knowledge of the medical decision maker. The ADA is silent as to other reasons for the decisions of clinicians or health managers such as negative stereotyping and resource limitations. Additionally the exemptions under the ADA include overtly discriminatory provisions such as the retention of the insurance provision known as Lifetime Healthcover. Conclusion The ADA provides uncertain and incomplete protection against age discrimination for older people who require health care. Amendments to the ADA should be enacted to specifically address the protection the wellbeing of older people.

### PD8 683 PERCEPTIONS OF BIRTHDAY CARD MESSAGES: NEGOTIATED, CONTRADICTORY AND COUNTER-HEGEMONIC MEANING

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Age and ageing related humour expressed in birthday cards has been suggested to support negative attitudes towards aged people. Little attention has been paid to how retired people themselves experience these messages. The objective in this presentation is to depict some of the perceived meanings of age related messages envisioned in birthday cards. The empirical material consists of six focus group interviews collected in Sweden (3) and Finland (3) in 2007-2008. Retired women and men, urban and rural, living at home and institutionalized informants of different ages have participated. In the interviews different cards were used as focus- or questions to achieve a "...culturally appropriate instrument that accurately reflected the community's life experiences" (Willgerot, M.A. 2003, Western Journal of Nursing Research; 25[7]: 798-814) with regards to ageism as a phenomenon. Results indicate that informants negotiate consensus to the meaning of the age related messages in greeting cards within groups. Contradictory perceptions occur between groups. Perceptions of the messages in the cards appear both positive (good) and negative (bad). There is a notion of individual discrepancy in that individuals do not conform to neither of the two mentioned. This is discussed in terms of counter-hegemonic meaning and as counteracting ageism in everyday life. It can be concluded that negative attitudes are supported according to some people, but this does not give us the complex picture. Other people, other voices explicitly claim otherwise. There is a greater picture of meanings that are perceived in birthday cards if we look at the ways in which people actually relate to the cards in everyday life. This brings to the fore the issue of human agency and the freedom we have as humans to act according to existing norms, or to resist, or simply to live.

### PD8 684 SOCIAL STRATIFICATION, AGE DISCRIMINATION AND HEALTH

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Introduction: The aim of the study was to evaluate the prevalence of main health, medical and social problems elderly people. Method and materials: For calculation (SPSS)

intensive rates peculiarities of health in different social groups the database of World health survey (WHO) was used, containing the results of population questioning in more than 70 countries (Russia - 1704 persons 60+), important for comparison and discovering universal regularities and specific problems. Results: 41,5% women and 28,7% men 60+ self-reported their health as bad, 8,3-11,6% correspondingly as good and very good, 3% indicated good health at 70+. Part of persons, self-reported good health, is significantly larger among successful (17,8%) than in poor families(5,2%),11,7% in the middle , bad health more often among poor. Highest prevalence of pain, aching, stiffness in joints indicated 55,9% poor people and 43,0% opposite,arthritis-41,7% and 26,7% correspondingly. More often poor people lost all their natural teeth, had difficulties in moving around , self care and other age dependent diseases and health problems. Age dependent diseases start earlier among people from low strata, their biological age is higher than contemporaries, it means accelerated ageing in poor conditions. In Russia as in other countries co-morbidity was revealed. Such diseases as diabetes, arthritis, angina pectoris, cataract were the only among 7-15%persons 60+. Most of population 60+ needed and received medical care, 14,2% were hospitalized. 85,9% were satisfied health care providers skills,66,5%- in hospital equipment, only 51,2% - drug supplies. New problems are age and wellbeing discrimination : 15,7% of patients felt they were treated worse because of their age and 13,9%-lack of money. Conclusion: Health problems of population 60+ reflect social gradient in ageing. Insufficient medical care in connection with age and financial situations is real social problem, influencing on quality of life and life expectancy.

**PD8 685 A NATIONAL CANADIAN COMPARISON OF SPOUSAL ABUSE IN MID AND OLD AGE: IS ELDER ABUSE SIMPLY A CASE OF SPOUSAL ABUSE GROWN OLD?**

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Objectives: Comparison studies on spousal abuse among different age groups are limited on a national level. Spousal abuse in older populations is often overlooked by health practitioners and is generally perceived as a problem associated with younger couples. Understanding spousal abuse or intimate partner violence (IPV) in older population is important in raising awareness of elder abuse and crucial to the development of specific interventions for older adults and their family members. Methods and materials: The study used a national pooled dataset from the Canadian General Social Survey (GSS) 1999 and 2004 to compare spousal abuse between mid-age adults (45-59 years) and older adults (>60 years). Two types of abuse: emotional/financial and physical/sexual are examined. Three regression models on personal, relationship and environmental explanatory factors are examined to determine the most salient predictors of spousal abuse for each age group. Results: The study from multivariate logistic regression has found differences and similarities in predicting abuse for both age groups. In general, the differences reflect the complexities of an aging population indicating the importance of social network such as participation in social activities and community size. Moreover, the associations between disability status and spousal drinking habits for both age groups are found significantly associated with abuse indicating evidence of spousal abuse grown old. Additionally, separate analysis have found that when compared to non-medical users, survivors of past IPV from both age groups are more likely to use medication to help them sleep, calm and deal with depression. Conclusion: This study is first of its kind to examine IPV among younger and older population on the national level. While there are similarities, the results have indicated that spousal abuse among older populations are different and require special attentions. Previous intervention programs for IPV victims may not be generalizable to the older populations.

**PD8 686 SELF-ASSESSMENT OF NEGLECT OF PSYCHOSOCIAL AND MATERIAL NEEDS AND HEALTH-RELATED QUALITY OF LIFE IN OLDER PEOPLE. A CRACOW STUDY.**

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Based on Exchange Theory and Bergtson's model of intergenerational solidarity, this study examined the relationship between perceived neglect of older people's needs and differences in their health-related quality of life (HRQoL). Materials and methods Face to face interviews examined how 403 community-dwelling older people perceived their needs as being realized and how they felt their expected level of psychosocial and material support was being neglected by younger generations. A "neglected needs scale" was developed based on these interviews. Particular dimensions of HRQoL were defined as low provided their score was below the median. The risk of a low score was measured using logistic regression modeling with SPSS 15 for Windows for two models: (1) a general evaluation of how older people's needs are neglected and (2) the above mentioned scale. Results Individuals who reported that older people in Poland are not treated well were at a 2.09 times higher risk of poor self-rated health (95%CI=(1,26;3,45)). This risk was 1.21 times greater for those scoring higher on the neglected needs scale (95%CI=(1,01;1,41))

[2.5 times higher (95%CI=(1,55;4,31)) in individuals with a secondary or lower level of education]. The risk of restricted functional status due to health problems was  $\approx 2$  times greater in individuals who believed that neglect of older people's needs is a problem in Poland ( $ExpB=1,92$ ; 95%CI=(1,16;3,17)). This risk was 1.25 times greater (95%CI=(1,02;1,53)) in those scoring higher on the neglected needs scale or in those who believed that they were being emotionally neglected ( $ExpB=1,65$ ; 95%CI=(1,00;2,71)). This risk was 1.8 times greater in widows/ers (95%CI=(1,02;3,19)). The risk of restricted functional status in one's social life rose 1.65 times in individuals who scored higher on the neglected needs scale (95%CI=(1,36;2,0)). Conclusions Select dimensions of HRQoL are decreased when older people perceive their needs as not being met.

**PD8 687 AGEING IN SPARSELY POPULATED AREAS OF THE BARENTS EURO-ARCTIC REGION: SOCIAL-DEMOGRAPHIC CONTEXT**

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Arctic Human Development Report (2005) declares an essential gap in demographic knowledge of the Barents Euro-Arctic Region (BEAR) profile requiring attention in the nearest future. In respect of the development of globalization process, comparative researches which permit comparing changes in ageing structure of the population in the European North of Russia and northern regions of the Nordic countries and regional differentiation of elderly population's indicators are becoming to be of urgent importance. The objective of the research is to define transformation of ageing structure of elderly population in sparsely populated areas of the BEAR in comparative aspect in order to formulate a scientifically proved concept of gerontosocial policy for the Russian part of the BEAR. To carry out the research the official data of the Russian Committee for Statistics and statistics agencies in Finland, Norway and Sweden have been used. A fractional scale of characterizing elderly population has been used to provide additional comparative analysis. The study of a number of social-demographic indicators shows that the ageing process is sufficiently expressed and is characterized by a considerable regional differentiation of indicators in the areas belonging to the BEAR. Ageing process in the northern regions of Russia is less marked than in neighboring Nordic countries of the BEAR and crossed by other negative social-demographic processes in the Russian Federation (decrease of average life expectancy, depopulation of the northern regions connected with youth migration from the northern regions, low level of life quality of the population, etc.). In the northern regions of the Nordic countries changes in ageing structure resulting in increase of elderly population are smoother and evolutionally forward. The obtained data can be used in developing regional social programs, regional concept of gerontosocial policy based on implementation of the Madrid International Plan of Action on Ageing.

**PD8 688 ACTIVE LIFE EXPECTANCY FOR JAPANESE ELDERLY POPULATION BY CHEWING ABILITY AND NUMBER OF TEETH**

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Introduction Panel interview surveys, named Nihon University Japanese Longitudinal Study of Aging, of nationally representative elderly people aged 65 years or above in Japan were conducted four times since 1999 to estimate health expectancy according to their chewing ability and number of teeth. Methods and materials Multistate life table methods were applied to estimate active life expectancy (ALE). Living respondents considered to be in an "inactive state" were "very difficult" or "unable" for performance of at least one of ADLs or IADLs. Otherwise to be in an "active state". 4,135 sampled persons were included in the study. Using ImaCh we computed ALE. Based on estimated transition probabilities between active and inactive states, and active and inactive states to death, population based multistate life tables were constructed by chewing ability (Group A: able to chew hard foods at the baseline, Group B: able to chew soft ones), and number of natural teeth (Group A': having 20 teeth or over, Group B': 19 teeth or less). Results a) Chewing ability: In multistate life tables at age 65, total life expectancy (TLE) was 22.1 years for Group A and 20.3 years for Group B ( $P<0.05$ ). ALE was 18.5 and 15.8 respectively ( $P<0.001$ ). b) Number of teeth: At age 65, TLE was 24.9 years for A' and 20.8 years for B' ( $P<0.001$ ). ALE was 20.6 and 16.7 ( $P<0.001$ ). Both in chewing ability and in number of teeth, statistically significant differences were observed between the two groups both in terms of total life expectancy and active life expectancy. Conclusions The results indicate those who have better chewing ability or have 20 or more teeth can expect to live longer, and also live longer in the active health state.

**PD8 689 POPULATION AGEING IN CENTRAL AND EASTERN EUROPE AS AN OUTCOME OF THE SOCIO-ECONOMIC TRANSITION TO CAPITALISM**

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The aim of this article is to find an explanation for the extraordinarily rapid demographic change in Central and Eastern Europe (CEE) during the 1990s and 2000s. It will be argued that population ageing in CEE is an unintended side effect of the socio-economic transition from 'communist' to 'capitalist' societies. An unprecedented drop in fertility in

combination with the emigration of many young people and improvements in life expectancy has resulted in an extraordinarily rapid ageing of the CEE populations. First, evidence for the interaction between socio-economic crisis and demographic change will be presented based on a literature review and Eurostat data. Clear evidence for rapid population ageing in CEE will be provided and how three demographic factors – mortality, fertility and migration – are driving this ageing process. Finally, implications of this joint transition and ageing process for the CEE societies and their people will be discussed.

**PD8 690 TRAVEL IN ELDERLY PATIENTS: MYTH OR REALITY ?**

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Introduction : Increase in life expectancy and modern travel access are associated with ageing of travellers. However, there are few data about travel in elderly population, and, to our knowledge, no data about travel in frail and comorbid elderly patients. We performed a study to analyse travel frequency and adverse outcomes in a cohort of elderly patients. Methods: Monocentric descriptive retrospective study. A questionnaire was sent to all patients followed for the last two years in a geriatric department (Pitié-Salpêtrière, Paris, France). Patients were asked to describe their travel pattern (distance, length of stay, outcome). In case of cognitive impairment, the questionnaire was completed by the caregiver. Results: 539/1301 (41%) patients or caregivers answered to the questionnaire. Mean age was  $82 \pm 7$  years, sex ratio (f:m) was 2.6:1, previous diseases was  $4.5 \pm 2.1$  and treatment  $5.4 \pm 2.8$ . Dementia was reported in 61 %, stroke in 22%, heart failure in 19%, and coronary disease in 15%. MMS was  $22 \pm 6$ , IADL  $10 \pm 4$  and/or ADL  $5 \pm 2$ . Travel concerned 64 % of patients, in holiday home (33%), France elsewhere (36%), and abroad (28%) in the last 5 years. Patients who reported no travel (36%) were more frequently women (69 vs 56%, p=.00119), with more treatments (5.8 vs 5.1, p=.0097), lower ADL (4.7 vs 5.2, p=.0375), lower MMS (21 vs 23, p=.001), and lonely home living (55 vs 39%, p=.001). Those patients used to travel before (93%), and would like to travel again (47%) but considered travel difficult (75%), and stopped for health problem (64%), loneliness (22%), and financial reasons (15%). Conclusion Despite numerous comorbidities, elderly patients conditions still travelled, or would like to, but are limited by health and social conditions.

**PD8 691 TWENTY YEARS OF GEOGRAPHIC CHANGE IN THE ELDERLY POPULATION: THE CHALLENGES OF DELIVERING FORMAL AND INFORMAL CARE**

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Introduction: Between 1986 and 2006, the Province of Ontario, Canada's elderly population grew from 10.9 percent of the total Ontario population to 13.6 percent. Growth, however, was not evenly distributed. Methods: First, using the 1986 and 2006 Censuses of Canada, how the Ontario elderly population grew and its geographic distribution changed are analysed. Cycle 3.1 of the Canadian Community Health Survey (CCHS 3.1) is then used to analyse what are the implications for the delivery of formal and informal care. Results: The main finding of the analyses is that there is a spatial mismatch between the geographic distribution of the elderly population and the delivery of informal and formal care. Conclusions: The policy implications of the failure to take into account spatial mismatches are issues that the Province of Ontario, Canada and indeed other jurisdictions where the elderly population is growing need to consider.

**PD8 692 AGEING OF THE POLISH POPULATION - MEDICAL, PSYCHOLOGICAL, SOCIOLOGICAL AND ECONOMIC ASPECTS**

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Introduction: The PoSenior Project is a largest interdisciplinary gerontological project in Poland related to various aging-related problems. The Program involves specialists in medicine (geriatricians, cardiologists, neurologists, nephrologists, psychiatrists, endocrinologists, epidemiologists, rheumatologists), molecular biology, sociology, psychology, economics and epidemiology and over 40 different research institutions. The scientific aims of the program are to assess health status and environmental determinants of ageing and to collect biological material for evaluation of aspects of aging, including genetic factors. 5800 patients older than 55 randomly selected from the Polish General Electronic System of Population Register will participate in a survey divided into 7 age-groups: one cohort of the pre-old-age(55-59) and six cohorts of respondents: 65-69, 70-74, 75-79, 80-84, 85-89 and 90+ years old. Moreover 1500 patients in 10 regions will be examined by geriatricians within the framework of this project. Geriatric assessment will include ECG, pulse wave velocity, spiroometry, pulsoxymetry, orthostatic trial, a hand grip

strength. Patients with cognitive function disorders will be referred for computed tomography and neuropsychological assessment. Detailed health status information will be obtained by nurses filling the questionnaire including: medical history, socio-economic status, nutritional habits and quality of life. The scope of medical examination is much wider that in the routine screening health status assessment and includes: blood pressure measurements, anthropometric measurements, collecting of the blood samples for laboratory and molecular tests. Mental status of the responders is assessed using Mini-Mental State Examination, Clock Drawing Test and Geriatric Depression Scale. Functional status evaluation is performed according to Activities of Daily Living and Instrumental Activities of Daily Living scales. Additionally, health habits and hazards are assessed. Final goal is to define the needs of the aging population in terms useful for social policy, health care and future decision-making.

**PD8 693 CENSUS DATA-BASED RESEARCH ON SEVERE DISABLEMENT IN BRAZIL**

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The increase in the number of senior citizens who show incapacity to go about tasks regarded as normal comes out as irrefutable reality in numerous countries. Lack of information on disablement prevents efficient governmental action upon the functional health of the elderly. Therefore, this study has aimed at identifying the percentage of severe disablement among the elderly in Brazil, in the year 2000. Methodology: Evaluation study of the information obtained out of the census data basis. Data was collected from the 2000 IBGE Population Census. Results: 47% of Brazilians with severe disablement are found to be elderly, and 29% of the Brazilian elderly show severe disablement. With the results provided by that research source, conclusions show that half of the Brazilian population with severe disablement is elderly and that out of the families with elderly in the household, 1/3 of them have to deal with a home cared bed-bound elderly with severe disablement, dependent on third parties, unproductive, and in need of home-care – that is, of physiotherapy. The highest concentration of those cases can be found in the states of Paraíba, Rio de Janeiro, Pernambuco, and Rio Grande do Sul; female epidemiological profile, aged between 60-70 years. A governmental management in health is advisable to ensure access to physiotherapy treatment in the private and public spheres, whether in assistance or prevention. This way, the elderly population can become more participative and less dependent in the future. Keywords: physiotherapy, elderly, disablement.

**PD8 694 CHALLENGES FACED BY IMMIGRANTS GROWING OLDER AWAY FROM HOME**

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INTRODUCTION: A complex interaction of social, cultural, and environmental factors through which an individual passes during the life course can have a profound impact on an individual's perceptions of quality of life and health. A growing body of research has begun to examine how these factors are impacted by the challenges and opportunities experienced by immigrants as part of their aging process. The intent of this study was to examine a number of socio-cultural factors that influence the health and well-being of older adult immigrants. METHOD: Data for this presentation were gathered from a study of 333 older Japanese-Brazilian return migrants to Japan. A self-reported questionnaire including a number of social-economic factors, identity (assessed by ethnic preferences for food, music, clothes, and language), and health concerns were assessed. RESULTS: The results show that older Japanese-Brazilians living in Japan are conscious of the differences between themselves and the general Japanese population. Many Brazilians shy away from situations that might demand close contact and protracted interactions with the Japanese natives. Paradoxically, although many Japanese-Brazilians are physically indistinguishable from native Japanese, they are often considered to be typically Brazilian from a cultural and social perspective. These factors often lead to a sense of displacement and alienation. In addition, there is a lack of health professionals (physicians and dentists) who are able to communicate in Portuguese and understand the Brazilian culture. The results suggest that this can be a substantial barrier to primary care access in Japan, and it may result in a lack of preventive care programs for immigrants in Japan. CONCLUSION: These results indicate that language and other cultural differences are strong barriers that limit access to health care, and ultimately, impact the health and well-being of immigrants growing older away from home.

**PD8 695 THE ROLE OF CONFIDANTS IN SOCIAL NETWORKS AND SELF-RATED HEALTH IN LATER LIFE**

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Introduction It is well-known that social networks and social support are important determinants of health status and mortality among the elderly. It is also well-established that self-rated health predicts mortality. However, the nature of the relationship between

social networks and self-rated health is less well researched. This paper uses cross-sectional data to examine the relationship between social network characteristics and self-rated health in older adults (aged 65+). Methods and materials Data are drawn from the nationally-representative 2006 General Social Survey and include 2365 Australians aged 65+. Using regression analysis we examine the association between self-rated health and both the number of non-coresidential confidants and the relative composition of confidants between family and friends. We included separately the effects of having just one confidant and then each additional confidant. Covariates include demographic and socio-economic variables, as well as disability status and frequency of face to face contact with the wider social network. Results Among Australians aged 65+, 32% report fair or poor health. The difference in self reported health between those who have none or one confidant is not statistically significant. However each additional confidant after the first is significantly related to self-rated health: the larger the number of confidants, the less likely to rate own health fair or poor. Further, the relationship between social network composition and self-rated health is not significant. Conclusion Number of confidants (above one) is an important statistical determinant of self-rated health in older Australians, but it is not important whether confidants are friends or family members.

**PD8 696 AGEING IN RUSSIA AND IMPLEMENTATION OF THE MADRID INTERNATIONAL PLAN OF ACTION ON AGEING**

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Russia is ageing rapidly on a background of country's population size decrease. Population ageing has major consequences for all facets of country's life. The Madrid International Plan of Action on Ageing (MIPAA) marked a turning point in how the world addresses the challenge of building a society for all ages. The study aims at analyzing demographic aspects of ageing in Russia in comparison with developed European countries and highlighting national efforts to implement the MIPAA. To characterize the situation with ageing in Russia a number of conventional ageing indicators have been computed for the period 1989 - 2007 based on censuses and vital statistics. Materials of the Council of Europe, Eurostat, the UN DESA, Human Mortality Database (Max Plank Institute for Demographic Research) have been used. The study is focused on the following directions of the MIPAA implementation – institutional infrastructure, human resources and policies. It is found that, on the one hand, there are similarities between ageing in Russia and in developed countries. On the other hand, unlike developed countries, this process in Russia is determined by fertility reduction only due to unacceptable high mortality. Besides, it has some pronounced specific features, e.g. significant gender differences (which are more marked than in developed countries) and great regional differentiation. Advantages and shortcomings in elaborating policies and programmes in Russia aimed at coping with challenges of ageing, and how these policies and programmes respond to the MIPAA have been analyzed. Results of the study may contribute to better understanding about ageing development in Russia within European context and to enhancing effectiveness of policies and programmes concerning ageing and the elderly.

**PD8 697 SOCIAL CAPITAL AND RURAL-URBAN SETTINGS AMONG ELDERLY JAPANESE PEOPLE**

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The aim of this study is to examine the relationship between the degree of social capital and the rural-urban settings of the respondents. It is said that social capital is a concept which means the extend of trust, norms and networks in a community. The length of residence is known as one of the determinants of social capital. But type of the local settings are also important, because generally, it is thought that the rural areas are livable. Therefore local settings are investigated both as a determining factor and as a control variable on the length of residence. A cross-nation survey assessed 1029 respondents who were 65 years old or more from all the prefectures in Japan. Social capital, which was measured by five items scale, is used as a dependent variable. And age, sex, educational background, self-rated health, marital status, occupational status, the length of residence and the type of local setting were used as independent variables. The key results of ANOVA are as follow; 1) the length of residence has an effect on social capital, 2) the local setting itself is not significant, although urban living tends to decrease social capital, and 3) the interaction effect of the years of residence and the type of local settings affects social capital. This results says that the elderly Japanese people have a tendency to prefer the place that are sparsely populated and where one has lived for a long time.

**PD8 698 ADVOCACIES FOR FRAIL AND INCOMPETENT ELDERLY IN EUROPE**

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In ageing societies, questions of participation of elderly people in social life and the possibilities of a self-determined life in old age are of high importance. It is a matter of fact that old, incompetent and frail people remain involved in many legally based matters and

participate in public and social life. Against the background of the demographic development, the requirements concerning advocacies for frail and incompetent elderly, who are in need of provisions to secure their legal protection and participation, increase. In addition to the demographic development, the family - traditionally the main institution with respect to the proxy of the elderly - more often adopts a background position in this context (changing structure of the private households, etc.). Thus, the state increasingly is confronted with the task of protecting personal rights of older and incompetent people. Societies have developed diverse institutions of advocacy for these people. With the rising needs and requirements, institutions - which have been delegated to take over responsibilities and tasks in this field - as well as the authorities themselves are under pressure to fulfil the growing demand. At the same time, they are forced to rationalise and to improve the use of alternative resources while simultaneously assuring the quality of the guardianship and advocacy. This scenario is largely the same all over Europe. The project "ADEL – Advocacies for frail and incompetent elderly in Europe" compares how different European countries secure legal protection and participation of frail and incompetent old people. First results of the project will be presented in order to contribute to the question how an adequate system of advocacy for ageing societies should be designed.

**PD8 699 LONG-TERM MORTALITY REDUCTION AND SUPPLY OF KIN OVER THE LIFE COURSE IN POLAND**

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Introduction: Long-term changes in families' size and structure are well documented in the Polish demographic and sociological literature. Due to many works done by historians of the family we could observe how the number of kins changed in particular circumstances as result of reduction both in mortality rates and the fertility ones. But – at the same time – there's no research focused on large-scale effects of mortality changes for family structure. Methods and materials: The presented study is aimed at determining how the mortality decline affect kin availability in the case two stages of the individual life-course – infancy and childhood, and senility. Using Polish period life tables I estimated probability that an individual could rely on living kins – partner, (grand)parent(s), (grand)child(ren). Results and conclusions: The results are consistent with results presented in works devoted to the supply of kin over the life-course in many other countries, but indicated the Polish specificity, i.e. lack of success in mortality reduction during the last 30 years of socialism in Poland.

**PD8 700 FUEL POVERTY: ASSOCIATIONS WITH HEALTH AND WEALTH AMONG OLDER ADULTS LIVING IN ENGLAND**

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Introduction: The UK government introduced winter fuel payments to those aged 60 and over in an attempt to ease the number of older adults in fuel poverty and meet its target of eradicating fuel poverty in vulnerable groups by 2016. However, energy inefficient housing, coupled with increasing fuel bills means that it is unlikely to meet this target. Furthermore, increasingly high fuel bills mean this issue is likely to come to the fore as a public health issue across developed countries even where the housing stock may be more efficient. Method: This project involved analysis of the Adult Psychiatric Morbidity Survey, a random sample of private households in England. A representative sample of 2,639 adults aged 60+ were interviewed in person. Trained interviewers asked questions about housing conditions and financial strain, encompassing indicators of fuel poverty, doctor diagnosed health conditions and administered standardised assessments of mental health (ICD-10 or DSM-IV criteria). Experts in each field were involved in question development and selection. Detailed information was also collected about other current and lifetime risk factors. Results: Just over 1 in 6 of older adults was found to be in cold and/or damp housing conditions, and 1 in 7 said they had used less fuel due to worry about cost. The presentation of detailed results is currently prohibited because the findings are under embargo but a profile of housing deprivation will be presented exploring associations with poor mental and physical health, and income and financial strain. Regression analysis will be used to examine complex interactions. Conclusion: More needs to be done in to assist older adults in fuel poverty particularly vulnerable groups identified by this analysis. This presentation will attempt to demonstrate that fuel poverty should be a concern to clinicians and policy makers concerned with geriatric health.

**PD8 701 "I LOST MY JOB": MONETIZING LOST WAGES OF ELDERCARE PROVIDERS**

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Canada, like other developed economies, has competing policy goals: shifting more responsibility for caring for an aging population from the public sector to family and friends; and forestalling labour shortages by pressuring working age adults to enter and stay in the labour market regardless of caregiving demands. Consequently more people face competing employment and eldercare demands and experience work-family conflict.

Many respond by reducing their paid work. Yet little is known about the long term monetary consequences of such decisions, nor how caregiving demands, stage of life course, gender, and employment decisions might interact to lead to differential costs. Using Statistics Canada Labour Force Survey data for 1997 to 2006, we estimate that the annual aggregate lost wages for all Canadians reporting employment disruptions because of eldercare responsibilities increased from \$207 million to \$359 million per year over the last 10 years. We also found that the number of employees who lost wages because of eldercare has nearly doubled over the last 10 years, that women are three times more likely than men to report lost wages, and that the economic costs generally increase in later life when earning power is highest. These findings have important policy implications. While the magnitude of wages lost is modest when job adjustments involve absenteeism and decreasing hours of employment, some households will not easily absorb these costs and financial hardships will follow. For those who left their jobs entirely to accommodate eldercare demands, financial consequences are much more severe. In fact they are substantially higher than the maximum government benefit provided for care-related work interruptions. And, since many caregivers are not eligible for this benefit, and those who are eligible rarely received the maximum amount, the real difference the benefit makes to employed caregivers is small compared to their actual costs.

**PD8 702 NEW A.G.G.I.R. FRENCH NATIONAL TOOL FOR EVALUATION OF THE LOSS OF AUTONOMY AND DETERMINATION OF THE LEVEL OF CARE**  
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The Autonomy-Gerontology Iso-Resources Group (A.G.G.I.R.) system comprises three components. 1/10 discriminant items scored on a 3-points scale, enable evaluation of the degree of gerontological autonomy of elderly subjects : these 10 discriminant and relevant items are those essential for evaluation of the loss of autonomy in the elderly. Each item supposes 3 possible modalities : - A Performs a function totally - B Performs a function partially, - C does not perform or perform with help To ameliorate the quality of coding we have introduced in the NEW AGGIR a binary cotation of the adverb that where badly taken in count in the previous rating scale Spontaneously Y/NO Completely Y/NO Regularly Y/NO Correctly Y/NO ∂ 7 domestic and social items coded the same way, very useful to establish the health care plan, but they are not taken in count to determine the Iso-Resource Group ∂ 3/ The Iso-Resources Group computer program is a grouping program which enables each patient to be assigned to one of six groups that are iso-consumers of work load (time and penibility) in the context of geriatric dependence management. A table enables detection of the main signs characterizing each of the iso-resource groups but, in case-by-case routine practice, the computer program is essential to assigns the patients, immediately and precisely, to the correct groups. The Mean Pondered Iso resource Group is also calculated by the computer program, it indicates the mean loss of autonomy of a population For a nursing home, the amount of money given for the basic care is related to the mean AGGIR score

**PD8 703 PATHOS FRENCH NATIONAL MODEL FOR EVALUATION AND FINANCING THE LEVEL OF MEDICAL AND TECHNICAL CARE.**  
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The PATHOS model is an information system on the care requirements necessary to ensure good practice treatment of pathological conditions in the elderly that was compiled in liaison between the French National Association (Syndicat National de Gerontologie clinique) and the medical department of the French National Health Insurance Organization (CNAM). It forms a complement to A.G.G.I.R. which evaluates basic care. The system enables : - identification, on a pre-compiled list, of 50 « pathological conditions », that or those best summarizing the set of disease entities with which the patient presents on the day of the survey. - completion of the clinical status description by a « care requirement profile » selected from 12 possible profiles which indicates the gravity and the level of technical care needed. Each pathological condition previously identified is associated with the corresponding care profile, - determination of an indicator expressing the global care level for a patient to be implemented for the 8 types of identified actor of care: geriatrician, psychiatrist, nurse, physiotherapist, psychologist, biology, other examinations, medications. The PATHOS system does not globalize the various types of resources by computing a single indicator. It has been defined as an analytical tool rather than as a simplifier. The data processing algorithm is complex and necessitates computerized processing . THE PATHOS INDICATOR BOARD : These indicators, constituted at different times, show the evaluation and evolution of the required resources as these are affected by the course of patients' pathologies. For a nursing home, the amount of money given for the medical care is related to the mean PATHOS score .

**PD8 704 FINANCING THE CARE IN NURSING HOMES : THE FRENCH WAY**  
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The financing system (beside the accommodation fare) is built for the nursing and medical care on the 2 tools previously described :AGGIR and PATHOS. So the care budget of the retirement house is the result of a mathematical equation : Budget=14Euros(GMP+2,59PMP)

per bed per year. So the budget is close to the mean loss of autonomy and mean seriousness of the diseases of the whole residents of the institution. We finance the group but not every person+++ This budget is adjusted every 2 years when a new « cut » is realized by the nursing home and then controlled and validated by the social security. For the institutions of 60 beds and more we can see that the GMP and the PMP are steady on the year, if the recruitment channel is stable.. For smaller institutions it is possible that just few patients throw the balance on the GMP or on the PMP, in these situations an appeal is possible to the social security to explain the special problem. With the budget thus obtained it belongs to the manager to recruit in correlation to the typologies of the pathologies of the residents the type of personnel they need :nurses, psychologist, physiotherapist and so on.

**PD8 705 WHAT ARE THE FACTORS INFLUENCING PATIENTS' COST IN COMMUNITY NURSING SERVICES (CNS) FOR FRAIL ELDERLY IN FRANCE?**

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In order to face the expected relative shortage of nursing homes, the development of services providing comprehensive, coordinated and integrated range of personal and maintenance care in the frail elderly's home have been encouraged. In France, this was called, the « maintaining at home » policy of which Community nursing services (called SSIAD) are a cornerstone. These currently provide care to 92 000 elderly and cost over €1 billion per year. However, many services are facing a financing problem. Therefore, this work conducted for the ministry of health aims to study the cost of CNS patients, to understand its structure and to identify its main determinants. Methods: 2179 elderly in 36 services were included in a one-week survey. The cost of patients' care is calculated through a micro-costing approach gathering information on type and quantity of care provided to patients. A two-level hierarchical statistical model is conducted to identify factors explaining differences in the patients' cost of care. Results: Patients' annual average cost of care is €10,323 which is very close to the per capita funding (€10,500). However, wide variations exist among elderly, their cost ranges from €1,135 to €36,659. Our model explains 52.1% of these differences. It finds that 11.6% are related to differences among services organisation and 88.4% to differences among patients. Patients' cost depends on 14 characteristics describing their level of disease, their level of disability (AGGIR scale, the technical devices they need, specific deficiencies...) and the additional helps received from informal and formal helpers. Conclusion: Thus, CNS services financing problem is mainly related to bad resources allocation mechanisms rather than to an underestimated national budget. Services are funded on a fixed per capita basis when cost variations ranges from 1 to 36. Using determinants of cost showed in our results could help to build a better financing method.

**PD8 706 AUDIT OF THE AWARENESS OF ELDER ABUSE (EA) AMONG MEDICAL STUDENTS**

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EA is common but frequently unrecognised. Aim is to define ability of medical students at St George's University of London to recognise, report EA, and recommend how this ability, if inadequate, could be improved. Materials and method: Standards of acceptable level of knowledge agreed, questionnaires formed to consider: • Preclinical and clinical students • Perception of training in EA • Ability to recognise and report EA • Knowledge of nationally publicised paediatric abuse case in UK (Victoria Climbié) vs. geriatric abuse case (Margaret Panting) • Most common form of abuse, most likely abuser and most likely place of abuse • Month of World EA Day Cross-sectional audit of students using confidential questionnaires, handed to students at varied stages of training, at beginning of unrelated lectures. Results analysed using SPSS. Results: Response rate was 85% (639/750). Number of preclinical students 61.5% while clinical students 38.5%. 22.5% felt they had previous training, 41.6% felt they could recognise and report EA. 28.2% recognised Victoria Climbié, 5.2% recognised Margaret Panting. 4% recognise both. 26.6% recognised psychological abuse as most common form of abuse, however 54% said neglect. 62% recognised family members as most likely abuser while 24% thought health and social workers. 65% said abuse occurs at home while 25% thought residential and nursing home. 94% would report abuse to social services. 62% did not know month of world EA day. When asked about signs of types of abuse, 55% did not attempt question. Conclusion: Generic training and common sense of most medical students allows them to make sensible judgements on EA. However, underlying knowledge is poor. There is little understanding of presentations of EA and potential cases could be missed. Comprehensive training is required throughout undergraduate curriculum to ensure newly qualified doctors are fully equipped to deal with EA

**PD8 707** DISCLOSURES OF AGING PROCESS WITH QUALITY OF LIFE: THE ELDERS PERCEPTION

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**INTRODUCTION:** The twentieth century was marked by a spectacular advance in science and technology, resulting in a huge development of humanity on several aspects, being the demographic aging among them. The challenge is formed by granting longevity with quality of life. **METHODS E MATERIALS:** This was a transversal study that had as purpose to identify the factors which contribute to aging with quality of life in the elders' perspective. 670 elders in age between 60 and 93 years old, members of third age groups in the city of Erechim (BRAZIL), participated of the study within the period from July to December of 2007. **RESULTS:** The data were categorized, where seven disclosures were obtained. Dignified retirement: the possibility of healthy aging. Relationships as important social mediations. The family: fundamental element in the elder's quality of life. Physical and mental health: essential condition to quality aging. Freedom to manage his/her own life. Spirituality: another essential disclosure to the quality of life. The necessity of governmental politics. **CONCLUSIONS:** To age is a dynamic and heterogeneous process that is part of all stages of life, and to take in consideration the several dimensions of the individual's life, which are intimately connected to a group of values, principles, rules, past experiences that guide the individual, is extremely important, where the assumed life style and public insertion and support to elders politics are essential to the maintenance of quality of life in the old age. **Observation:** This work does not present conflict of interests.

**PD8 708** VALIDITY OF A MODIFIED FUNCTIONAL HEALTH LITERACY TEST IN ELDERLY ADULTS IN CANADA: A PILOT STUDY

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**Introduction:** Health literacy is the ability to access, process and comprehend health information to make health care decisions. Low health literacy is associated with less knowledge of disease, lower quality of life, poorer health outcomes and higher hospitalization rates. The Test of Functional Health Literacy in Adults (TOFHLA) only applies to US residents, rendering it inadequate for Canadians. The primary purpose of the study is to test the validity of a modified health literacy survey, by measuring the correlation between our modified TOFHLA and the Rapid Estimate of adult Literacy in Medicine (REALM); measuring the correlation between our modified TOFHLA and health-related quality of life (EQ-5D); and using subject responses to estimate the prevalence of poor health literacy of elderly residents in Edmonton, Alberta. **Methods:** A cross-sectional interview survey of community-dwelling elders seeking health/social care will be completed using a convenience sample: N=250 Inclusion Criteria Alberta resident  $\geq$  65 years of age Able to consent & read English Exclusion Criteria Cognitive impairment with MMSE  $\leq$  24 Inability to read English Participants complete our modified TOFHLA, the REALM, and EQ-5D questionnaires and demographic information. The correlation between the modified TOFHLA and REALM is assessed with the Spearman correlation coefficient. **Results:** Preliminary findings based on the first 30 participants show: 1) A strong correlation between our modified TOFHLA and REALM; 2) The correlation between the modified TOFHLA and EQ-5D are within the range of other studies; 3) There is a trend toward poor health literacy among elderly residents in Edmonton, Alberta. **Conclusion:** At this interim analysis, it appears that our modified TOFHLA retains similar properties as the original instrument. If these observations hold following completion of the full study sample, the modified TOFHLA will enable us to explore the relationship between health literacy and health care utilization

**PD8 709** INTEGRATION OF INTERDISCIPLINARY WORK IN TRAINING IN AGING RESEARCH: THE FORMSAV EXPERIENCE

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Research on aging requires an interdisciplinary approach involving collaboration between researchers from a wide range of disciplines, from biological to social sciences. Efficient interdisciplinary work is complex and needs to be integrated early in research training curricula. FormSaV (Formation Santé Vieillissement) is an innovative training initiative supported by the Canadian Institutes of Health Research and the Réseau québécois de recherche sur le vieillissement (RQRV), arising from the collaboration of three French language Canadian Universities (Laval, Montréal, Sherbrooke). The objectives are to provide graduate students and post-doctoral fellows in aging research with an opportunity to meet and experiment interdisciplinary activities. Since 2004, FormSaV has offered workshops in the format of Saturday schools and summer schools to graduate students in aging research from all disciplines and graduate programs. These workshops focus on areas of interest common to all areas of aging research: the challenge of aging in modern society,

interdisciplinarity, ethics, grant writing, peer review, knowledge transfer. Workshops include exercises and discussions, supervised by experts. They provide graduate students with a unique opportunity to meet with other students from other disciplines and initiate interdisciplinary collaboration. Since 2004, 250 students enrolled in the program and over 100 trainees have completed at least five training workshops. Students come from all disciplines involved in aging research, including fundamental, epidemiologic, clinical, evaluative and social research. Workshops offer learning abilities and skills which are not readily available through standard disciplinary programs. FormSaV is a unique opportunity for students to place their research project in a more global aging perspective and to welcome contributions from other fields. The present work describes how FormSaV contributed to improve the interdisciplinary approach among participating graduate students and post-doctoral trainees, using data from questionnaires to trainees on satisfaction about workshops and activities provided by FormSaV.

**PD8 710** SOCIAL HOME CARE AS NATIONAL VOCATIONAL QUALIFICATION

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Social home care is playing an important role for population of elderly, especially for those who need constant help in their own homes within housekeeping, personal care and social contacts. Although the need for social home care has been growing up lately, the question whether a formal qualification for such work is needed, remains open. The first social home carers in Slovenia were working within temporary public programs, where its duration took six months to a maximum of one year. Home Care Centers had difficulties to organise the service for elderly with enough qualified people under above circumstances. Most carers are women in middle age with lack of recognized qualification, whose backgrounds are related to different working and life experiences. New National Vocational Qualification Act in 2000 appeared to be a felicitous solution to above situation. Within this act an Accreditation of Prior Experiences and Learning for acquisition of National Vocational Qualification was introduced. During past years the evaluation of social home care has been implementing. Qualitative research about home care service was implemented and catalogue of knowledge and skills for NVQ was analyzed. Results are important for future development of job, care services and quality of life for elderly. Within NVQ were defined nine main working areas, including twelve vocational competences. NVQ was proposed within forth level of qualification framework. With regard to acquisition of qualification, portfolio method and counseling process were recognised as two most important methodological approaches. Even the NVQ took place a further training for social home carers seems to be very important due to constant improving of home care service. At the same time social home carers need to have professional support in order to prevent burning out syndrome. The home care service profession is becoming complex and important in the life of elderly people.

**PD8 711** SEXUAL IMAGE OF PUERTO RICANS OLDER ADULTS IN THE MEDIA

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**Introduction** As in other countries in Puerto Rico, older adults' population is increasing. Middle and older adults' sexual behavior have become an important issue in Public Health efforts. Of all HIV cases reported through June 2003 to December 2007, 11.4% were from people 50 years and older: 8.1% from 50-59 years old and 3.3% from 65 years and older (Puerto Rico's Health Department, 2009). The most common form of transmission was related to sexual contact (heterosexual, male to male/bisexual). The availability of erectile dysfunction medications and health insurance companies' mass media campaigns in Puerto Rico has contributed to validate sexual expression among this population. Health communication needs to take this into consideration, when designing interventions to promote sexual health. This research analyzes the sexual image of older adults in the mass media. Methods and materials Content analysis of the media images (TV, movies, newspaper ads and postcards) that portraits sexual expression of older adults. Results Media is an important influence in how older people perceive themselves as sexual beings. It also changes the awareness of older people sexual expression in health professionals and community. There has been a gradual change in the media, towards a more positive approach to sexual expression of older adults. They are presented as more spontaneous, attractive, vigorous and interested to express their sexuality. This validates sexual expression as a positive component in health among this population. Conclusion These results confirm the importance of validating sexual rights in this population. Sexual health promotion and prevention interventions for older adults of different sexual orientation should be incorporated in health services. Academic curriculum and continuing education activities for health professionals must include this component. Mass media must recognize their impact and importance in promoting a positive and responsible sexual behavior among this group.

**PD8 712** 14-YEAR LONGITUDINAL STUDY: PROGRESSIVE DEVELOPMENT OF ONLINE GERONTOLOGICAL DISTANCE LEARNING  
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Since the advent of the World Wide Web in the early 1990s, the use of the Web continues to proliferate at an astonishing pace. The application of web-based technologies in higher education has also developed and grown, ranging from recruitment tools to complete post-baccalaureate degrees offered in cyberspace. While much has been written about the advantages of web-based education or those of distance learning in general, there little is critically known about the effects of various online distance learning approaches all within the same academic institution over an extended period of time. Although fourteen years in many research studies might not constitute a "longitudinal study," for online distance education covers almost the entire time length of its existence. Questions that will be focused upon are the following: what were the successes and failures of various distance learning endeavors, how are successes and failure measured, what are the positive and negative aspects of following the trends of distance education, how was knowledge disseminated and re-disseminated for different audiences using various online technologies, and how did all these questions relate to the challenges of developing distance learning models for age and culturally diverse audiences. All three of this paper's authors have been the leading members of the vision, funding, management, marketing, design, and development of the distance learning program throughout all fourteen years. The authors include the former dean who was the executive director of the Davis School during the initial development of the online distance learning program, Dean Emeritus Edward S. Schneider; program manager, Maria Henke, and director of distance learning, Greg Misiaszek. Discussed will be not only their perspectives on the programs tenure but also perspective from students, faculty, and staff throughout.

**PD8 713** NURSING KNOWLEDGE IN ELDERLY CARE: CHALLENGES AND TENDENCIES  
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1-Summary The research is a meta analysis and was developed in a Portuguese University in the North of Portugal. The materials used in the research were the texts of Master Thesis about elderly people, in Nursing Sciences that were approved in public examination in the period between 1995-2006. 2-Main Goal The aim of this research was: - to analyze produced knowledge in elderly nursing care during Post graduated education. - to analyze tendencies and future scenarios for nursing elderly care and education. 3-Methods Content analysis of: introduction, methodology, conclusions and suggestions (Huberman and Miles, (1991) and also quantitative analysis. 4-Results - 52% of the studies were carried on in hospitals and the research object was centered in elderly disease, emphasizing; breathing disease and heart and cardiovascular diseases; - The analysis about elderly pain was studied with different scales and results also evidenced the need of standards in nursing practice education in order to solve suffering problems; - The presence of elderly members in the family is an important stress source and influence the quality of life of all the members of the family; - A lack of nursing studies and geriatric specialization was identified. 5-Results Discussion and Conclusion Nursing practices in health community have not quality standards which difficult a deeper analysis of community care (Costa, 2005). Nurses have a very important role if their practices are centered in the patient and not in the technique and education is playing an important role about (Costa, 2005); - Geriatric nurses are needed and multidisciplinary studies are advising the development of team education in elderly care. Discussing groups among professionals can be useful to share doubts, to study professional practice. - Learn together to work together is a challenge in modern society applicable to elderly care.

**PD8 714** VICTORIAN GERIATRIC MEDICINE TRAINING PROGRAM  
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Introduction: There is no consensus as to the best way to expand the workforce to cater for the needs of an ageing population. Faced with this challenge the Victorian Department of Human Services in Australia supported a proposal by the Australian and New Zealand Society for Geriatric Medicine to make a career in geriatric medicine more attractive by enhancing the specialist training program, and to redress a maldistribution where most training was occurring in a few major centres. Methods: The first step in the restructure of specialist training was to create an environment of collaboration between all accredited training sites aiming to enhance recruitment rather than compete for a limited number of trainees. The next step was to enhance the quality of training through a statewide training program, complemented by local training programs. This was followed by the development of internet training programs for junior doctors and medical students. The scope of the education programs on the internet is now being expanded to other health professional groups. Results: There has been an increase in the quality of training and enhanced spirit of collegiality among trainees. Recruitment into specialist training has increased by 75%

since the program commenced in 2006 and by 25% in the number of sites where training takes place. Evaluation of the internet education programs is currently being undertaken. Conclusions: A well resources and integrated training program has been associated with a significant growth in recruitment into specialist training. The success of this program has resulted in the expansion of the education program to other medical, nursing and allied health groups involved in aged care.

**PD8 715** THE GERONTOLOGICAL EDUCATION DEVELOPMENT IN TAIWAN  
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Taiwan, like many Asian countries, is considered one of the fastest aging states in the world currently. During the past 8 years, gerontological education has undergone rapid development in Taiwan. For example, over 15 programs were established at the levels of associate, undergraduate and graduate degrees. The purpose of this paper is to analyze the development of gerontological education in preparing for various types of aging specialists needed in Taiwan. The data came from the official website information about the gerontological programs, curriculums as well as personal interviews with the directors of the programs. All curriculums were collected, evaluated and analyzed by comparing to a 12-category competency scale. Results showed that the gerontological curriculums and programs varied by its departmental origin, faculty specialty and the strengths of the universities where they are known by. Among the different types of degrees, differences were not observed significantly, suggesting that most programs were more likely to cultivate gerontological generalists rather than specialists. In addition, competencies in health care skills, care management, and policy understanding were the focus of most programs while competencies fostering team-work, leadership, and technological advancement were not observed as much. In conclusion, Taiwan is at the state in need of aging specialists and generalists. Although it is a good sign having many programs established in such a short period of time in Taiwan, many still lack a central mission and faculty members specializing in teaching gerontology. Therefore, for Taiwan to have a comprehensive system in both community-based and institution-based services, it is urgent for all programs to be in communication and/or to have specializations so future aging specialists can be developed and ready for the needs of the future aging population.

**PD8 716** NEWSPAPER IN EDUCATION(NIE) PROGRAM FOR THE ELDERLY  
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The purpose of this study is to develop NIE program and evaluate its effects for the elderly and to investigate whether NIE can be applied to the senior education. The procedures of the study include reviewing the concepts and effects of NIE through the related materials, and developing the NIE program for the elderly. Then I analyzed the program effect in view of quality and quantity method. The results of this study are as follows: Firstly, senior educational program using NIE was developed for the first time. The meaning of application of NIE to senior educational program seems to be great. Secondly, after the program was put into practice, the melancholy trend, self-respect and the degree of life satisfaction of the participating seniors showed meaningful difference. That is, as a result of controlled - experimental comparison and before and after statistics of experiment group, the degree of life satisfaction and self-respect improved while melancholy trend decreased. In the after-evaluation of experiment group, life satisfaction improved on the average from the emotional and experienced point of view, and likewise melancholy trend improved psychologically and physiologically. In other words, NIE is effective educational method for the senior education. Therefore, to generalize NIE a variety of learning preparations and education program considering senior quality should be developed. In conclusion, as NIE using newspapers as a learning material turned out effective for the senior education, it should be used positively afterwards. To attain this purpose, various technique development and effect examination which can be applied professionally and systematically by trained instructor is required.

**PD8 717** THE MEDIATING EFFECT OF SELF-EFFICACY ON THE RELATIONSHIP BETWEEN HEALTH LITERACY AND HEALTH STATUS IN KOREAN OLDER ADULTS  
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Introduction: Although limited health literacy has been shown to be associated with worse health status, research to date has not elucidated the factors that mediate the relationship between low literacy and adverse health outcomes. The purpose of the study was to examine the mediating effect of self-efficacy on the relationship between health literacy and health status in Korean older adults. Methods and Materials: A cross-sectional study of 103 community-dwelling Korean older adults was conducted from June 2007 to September 2007. Data were collected by using the Korean Test of Functional Health Literacy, the General Self-Efficacy Scale, and the subscales of the Medical Outcomes Study 12-item Short-Form Health Survey (SF-12). The causal steps method developed by Baron and Kenny was performed to analyze the pathways linking health literacy and health status. Results: The study showed that low health literacy was associated with worse physical and mental health status, and the effects of health literacy on physical and mental health status were mediated through self-efficacy. Conclusions: Because older individuals with low

health literacy are at increased risk for poor health, assessing health literacy in health care practice is warranted. Also, the approaches to improve delivery of care for older adults with low health literacy need to include not only improving readability of health information material but also enhancing self-efficacy of each individual.

**PD8 718 INNOVATIVE TRAINING FOR THE AGED CARE WORKFORCE-THE AUSTRALIAN EXPERIENCE**  
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In 2003 as a result of the identification of the particular needs of staff working in aged care homes in Australia, a satellite television medium was established to provide live interactive education sessions to staff on site. This is now the primary tool for education for over 55% of the aged care homes across the nation. Staff are provided with current evidence based practice information using real live footage of clients and scenarios in the work place. A leading expert is the guest panelist on each program and staff phone in for a live interactive question and answer session at the end of each program. Web based resources are provided and sessions can be recorded and used for staff education across all shifts. During this presentation case studies will be presented on the outcomes of this medium of education and research that supports why the short course/interactive type of education is effective as opposed to self directed distance learning. Staff who would normally not have access to the latest research or evidence on a particular topic have been able to review practice and change where appropriate. Recognition of Prior Learning (RPLs) are granted for staff who wish to complete aged care certification.

**PD8 719 THE CURRENT SITUATION OF LEISURE ACTIVITY FOR THE ELDERLY IN NORTH CHUNGCHEONG PROVINCE, SOUTH KOREA**  
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Introduction: Participation in leisure activities is associated with a life satisfaction and an improvement in quality of life in the elderly according to the result of precedent study. The participation in leisure activities is related to the frequency with regard to our socio-demographic change. The purpose of this study is to investigate various factors that affect leisure activities with focus on the leisure participation of the elderly living alone or living with their spouse. Methods : We examined the leisure life to provide some suggestions from perspective of the well-being of the elderly. The prospective cohort of 244 subjects older than 65 years of age resided in the province. Data collected through a questionnaire designed for this study consist of multiple-choice questions with items constructed to represent the operational definition for each variables. Data analysis used in this study were utilized t-test, one way ANOVA, multiple-classification analysis. Results: The kinds of participation activities are as follows : 1. sports and health activities, -jogging, walking ,free gymnastics- 2. hobbies and cultural activities -cooking, gardening, reading, playing the instrument, singing a song- 3. appreciation and inspection activities - watching TV, listening to the radio, listening to music- 4. recreation and social activities -visiting friends or relatives, social group activities such as club activities, all sort of training, alumna associations. The elderly who were living alone or living with their spouse frequently participated in time-spending activities such as watching TV and family-oriented activities. The structure of leisure participation differed significantly according to the respondent's age, educational level, health status, and monthly average income. Conclusion: The significant independent variables influencing the participation of the elderly were educational level and monthly average income, and future, the most important variable in influencing the elderly leisure participation was the educational level.

**PD8 720 „HEALTH PROMOTION FOR FAMILY CAREGIVERS“ - IMPLEMENTATION OF AN ASSESSMENT IN ESTABLISHED STRUCTURES -**  
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introduction: European and German studies identify family caregivers as an important target group that have, due to various burden, high needs for health promotion and prevention. Established offers rarely have preventive character and seldom reach the target group. Studies have identified numerous shortcomings in established offers, e. g. proper ways towards the target group and a lack of need orientation. Referring to these scientific results an assessment-instrument was developed in the project "Health Promotion for Family Caregivers". This instrument determines the needs of health promotion for the target group. The implementation of the instrument in established structures of the co-operation partner, a German national health insurance, constitutes a new way towards the relevant group. method: A CATI-software was developed to carry out the assessment. The software was implemented in the IT-network of the insurance. Before starting the assessment the interviewer was instructed intensively: 1. standards of quality, usage of the CATI-software; 2. strategies of argumentation for promotion of offers; 3. supervision of the start-up phase. In addition to the assessment-instrument a matrix of classification was developed consisting of three partitions (psychological, social, and physical profile). This classification summarizes family caregivers into groups that are equal regarding psychosocial and physical self-estimation. There are nine types in the matrix of classification. According to the placement in the matrix a family caregiver receives an offer for health

promotion that is submitted since January 2009 via the health insurance. results: The analysis of the phase of implementation delivers differentiated knowledge about the willingness of the target group to participate in the assessment, about the placement of the relevant group in the matrix of classification as well as the usage of offers. conclusion: The data allows a first feedback of the preferred way towards the target

**PD8 721 VALIDATION OF A TOOL FOR DETECTION OF DOMESTIC ABUSE AND SELF-NEGLECT(EDMA SCALES)**

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Introduction: The Scales for Detection of Domestic Elder Abuse and Self-neglect (EDMA) is a tool designed for use by social service professionals to identify people at risk of abuse by their caregivers, family and / or people nearby, or by themselves (self-neglect). It consists of two scales: the scale of the older person and the scale of the person who allegedly exercised abuse. Depending on the type of suspicion (domestic abuse and self-neglect or domestic abuse or only self-neglect), the type of information that can access (pertaining to the elderly, to the potential perpetrator, or both), and / or the time available, the professional can choose to use both scales, only one of them, or some aspects of both. Methods and Materials: The objective was to test the psychometric properties of the EDMA. 46 professionals were involved and allowed us to access a sample of 278 cases. In addition to the scales, we used the "Indicators of Abuse (IOA) Screen (Reis and Nahmias, 1995; and Nahmias Reis, 1998 Reis, 2000). The validation study was conducted in several stages: 1rst. Presentation, 2nd. Training of professionals, 3rd. First application, 4th. Second implementation, 5th. Analysis of results and 6th. Presentation of results. Results: The statistical analysis made evident how the two scales and their corresponding dimensions have shown appropriate indexes of reliability. They have also shown evidence of validity to distinguish people might not be abused and people might be abused and predict the type of treatment and its possible suspected risk. Data also shows an adequate sensitivity and specificity. Conclusions: The present EDMA psychometric properties are comparable to other similar instruments. In the future, it would be useful to repeat the investigation with a representative sample of the Spanish population.

**PD8 722 FAMILY SUPPORT IN BRITAIN: A QUESTION OF NEED, CULTURE OR ENABLING FACTORS?**

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Introduction There is a perception that particular ethnic groups have a stronger sense of filial responsibility than is found in Western European societies, which has led to a belief that formal services are not required by minority groups in Britain. However, it has been suggested that some minority ethnic older people are actually in greater need of support than the white majority in Britain, because of factors such as poorer health and lower socio-economic status. Methods and materials National statistics from the Home Office Citizenship Survey 2005 were used in order to identify whether there were ethnic differences in informal support in old age while controlling for the demographic factors which affect support provision. Results Logistic regression using an adaptation of the Andersen behavioural model of health service use was employed. Ethnic differences in levels of support persisted once demographic factors had been controlled for. However, these ethnic differences were in the opposite direction to that predicted by the popular perceptions. The Black Caribbean, Black African and Mixed groups all had significantly lower odds of receiving support from relatives outside the household when compared to White British older people. Moreover, Indian older people had significantly lower odds of giving support to relatives outside the household when compared to White British older people. Demographic factors which were significantly associated with both support provision and receipt regardless of ethnicity included being female and having children. Furthermore, those with a limiting long-term illness or disability were significantly less likely to give support regardless of ethnicity. Conclusions Ethnic differences in provision of informal support in old age do exist in Britain, even when important demographic factors have been accounted for. These differences are contrary to those which would be expected if the popular assumptions were true.

**PD8 723 ADAPTING TO FOOD RELATED ROLE CHANGES: THE EXPERIENCES OF MALE CARE PARTNERS AND WIVES WITH DEMENTIA**

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H. KELLER

Male care partners and their wives with dementia encounter challenges as they deal with food-related role changes. There are very limited studies on challenges faced by male care partners who adopt food roles previously performed by their wives and none on these wives who progressively lose their food roles to their husbands. This study explores the experiences of nine male care partners and their wives as they adjust to these role changes. Theoretically sampled participants were interviewed (dyad and individually) as part of the Eating Together 1 Study, a longitudinal project looking at the experience and meaning of food and mealtimes for families living with dementia. Using grounded theory

methodology, three years of interview data from these participants were analyzed. The emerging theory describes the process of sliding into food-related roles. This shifting of roles results from a progressive handing over of roles where wives transition from being in control of cooking and other food roles to coaching their husbands to take over some food roles and finally to a point where she loses complete interest in cooking and the male care partner is fully in control. Male care partners slide into roles previously performed by their wives by reciprocating the nurturance they have received from their wives and keeping the domestic standards set out by their spouses. A gendering of the food-related role impacts how successful the transition occurs. Male care partners and wives with dementia found the process of sliding into roles less challenging when they were successful in promoting each others' self-worth and preserving identities throughout the process. This study shows the need to provide support to male care partners and their wives with dementia in the area of food roles. Strategies used by participants will be discussed to help with knowledge

**PD8 724 FAMILY, QUALITY OF LIFE AND CARETAKERS OF SENIORS WITH ALZHEIMER**  
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**Introduction:** The aging of the population is a world concern and motivates the development of several areas of the science that study that phenomenon. Among the problems of health found in the age, the Disease of Alzheimer presents an accentuated increase in its incidence. With this study, it was looked for to deepen knowledge, to identify the caretakers' difficulties and the nets of social support, besides offering subsidies for the development of social policies. **Methods and materials:** 100 relatives were interviewed, with a semi-structured instrument that evaluated the situation of taking care. For the evaluation of the life quality the instrument WHOQOL was used and to analyze the stress symptoms the inventory of Lipp it was used. The qualitative data were analyzed according to the Method of Analysis of Content of Gagneten and the quantitative ones by the Lexical Sphinx Program. **Results:** The family caretaker is, generally, the wife, the daughter or daughter-in-law, that suffers physical, social, emotional and economic pressures and can develop several types of diseases. To face the stress, the relative develops material and emotional strategies, that facilitate the situation of taking care and decrease the stress. Among the strategies, the relatives mention the search of spiritual support, the participation in the support groups to the patients' families with Alzheimer and the assistant's recruiting, but most of the families cannot pay that service. **Conclusions:** The participation of the family is fundamental in the seniors' care with Alzheimer, a chronic and degenerative disease. The deficiency of the public Brazilian politics causes the relatives' overload. The situation affects, especially, the poorest population than, besides the disease, faces economic, psychological and social difficulties. It is urgent the creation of services for the sick seniors, home services, day-care centers, public centers of health and other resources.

**PD8 725 ELDER MISTREATMENTS, CRISIS SITUATION, NOSOCOMIAL LOSS OF ABILITIES: A MULTIFACTORIAL GERONTOLOGICAL SYNDROME**  
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The experience of the listening association ALMA (more than 6000 files of mistreatments each year) demonstrates analogies of etiologic factors between mistreatments, quick nosocomial loss of abilities, and "crisis" situation in geriatric care. Study of related factors shows similar causes, even if all mistreatments do not lead to crisis and if crisis are not always preceded by mistreatments, neglects are inescapable in pre crisis periods. Uneducated hospital staff leads to same results. Main elements of this syndrome are: • Victims: they depend from the perpetrator, either familial or professional, for their daily life, and present behavioural or mood disorders. • Perpetrators have some ascendancy over the victim, but also lack of training and education for their task (professional or familial). They are isolated without access to competent advices. Often they are not aware of the needs of the victim or of his pathological state. • Surroundings are inappropriate for the needs in care and helps. • Witnesses, if working or living in the same routine than the family or the professional team, are not aware of the mistreatment. Only witness with a new look on the situation or with professional competence may alert on the mistreatment and/or on the risk of crisis. Changing only one among these factors (disabilities, behaviour, mood, training, education of helpers, awareness, inappropriate surroundings, witness with a new look), may suppress mistreatment and limit the crisis risk. Mistreatment, loss of abilities and "crisis" are aspects of a common, multifactorial socio-medical syndrome. Better knowledge of those factors may strongly decrease mistreatments, loss of abilities and crisis situations and decrease in the same way needs for emergency hospitalizations in non geriatric wards and institutionalizations. Further studies on this common syndrome could lead to better care for frail populations and important decreases of costs.

**PD8 726 KINSHIP CAREGIVERS: DOES HEALTH INTERFERE WITH CAREGIVING?**  
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**Introduction.** In almost every culture grandparents have served as child care resources for families experiencing stress. A recent trend in American child welfare and in the general population is the reliance on relative care in the face of social forces that have left a large number of children in need of care. The care of grandparents has been leveraged to support the child welfare system in the formal system and has stressed families outside of the system in informal arrangements. Although, as a group, these grandparents are younger (early to late 50s), they face a number of health, social and policy challenges that require attention to maintain the well-being of these caregivers and their grandchildren. The purpose of this paper is to examine the consequences of kinship care on the health of caregivers. **Methods.** Data from this study of kinship caregivers (N=102) were analyzed using SPSS. Their mean age was 57.51 years, the majority were female, they were racially diverse, 30% were married, and 37% completed high school. The research was funded by the Childrens Bureau-DHHS. **Results.** In the logistic regression analysis using the variable, "my health interferes with caregiving," as the outcome variable (1=yes, 0=no), caregiver age, monthly income, hours they provided care, number of children in care, and total hours employed were not significant predictors of negative health consequences of caregiving. However, total pressures score and the total family service needs score were found to be statistically significant negative health predictors and the classification table correctly predicts 77.4% of the cases. **Conclusions.** Practitioners should be aware of the importance of family service needs when working with kinship caregivers, if they expect to reduce the potential negative health effects of caregiving. Helping caregivers reduce their "pressures" of caregiving is also essential.

**PD8 727 'I DON'T FEEL USELESS AT ALL': SOCIAL ACTIVITY AND WELLBEING OF AUSTRALIAN BABY BOOMERS**  
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N. HUMPEL(1), M. SNOKE(1) - (1) University of Sydney (Lidcombe, Australia)

**Introduction** Individuals and governments are becoming increasingly aware that baby boomers' retirement from the workforce will have a major bearing on their economic and social wellbeing and the future of younger generations. This study is part of a larger Ageing Baby Boomers in Australia project. The aim of this qualitative study was to explore boomers' retirement planning with the focus on their current and expected level of social activity and wellbeing. **Method** Participants aged 50 to 62 years were recruited to 15 focus groups (n = 73; m= 29, f = 44) conducted throughout Australia. The groups were organized by work/retirement status, gender and geographical location. The data were analyzed using NVivo software to identify the range of views and any variation by the selected study variables. **Results** Boomers, whether retired or still working, emphasized the importance of staying active in their retirement years as a means of maintaining both physical and mental health. The majority of participants reported high levels of social activity including voluntary work and travel. Many are engaged in voluntary work in their communities and those planning retirement indicated the likelihood of increasing involvement in voluntary work. Boomers are well traveled and reported that travel plans had been factored into their financial planning for retirement. Other areas of activity identified included providing support/care for elderly parents and, to a lesser extent, for grandchildren. Very few had a direct caring role; rather they supported elderly parents in managing finances and home maintenance. Conclusion Boomers are keen to maintain their health and to stay socially active as long as possible. Findings from this study will give governments and communities knowledge on baby boomers' expectations to guide their responses to societal ageing, contribute to a new vision of positive ageing and help relieve pressure on health expenditure

**PD8 728 CONSUMPTION CHOICES AND PRACTICES IN LATER LIFE – EXPLORING SUBJECTIVITY, SOCIALITY AND SPATIALITY**  
J. MANSVELT\* (Massey University, Palmerston North, New Zealand)

**Introduction:** Limited research has been conducted on relationships between ageing and consuming. In order to understand the significance of these relationships, it is important to examine the experiences of older people and to consider how consuming practices shape social relations, identity formation and place in later years. **Methods and Materials:** The research was conducted with 12 elders dwelling in the Manawatu region of New Zealand. Participants were chosen according to highest and lowest scores on a standardised living index. Methods included audio recorded in-depth qualitative interviews, participant observation of shopping trips, and participants' photographs of shopping spaces and purchases. Three forms of commodities (groceries, clothing and electrical appliances) reflecting differing necessity, durability, positional status, and shopping practice were used to explore decision making, provisioning and commodity use and the social and spatial networks which enabled or constrained consumption. Interviews and fieldnotes were coded thematically and subject to critical discourse analysis. **Results:** Across all participants consumption was demonstrated to be a moral and sometimes contradictory activity. It was also a relational activity with commodity choices formed in the context of familial,

intergenerational and peer relationships. For each commodity form studied, consumption provided a means of self-identification and belonging. Consuming practices afforded opportunities for sociality and spatial mobility and were frequently associated with resourcefulness and resilience, a means of retaining autonomy and choice in ones later years. Conclusion: Much more than either a mundane or hedonistic activity, consumption is a complex set of moral practices which have a significant role in establishing ageing subjectivities, well-being , inter-generational and social connections and life-course opportunities. In addition consumption also plays a significant role in crafting a place to be and to 'become' in later years of life.

**PD8 729 THE POLICY OF 'AGEING IN PLACE' – DILEMMAS IN THEORY AND PRACTICE**

G. HAMMARSTRÖM\* (Department of Sociology, Uppsala University, Uppsala, Sweden)

One of the pillars of Swedish old age care policy is the idea of 'ageing in place', which means that old people should live in their own home as long as possible and get their needs of help and care met by publicly organized and financed home-help services. Even if the public sector has the main responsibility for the old age care, the care of old people is in fact a shared responsibility between the public sector and the family. The aim of this presentation is to shed light on some of the dilemmas that the goal of 'aging in place' generates, in relation to the elderly themselves and to their adult children. The presentation is based on three different studies on i) elderly home help recipients, ii) old people with complex and severe illnesses and their relatives, and iii) needs assessors. The studies show that the well-being of old home help care recipients more or less presupposes complementary assistance from adult children; that old people's adult children are rather dissatisfied with their relations with the home-help services because of lack of influence; that the needs assessors are, in turn, ambivalent toward old people's adult children. The studies show also that the goal of 'ageing in place', which more or less presupposes complementary help from adult children, and the Social Service Act, which diminishes adult children's influence, operate as contradictory principles which pose various dilemmas for both the elderly and their adult children. This presentation argues that these dilemmas stem from the fact that Swedish old age policy works with two distinct family constructs. The goal of 'ageing in place' is based on the extended family network across family generations, whereas the Social Service Act rests on a legal construct which excludes adult children.

**PD8 730 EVALUATING HOME-BASED DEMENITA CARE PRACTICES: A CRITICAL ANALYSIS**

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Background: Because care is most accurately understood as relational, relationships between and among seniors with dementia, their family caregivers, and formal care providers need to be better understood. Examining how these relationships are negotiated and how the care process influences the health and well-being of all those involved in home-based dementia care will potentially improve the quality of care for seniors with dementia. Purpose: A critical ethnographic study examined the values, beliefs and social power relations of community dwelling seniors living with dementia, their family caregivers, and care providers and how they negotiated the provision of homecare. Methods: A purposeful sample of 9 dementia care networks, including 9 seniors living with dementia, 25 family caregivers and 12 homecare providers, was obtained. Semi-structured interviews were conducted with all participants providing/receiving dementia care. For each field visit, researchers recorded their perceptions, insights and observations of the dementia care network. Findings: Our analysis yielded four integral relational care processes: managing care resources, making care decisions, reifying care norms and evaluating care practices. This presentation will focus on the evaluations of dementia care practices as perceived by clients, caregivers and providers. The type and quality of evaluations was dependant on the participants' position within the dementia care network. Caregiving contributions of self and others were evaluated according to taken-for-granted, but often conflicting values of care and caregiving relationships. Further, the practices and policies of the homecare system were rarely appraised, particularly by family caregivers and in-home providers. Conclusions: With the increasing emphasis on homecare in Canada, findings provide vital information about the complexity of relational care processes within dementia homecare. Healthcare providers, administrators and policymakers need to attend to the potential negative outcomes of hierarchical roles within homecare that value some care practices over

**PD8 731 THE CASE-MANAGER: WHAT SUPPORT FOR THE INFORMAL CAREGIVERS? AN ACTION-RESEARCH TO PROMOTE CASE MANAGEMENT AT HOME IN FRANCE**

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**INTRODUCTION:** Within the framework of an Action-Research to promote help to disabled elderlyin (Languedoc-Roussillon), a case manager was appointed to each household including a disabled elderly and his informal caregiver. The objective for the case-manager would be to contact the household and act as a go-between, coordinator and support. He would be identified by the disabled elderly and his family as a professional able to answer their needs for support. In the project the case-manager was in charge of the evaluation of the informal caregivers' needs in the context of the daily support given by the spouse or relative. One of the objectives was to assess the recognition of the case-manager by thecaregivers and identify the required conditions to promote this procedure on the longterm. **MATERIAL AND METHODS:** 1. Choice of case-managers in cooperation with the local centers for information and coordination (Clic) in 4 gerontological areas. This procedure is based on voluntary acceptance from social workers and their institutions (Conseils généraux, Social security, local hospitals ) 2. Training of case-managers, control sessions. 3. Methodological support: conception and availability of follow-up and evaluation tools. **RESULTS:** The Reluctance of informal caregivers to accept to be helped is confirmed by professionals that pointed out the difficulty to act, except when they are clearly asked. It is important to reexamine care-plans and to work with all the professionals involved into help. Professionals need to improve their skills and to gain an official recognition to collaborate with others professionals in the area. **CONCLUSION:** Additional work will be necessary to determine which time is the more appropriate to offer the case-manager intervention in relation with other professionals involved in help. It is also important to set up relevant criteria to select suitable professionals.

**PD8 732 THE DENATURALIZATION OF CARE FOR OLDER PARENTS: THE NEW CULTURE OF CARE AMONG BABY-BOOMER CAREGIVERS**

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Baby-boomers are now at a stage in their lives where many of them, mostly women, need to face their older parents' impairments. This generation is known for its culture of freedom, feminism and individualism. Now that many baby-boomers have to care for their older parents, do they view themselves as different from former generations of caregivers? Are they bringing forth a new culture of care? In Quebec, these women's life trajectory is very different from previous generations owing to their participation in the labour force, their fertility and their move away from traditional marriage. We conducted two studies with 70 baby-boomer caregivers, mostly women. Half of the participants were interviewed on the organization of care in their family, their attitude about care and its impact on their lives. The second half participated in focus groups and discussed their relationships and expectations with service providers. According to our results, care doesn't appear to fit in with their present life trajectories nor their plans for retirement. Also, contrary to their parents, care isn't central to their core identity. This denaturalization of care leads these women to categorize themselves as caregivers rather than simply as wives and daughters.

**PD8 733 THE IMPACT A HOMECARE PROGRAM ON ELDERLY' CARETAKERS QUALITY OF LIFE AT A BRAZILIAN HEALTH CARE SERVICE**

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The enhanced aging of the Brazilian population results in a growth of elders that are dependent, and that overload the family. In this scenario, some changes are needed within the health care model, with greater focus on the actions directed to homecare. With this aim, the Basic Health Care Unit at the IAPI Health Care Center (Porto Alegre/Brazil) has launched the In-bed Homecare Program (IHP) in 2002. The objective of this research is to evaluate the quality of life of 'main elderly' caretakers who attend this program. It is an interventional, longitudinal, non controlled study (POLIT, 2004). The population of the study comprehends the main caretakers of elders enrolled in IHP. Data collection has been conducted in two moments: before entering IHP, and four months after the first interview, from August 2008 to December 2010. The interview consists of the application of a multidimensional tool that contains social-economic and demographic variables, and aspects about health and the delivered care. WHOQOL-BREF will be used to evaluate the quality of life, and for the caretakers who are 60yrs-old or more, the WHOQOL-OLD will also be applied. The caretaker overload will be measured by the Overload Evaluation Scale (ZARIT, 1980). A descriptive and comparative analysis will be performed (Wilk's lambda test – ANOVA-; Bonferroni test and t-Student's test). The project was approved by the Ethics Committee from the Health Secretary of Porto Alegre. Preliminary results obtained until January 2009 showed that between the 15 caretakers already interviewed, most of them are women (73.3%), daughters (60%), with ages from 32 to 73yrs-old. The results of this study will be used to reinforce or adapt IHP focusing on integrative care of the family of in-bed patients, pursuing a better quality of life for them.

**PD8 734** "I DON  
H. MACRAE\* (Mount Saint Vincent University, Halifax, Canada)

As depicted in popular culture, Alzheimer's disease is a "ravaging" and "mangling" disorder that robs persons of their minds and destroys former selves. Adopting a symbolic interactionist perspective, and drawing on data obtained from face-to-face, in-depth interviews with nine individuals living with the illness, this paper examines the impact of early-stage Alzheimer's disease on identity. It investigates the extent to which persons who have Alzheimer's fear "loss of self" and whether identity is actually dramatically transformed. The findings show that despite the losses they have experienced individuals living with the disease do not necessarily view their identities as having changed very much, nor do they appear to be overly concerned about the potential loss of former selves. Some even manage to create new selves. The paper attempts to explain how persons with Alzheimer's are able to maintain continuity of self despite the substantial changes they have experienced. Suggestions are offered concerning how others can support persons with early-stage Alzheimer's to maintain identity.

**PD8 735** THE IMPACT OF PERCEIVED SERVICE BARRIERS ON CAREGIVING BURDEN  
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Introduction: Research has shown that formal service interventions for family caregivers can be effective in alleviating caregiver stress and burnout, yet, family caregivers often underutilize these services. Several studies have identified the need to address the barriers that affect family caregivers' accessibility and use of formal supports. Few empirical studies have examined the effect of service barriers on caregiving burden. This study aimed to examine the effects of family caregivers' self-reports of service barriers on caregiving burden. Methods: Data were obtained through telephone interviews using a structured questionnaire with a random sample of 340 family caregivers of older adults aged 65 years and older residing in Calgary, Canada. Caregiving burden was measured by the Zarit Burden Interview. Service barriers were measured by a list of 15 items identified in previous literature and from feedback of community service providers. Results: Exploratory factor analysis using the principal component analysis was conducted. The findings revealed four types of service barriers: personal attitude and experience, administrative problems, circumstantial challenges, and cultural incompatibility. Hierarchical multiple regression was conducted to examine the effects of these four types of service barriers on the level of caregiving burden of family caregivers. When controlled for caregivers' demographics and number of illnesses of care recipients, more barriers related to personal attitude and experience, administrative problems, and circumstantial challenges correlated significantly with a higher level of caregiving burden, with the first two barrier factors being the most important. Conclusion: The findings estimate the direct linkages between service barriers and caregiving burden. Policies and programs to address these barriers, particularly with respect to personal attitude and administrative problems of service delivery should be developed.

**PD8 736** RESPONDING TO THE NEED FOR CAREGIVERS FOR OLDER PEOPLE IN UGANDA: EXPERIENCE OF A SMALL LOCAL NGO  
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Introduction: There are currently more than 1.3 million persons in Uganda aged 60 years and over. Many of these older persons need professional caregivers trained in the field of geriatrics but the health and social service system in Uganda is unable to provide such care. This paper reports the response to this situation of a small local NGO, The Aged Family Uganda (TAFU). Methods and materials: Three projects were conducted. First, in 2006, TAFU and Age Concern Devon were brought together by the International Federation on Ageing to carry out a survey of the lives and experiences of 382 isolated older persons living in seven regions of Uganda. Second, TAFU worked with the African Palliative Care Association to carry out a situation analysis of the needs of older persons. Third, TAFU, with financial help from Unie KBO, used the findings of the first two studies to develop a training program to empower caregivers with basic geriatric knowledge and skills. Results: The survey of 382 older people confirmed that most older Ugandans live in extreme poverty and suffer from a variety of age-related conditions. The situation analysis highlighted the pressing need for geriatric care in Uganda. The caregiver training programme has so far involved 218 community caregivers, including local council leaders, who have been trained on how to care for older persons, especially the isolated. To date, 75 households are beneficiaries of the programme. Conclusion: The projects conducted by TAFU demonstrate the contributions that a small local NGO can make to improving the health and wellbeing of older persons in sub-Saharan Africa.

**PD8 737** JAPAN'S ISSUE OF SUPPORTING ELDERLY'S HOME-BASED FAMILY CAREGIVERS  
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Introduction As today's recent situation of aging society in Japan, there is an eminent policy to curtail medical care expenses for elderly requiring medical care, and a movement

to promote a shift from public medical care to community care. It is expected, therefore, that a larger number of elderly requiring medical treatment will be relocated to local areas and that their family caregivers will have to care for them. The extent of support for family caregivers, key role players in the family care issue, is far from satisfactory. We are going to clarify the facts related to the business of home nursing visits as the underpinning of homecare, and then study the matter of supporting family caregivers involved in nursing visits. Method We interviewed seven visiting nurses registered with a home nursing visit station in accordance with a roughly structured plan. We explained to them in writing about the purpose, method and ethical aspects of this study and interviewed only those consenting to the interview. Result Those home visits nurses have been tackling the issue of care burden and health problems of family caregivers but they have failed in providing effective support. As a partial factor behind this situation may be that the service provided by those home visits nurses is not aimed at supporting family caregivers. Conclusion In order to promote the policy of homecare service in the future, it is important that family caregivers get support. For materialization of the plan, we thought it necessary to focus on family caregivers in the process of assessment and to work toward development of a program aimed at reducing care expenses.

**PD8 738** EVALUATION OF A SMART HOME FOR INDEPENDENT LIVING, ACCESS TO CARE, SAFETY AND SOCIAL CONNECTIVITY.  
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Introduction QSHI (Queensland Smart Home Initiative), a consortium of selected organisations, established a Smart Home in an aged care facility in Brisbane, Australia. The objective was to demonstrate technology, research, inform and educate stakeholders. Information from the project informed a subsequent phase and research program. Methods and materials An independent living unit (ILU) in an aged care complex was provided to the QSHI which consisted of technology providers, government, consumer body, aged care provider, a property developer and universities. Complementary products were installed. Visits were organised from consumer, care provider and policy organisations. At each of the visits the technologies were demonstrated and comments invited. Over 12 months 230 people visited the home. Workshops with stakeholder organisations discussed comments received from the Smart Home visits. Results There was great interest in the Smart Home as demonstrated by the number of visits. There was enthusiasm on the part of care providers and consumers for adopting the technology. There was uncertainty about cost and affordability, return on investment, availability of technical support; and a lack of awareness of avenues to obtain the technology and support services. Conclusion The need for smart home environments and assistive technologies is evident in the high rates of adverse events and conditions such as medication problems, falls, maintaining independence, social isolation and problems of cognitive decline. Technology has huge potential to assist individuals and their carers. The technology is becoming ever more sophisticated. There is however a gap in the means for assessing an individual's needs, specifying a suitable suite of products, installation, professional monitoring of signals and in demonstrating the Return on Investment. The Research program informed by the Brisbane Smart Home is focused on these issues.

**PD8 739** THE ECONOMIC IMPACT OF CAREGIVING ON RETIREMENT  
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The purpose of this study was to examine the economic consequences of retiring to caregive. In Canada, 1.7 million adults aged 45-64 provide unpaid care to 2.3 million older adults with chronic disabilities; 7%-9% of older Canadians retire and about 3% quit work to provide care. Yet few studies examine the economic relationship between caregiving and retirement. This paper presents the qualitative findings from a large multimethod study which examined the experiences of older adults who had retired from the labor force to care for relatives, and for whom caregiving has ended. The qualitative methodology was consistent with the phenomenological tradition. In-depth, semi-structured interviews were conducted with 62 former primary caregivers (31 women and 31 men), aged 45-78. Purposive sampling was used to select participants who had retired to caregive and for whom the caregiving was over. The interviews lasted 2.5 hours on average, were digitally recorded, transcribed, thematically coded and analyzed using NVIVO software. The findings indicated that the caregivers' transition into early retirement took two routes: the first was precipitated by a crisis and viewed as temporary; the second was planned and permanent and was related to deteriorating work conditions but justified by the need to caregive. At the conclusion of the caregiving, most "crisis" caregivers lived in abject poverty while the "planners" reported adequate income. The main post-caregiving survival strategy was work re-entry without any prospect of retirement due to economic losses sustained from retiring to caregive. Understanding the intersection of caregiver and retirement trajectories is necessary for planning financial services for retiring caregivers and for developing social policy that mirrors their lives. Although the caregiving may be

over, the continued intervention of professionals is warranted to avoid the distressing economic consequences resulting from retiring to caregive.

**PD8 740 SPOUSAL SUPPORT IN THE CONTEXT OF ADULT DAUGHTERS CARING FOR ELDERLY PARENTS**

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**Introduction:** This research examined the moderating impact of spousal support in the context of multiple roles of working adult daughters caring for their elderly parents. The relationships between role strain, role conflict, role stressors and marital quality, according to role theory were examined. Especially in midlife, in our modern world, many women are holding simultaneously multiple roles in the family and as part of the workforce. With the increase in the aging population, the caregiving role for an elderly parent is added to the multiple roles of midlife women. Husbands can be a source of support vs. hindrance in this context. **Design and Method:** The sample included 100 employed married women, caring for a dependent elderly parent, at least four hours per week, using a convenience sample. Data were collected through personal interviews with a structured questionnaire which included the following areas: work-care conflict, work-family conflict, care burden, spousal support and marital quality. In addition, 10 women were interviewed used semi structured interviews, for deeper understanding of the meaning of spousal support in the context of parent caregiving. **Results:** The results revealed that while stress feelings were negatively correlated to marital quality, spousal's support was a partial mediating variable between total stress feelings and marital quality. Women who are caregivers in addition to their other roles, subjectively experience stress feelings resulting from role strain and inter-role conflict. In addition, only work and caregiving extent (hours/time) were found to be directly correlated to subjective work-caregiving conflict. **Conclusion:** The main findings point to the importance of spousal support in time of caring for an elderly parent, usually at midlife. Therefore, creating support groups for couples might be effective to increase spousal's awareness to their wife's stress feelings and the importance of their support.

**PD8 741 ELDERLY IMMIGRANTS IN NORWAY - CARE SERVICES AND CULTURAL SENSITIVITY**

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**Introduction:** As the older immigrant population in Norway is increasing, a crucial question is how to give elderly immigrants equivalent care services. The main aims of this project are to describe how the care services for elderly immigrants work, point to problems and plan for further research and practical implications. Regarding cultural sensitivity, user preferences and cooperation between staff and family-carers are major concerns. **Methods and materials:** Care service staff, elderly users in nursing homes and day care centres and their family members are interviewed (N=30). The interviewees have varied cultural background and residence time in Norway. **Results:** Three issues are in need of attention: (1) Information, language, and communication, (2) Adaptation of services to immigrants expectations, and (3) Staff training in cross-cultural care. Case analyses show various patterns of expectations and cooperation between the care systems and families. Families often try to help according to their customs, but they experience dilemmas and burdens. Elderly immigrants in need of help do not always have available informal care. The expectations of elderly and their family members often are expressed as ordinary wishes for caregiver stability, reliable appointments and staff-cooperation together with culturally adapted care. Individualized, tailor-fit care is a central motto for staff. Communication and cooperation with family is important to get to know the person and cultural norms, and to share considerations about treatment. **Conclusion:** Listening to the expectations of a multicultural group of care users and adapting care services to their needs is a continuous process. A multicultural staff may ease the process. Close cooperation between the care systems and families and between different agencies in the care systems is crucial to follow up minority ethnic elderly in need of care. The ideal of cultural sensitivity can otherwise be replaced by exaggerated caution.

**PD8 742 CARING TO GRANDCHILDREN: DIFFICULT BEHAVIOURS, HELP RECEIVED AND SATISFACTION WITH THE ROLE BY GRANDPARENTS IN SPAIN**

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Older people are increasingly more involved in regular tasks of caring their grandchildren as a way of helping their adult children to balance work and family life. The aim of this study is to look at what are the most difficult grandchildren's behaviours grandparent face in their care tasks, who help grandparent to do better this role and how satisfied grandparent are caring for their grandchildren. Three hundred and twelve grandparents (240 women and 72 men) participated in this study from Barcelona and surroundings. Those grandparents took care regularly at least one grandchild till 12 years of age. The instrument created includes different areas of this role as well different consequences of this role. For

this paper frequency of grandchildren's behaviour difficult to handle by grandparent (9 items), from how grandparents receive help (6 items) and what kind of satisfaction grandparents perceived (11 items). Results indicated that 80% of grandparents perceived three different behaviors: being naughty, disobedient and moved. The main assistance is received by their partner, lesser from their children and nearly nothing from public institutions. Finally, satisfaction with caring grandchildren is very high, both emotional and cognitive satisfaction. Results are discussed in the light of successful aging theory and generativity of the elderly. \* This research was funded by a grant from the Spanish Education and Science Ministry (SEJ2005 – 04154 / PSIC)

**PD8 743 HIV/AIDS: IMPACTING THE ROLE OF THE ELDERLY IN THE AFRICAN COMMUNITY**

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**HIV/AIDS: impacting the role of the elderly in the African community** **Introduction:** The status of older adults in Africa occupies a small but rapidly expanding share of the global aging literature. The issue of HIV/AIDS pandemic has generated a new focus on the changing role of the elderly in the communities that have been affected by AIDS. In sub-Saharan Africa where millions are projected to be infected with HIV, with about 2 million deaths recorded annually among the traditionally productive adults; children and the elderly are made to take up unusual responsibilities when there is such loss of parents or breadwinners. This paper reviews the findings on the impact of HIV/AIDS on the elderly population, with a particular focus on the changes in the roles of the aged that have survived the deaths of their younger ones. **Methods:** A systematic review literature on the elderly and HIV/AIDS provided the analysed data for this paper. Access to the database were mainly via EBSCO ([www.ebsco.co](http://www.ebsco.co)) that allowed search in 7 electronic databases representative of major databases and search engines useful in an academic setting for finding and accessing articles in health and health related academic journals, repositories and archived reports. The findings were grouped, categorised and summarised using the RAPID software that assist with critical appraisal of evidence from reviewed articles. **Findings:** Preliminary finding show an increase in grandparent-headed households due to HIV/AIDS. An escalating financial burden on these aged who have to share their social grants with their sick children, and stretched resources that compromised the quality of life of these elderly in affected communities. **Conclusion:** It was concluded that the challenges of HIV/AIDS for the elderly in Africa are many. More also need to be done to articulate the knowledge

**PD8 744 THE TRANSITION OF PEOPLE WITH DEMENTIA TO SPECIALIST CARE UNITS: EXPERIENCES AND VIEWS OF RESIDENTS AND CAREGIVERS**

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**Introduction** Numbers of Irish people diagnosed with dementia will increase over the coming years. One consequence is that more specialist dementia care units (SCUs) will be needed. SCUs have only recently become a part of the Irish long-term care system. Thus, there is a lack of knowledge about the process of admission and relocation to SCUs and its immediate and more long-term outcomes. This study will explore in depth the experiences and views of people with dementia and their informal and formal caregivers of relocating to a specialist dementia care unit. **Methods and materials** A qualitative exploratory design is being used. The methodology is guided by a hermeneutic-phenomenological approach. Qualitative measures will include: 1) Individual interviews with people diagnosed with dementia, and 2) Focus Groups with family caregivers, SCU care staff, and SCU management. Interviews and Focus Groups will be conducted prior to and following the move. Quantitative measures will include: 1) cognitive and memory testing - MMSE, 2) a socio-demographic questionnaire for caregivers, and 3) a nursing home documentary analysis. These measures will provide additional information about participants' living contexts, and will help better understand individual transition experiences. **Results** To date, no results are available. A pilot study, to pre-test instruments for the main study is about to take place. The main study will commence in April 2009. Preliminary findings will be ready for presentation in July. **Conclusion** Results of the study will generate new and original findings about the transition process into SCUs for people with dementia and its short-term and more long-term effects. The findings will be used to inform care practitioners, policy makers and planners about best practice in relation to the relocation of people with dementia to SCUs.

**PD8 745 THE SAVVY CAREGIVER PROGRAMME. AN INTERVENTION ON FAMILY MEMBERS OF ALZHEIMER PATIENTS**

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It is known that support interventions given to family caregivers have favourable impact on themselves, on the disease itself and on the life quality of the whole family. The programme experimented a method aiming at the research of an effective, assessable and reproducible psycho-educational approach to the caregiver. The Sacro Cuore Alzheimer Unit of Rome has organised a course for caregivers. A geriatrician and 2 psychologists,

knowing the stage of the disease, were responsible for the course. A "Caregiver Manual" for the family caregivers and a Trainer's Manual for the trainers were distributed to the attendants. The manuals contained the whole programme: its effects on behaviour; the purpose of care giving; management of daily treatments and of difficult behaviour; strengthening the family as a resource. The programme contained practical indications as to cope with assistance and relation problems as they emerged. The caregivers response was excellent. The data show an improvement of the depressive state of the caregiver and the lesser behavioural disturbances of the patient are also relevant in the corresponding sections of the self-administered questionnaire. The final data of the study will be presented during a congress. Beyond the results exhibited, the programme, proposed to the trainers as well as to the caregivers, is "strategic", and represents a personal approach to self-knowledge and to the difficult relations growing in the whole family environment, among assistants, patients and caregiver. Bibliography 2. "Studio Eurofamcare: l'assistenza a familiari anziani affetti da demenza (dementia caregiving) in Italia. Risultati preliminari. Giorn. Geront. Vol. 52, , 256 , 2004. 5. Hepburn K., Lewis M., et al : "The Savy Caregiver program: the demonstrated effectiveness of a transportable dementia caregiver psychoeducation program" J. Gerontol. 2007

**PD8 746 TELE-TECHNOLOGIES TO FACILITATE AGING IN PLACE**

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Tele-technologies offer great promise for facilitating aging in place for older adults who require rehabilitation services, particularly those who live in remote areas or who have difficulty traveling to a clinic. A study was undertaken to compare the effectiveness of in-home rehabilitation delivered by interactive teleconference and in-home visit to older adults who were new users of walkers or wheelchairs. The two intervention groups (Tele- and In-home Care) received a 4-visit rehabilitation intervention aimed at six transfer and mobility tasks. A Usual Care Group (UCG) received no intervention. The intervention, developed by an interdisciplinary team, included in-home assessment of mobility and transfer skills, treatment recommendations for home exercises and adaptive strategies (i.e., skill training, provision of assistive technology, and recommendations for environmental modifications). The intervention was delivered by an occupational or physical therapist (PT/TOT) via teleconference from the clinic or in the home. Primary study outcomes were the number of performance deficit problems and recommendations for adaptive strategies (baseline to 6-weeks), and changes in Task Self Efficacy (confidence in performing routine tasks) and ADL performance. A total of 65 of the 82 subjects who were enrolled completed the 6-week protocol. Intervention delivery by Tele- versus In-home showed a trend for more problems to be identified ( $p = 0.13$ ) and more recommendations made in-person ( $p=0.20$ ). However, this was due to differences in the mobility tasks where the Tele-group had significantly fewer problems ( $p=0.003$ ) and recommendations ( $p=0.005$ ). In contrast, there were no significant differences in the transfer tasks for either the mean number of problems/patient ( $p=0.68$ ) or recommendations/patient ( $p=0.68$ ). Moreover, when compared to the UCG, the combined Intervention Group (Tele- and In-Home) had significantly improved FES scores ( $p<0.05$ ). These data provide evidence that interactive teleconferencing technology can facilitate aging in place. Currently a follow-up, 4-site clinical trial is being conducted with stroke patients.

**PD8 747 TRANSDISCIPLINARY PRIMARY CARE FOR THE CAREGIVERS OF INDIVIDUALS AFFECTED BY ALZHEIMER DISEASE**

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Introduction: Caring for individuals with Alzheimer Disease (AD) poses significant challenges to family/friend caregivers. To provide care that is meaningful and appropriate, it is necessary to provide health services directed at the needs of caregivers. The main objective of this research was to generate knowledge about issues concerning primary health care for caregivers of individuals with AD and to develop primary health care model for family caregivers of individuals affected by Alzheimer Disease and related dementias. In particular, we examined how health care professionals currently work together to provide care for caregivers and barriers to accessing and providing this care. Methods and Materials: Recruitment of participants was conducted using mixed methods including mailed invitations, gate keepers, advertisements in professional newsletters and email lists, and snowballing. The sampling frame was designed to recruit participants from a wide range of perspectives including primary care providers, government representatives, community organizations, and family caregivers. One-on-one interviews were conducted and transcribed verbatim. Questions were designed to explore the availability of services and support for caregivers, barriers to accessing and providing care, and ideas for pragmatic changes to the current primary health care system. Data was coded using MAXQDA software. Results: Themes resulting from coding and data analysis included support services available, regional differences in approach to care, barriers to health professionals providing care, barriers to caregivers accessing care, individual roles on the care team, interdisciplinary collaborations, and primary care model development. Conclusions: The results of the study may be used to advise health care providers and

policy decision-makers regarding the primary health care and support needs of family caregivers of individuals with AD in Canada and elsewhere.

**PD8 748 EVALUATING THE UCLA AND DE JONG-GIERVELD LONELINESS SCALES FOR RESEARCH ON AGING**

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Introduction: The UCLA and the de Jong-Gierveld Loneliness Scales are two of the most frequently employed measures of loneliness across the life course. Both have given rise to short-forms intended for use in large-scale cross-sectional and longitudinal surveys. However, despite extensive testing, questions remain regarding the relative reliability and validity of these measures, particularly when used to assess loneliness across age groups and over time. Methods and Materials: This paper reports the results of a study conducted to assess the reliability (internal consistency, two-week test-retest) and validity (convergent, divergent, factor structures, and factorial invariance with respect to age and time) of these two scales. Data were obtained from interviews (baseline, 2-week follow-up) conducted with a sample of 253 respondents aged 45 to 84 living in British Columbia, Canada. Results: Findings reveal that both measures, including their short- and long- forms, display satisfactory reliability. However, confirmatory factor analyses do not indicate overall good model fit. As well, the analyses provide little support for assumptions of measurement invariance across age groups. Conclusion: Our results suggest that age group comparisons and longitudinal changes in loneliness scores be interpreted with caution.

**PD8 749 THE EXPERIENCES AND EXPECTATIONS OF CARE AND SUPPORT AMONG OLDER PEOPLE FROM DIFFERENT ETHNIC GROUPS**

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Introduction A large volume of research has explored older people's perceptions about their health and support needs and experiences of services. However, little is known about how older people from different ethnic groups experience services and what their preferences are. A common assumption is that older people from different ethnic groups have more differences than similarities in their service and support needs. Our study set out to investigate the needs and experiences of older people and their carers from different ethnic communities, particularly regarding accessibility and acceptability of services. Methods and materials The qualitative research consisted of 22 focus group and 53 narrative interviews with older people and their carers from ten ethnic groups (including White British) in Bradford, UK. A total of 144 older people and 48 carers were included in the study. We present findings from the interviews with older people. Results The study found a distinction between older people's expectations at macro and micro level. Experiences and expectations of services were described as complex constructs of macro and micro level needs and experiences. At macro level all groups, irrespective of ethnic background, expressed three service expectations: high standards of good practice; cultural understanding; responsiveness to individual expectations. For all groups accessibility to services was greatly improved through the provision of relevant and repeated information. At micro level the experiences and needs were culturally distinct and described in more detail, for example regarding food acceptability or language preference. Conclusions This study indicates that older people describe the same experiences, expectations and needs of services at macro level, irrespective of what ethnic group they belong to. It would seem that services are often more concerned about meeting micro level needs leading to fragmented and uncoordinated service provision. Where satisfaction was expressed about services, macro level needs had been met.

**PD8 750 CHARACTERISTICS OF THE SOCIAL SUPPORT NETWORKS OF ELDERLY PARTICIPANTS AND NON-PARTICIPANTS OF A PHYSICAL EXERCISE PROGRAM IN THE BRAZILIAN PUBLIC HEALTH SYSTEM IN FLORIANÓPOLIS, BRAZIL**

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Introduction: This cross-sectional study aimed to compares the characteristics of the social support network of elderly participants and non-participants of programs of physical exercise. Methods: Sample was composed by 81 aged people enrolled in three Health Centers in the city of Florianopolis, SC, that were participating in the program Floripa Ativa (GP) and that were not participating in this program, nor in any other formal group activities (GNP), selected in a non-probabilistic way. The GP was composed by 55 elderly patients with a mean age of 69.6 years ( $SD=7.3$ ) and the GNP by 26 elders with a mean age of 70.6 years ( $SD=5.7$ ). The instruments used in data collection and applied in the form of individual interview were: sheet identification data, Social Support Scale, Minimum Chart of Relationships, Family APGAR and Perceived Stress Scale. The data were processed by descriptive and inferential statistics, respecting the precepts of normality on distributions. In all inferential analysis was adopted a significance level of 5%. Results: The elderly of both groups showed no significant differences in their socioeconomic characteristics, health status and level of stress. In general, the elderly from the GP group

have more contacts available for financial aid ( $p=.009$ ) and in daily activities ( $p=.001$ ). These seniors also perceive a greater availability of overall social support ( $p=.009$ ) and in its most dimensions: affective ( $p=.016$ ), emotional ( $p=.039$ ) of positive social interaction ( $p=.026$ ) and informative ( $p=.041$ ). The elderly of the GP group, also had a more balanced family environment, with improved functionality of the family ( $p=.047$ ), besides being more satisfied with the adaptation ( $p=.049$ ) and family's development ( $p=.004$ ). Conclusion: The elderly participating in the Floripa Ativa program had a significant better social support network which can contribute for the maintenance of the health and for a better care of these elderly.

#### **PD8 751 OLDER ADULTS' PERCEPTIONS ABOUT PHYSICAL ACTIVITY OPPORTUNITIES IN THEIR LOCAL ENVIRONMENT**

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**INTRODUCTION:** Recent research suggests that reconfiguring outdoor environments can encourage older adults to spend more time outside and to discover new and enjoyable ways to build more physical activity into their everyday life. For several years researchers from our laboratory have participated in projects that redesign outdoor spaces surrounding retirement communities in order to encourage residents to be more active. **PURPOSE:** Seniors living in a retirement community which had recently been redesigned were asked to comment on their perceptions of the value of the newly renovated outdoor space. Our goal was to examine how older adults respond to alterations to the environment that are designed to promote active lifestyle choices. **METHODS:** A qualitative research design was used to explore in depth the perceptions and reactions of older adults to a purposeful redesign of their community. **RESULTS:** Several distinct cohorts of older adults were identified: (1) individuals who were highly positive about landscape redesign; (2) individuals who were much less supportive of changes to the environment; as well as (3) individuals who both value and regularly use the outdoor environment; and (4) non-users of outdoor space who do not value or participate in outdoor activities. Similarities and differences in reaction to environmental change between the various cohorts were identified. **CONCLUSION:** Changes to the built environment have the potential to be viewed in different ways. Older adults differ considerably with respect to how they react to alterations to the environmental space that surrounds them. It is important to carefully study the preferences and opinions of older persons prior to embarking on any strategy to redesign the environment. Engaging older adults as participants in all stages of the design, build, and implementation of environmental change is essential.

#### **PD8 752 COULD ELDERLY PEOPLE LIVING AT HOME IMAGINE LEAVING IT FOR A RETIREMENT HOUSE WHEN GETTING OLDER ?**

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Introduction To explore this problematic, elderly people living at home in French rural environment were interviewed. Material and method Thirty-five people aged 75 years and over, living around Nevers (Burgundy, France) were interviewed by 2 of the authors in September 2008. Results Most of them want to stay in their home. They can only consider to leave their home if they would suffer from dementia. Thus, moving in a retirement house appears to be the last solution.Three main arguments sustained this idea. First, they have a negative image of retirement house. Second, the cost of living in a retirement house is viewed as far too expensive compare to their income. Third, they argued that their children would not agree to let them leave for a retirement house, and would prefer their parents stay as long as possible in their home. However, for most of them, they do not plan their future. Conclusion As usually observed, moving in a retirement house appears to be a difficult moment, and is rarely desired.The present study showed that the crisis induced by leaving home would be emphasized by the belief that children support their parents'desire to stay at home. The expectation of the elderly that their children support them could induce culpability in the children when in the last resort they would have to take the decision to move their parents in a retirement house.

#### **PD8 753 VOLUNTEERING WITH SENIORS RECEIVING END-OF-LIFE HOME CARE: A QUESTION OF BALANCE**

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Introduction: In response to the aging population and the challenges brought on by the organization and delivery of care for the increasing number of seniors approaching death, the Quebec government (Canada) chose to adopt three strategies: development of home care services, promotion of interdisciplinary approaches and implementation of integrated palliative care programs. These choices go hand in hand with seniors' expressed desire to

live at home as long as possible, insofar as their needs are fulfilled. The participation of all stakeholders (professionals, patients' families and volunteers) is fundamental to answering these multifaceted needs. In Quebec, volunteers play an important and increasing role in palliative and end-of-life care, particularly in hospices and other health institutions. However, their involvement in home care has been scarcely developed. This study aimed to explore the factors that facilitate or hinder volunteers' participation in end-of-life home care for seniors. Methods and materials: Qualitative methods were used, based on Giddens' theory of structuration, which takes into consideration the dynamic interactions between the actions undertaken by individuals and the socio-structural context within which these actions take place. Thirty-one interviews were conducted with seniors receiving end-of-life home care, informal caregivers, volunteers and professionals. Results: Volunteer's participation results from reaching a balance between different components: 1) developing a confidence-based relationship while keeping a certain distance between volunteer and senior; 2) following existing rules aimed at guiding volunteer's action while respecting the flexibility needed for volunteer's and professional's action to co-exist; 3) establishing formal channels of communication while creating spontaneous and informal ties. Conclusion: Volunteers' contribution to seniors' end-of-life home care is contingent upon the careful equilibrium between liberty and flexibility – fundamental characteristics of volunteering – and the regulations that restrain them. This study has produced useful information that may contribute to the development of integrated, coordinated, and complete end-of-life home care.

#### **PD8 754 DO ELDERLY WITH DEMENTIA SHOULD BE SEPARATED FROM ELDERLY WITHOUT DEMENTIA?**

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In a previous study conducted in an EHPAD (specialized medical structure for elderly dependant people only) opened to any pathologies (83% dementia), among the 43 people not suffering from dementia, only 20% admitted that living closed to people with dementia was difficult to cope with. However, 64% of them would prefer to stay in a structure without people suffering from dementia. The present sociological study aimed at exploring the same question in medical structures in which patients are separated according to their pathologies. patients and method : The present study took place in 2 EHPAD. Thirteen interviews were conducted between January and March 2008: i.e., 12 individual interviews and 1 collective interview. During the interviews, the authors aimed at understanding what would be the ideal retirement house. Among this topic, they explored if elderly people would ask to be separated from people suffering from dementia. Results : During individual interviews, 2 distinct categories emerged clearly. On one hand, some people were strongly against the fact of living with people suffering from dementia, while on the other hand, some were ready to be mixed with people suffering from dementia because it may help them and allows to put their own problems in perspective. However, during the collective interview, the idea of living with people suffering from dementia was largely rejected. Conclusion: Living with people suffering from dementia is problematic for elderly people without dementia. thus, as a consequence, they can only be resigned when brought to live in a mix environment.

#### **PD8 755 TRANSITIONS IN FORMAL CARE AND INFORMAL. THE NORDANSTIG PROJECT -A LONGITUDINAL SWEDISH POPULATION-BASED STUDY**

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Introduction: The care for the elderly includes a complex interaction between formal services, informal care, morbidity and disabilities. Population based longitudinal studies of transitions are rare. The aim is to describe the care patterns longitudinally of non-demented and demented elderly people in a rural area in Northern Sweden. Methods and materials: People 75 years and older participating in the Kungsholmen-Nordanstig Project (n=919) was followed up 3 years later (n=579). The transitions are presented as patterns of informal and formal care, institutionalization and mortality. Number of hours of informal and formal care was examined by the Resource Utilization in Dementia instrument (RUD). Descriptive statistics as well as regression models were applied with age, gender, ADL, cognition, habitation and care patterns as covariates. Results: The mortality was 34% and 12 % of the survivors living at home at baseline were institutionalized. The sub group who had formal care but no informal care were institutionalized to the greatest extent (29%; chi-square  $p<0.05$ ). The relation between informal care and formal care for demented was more prominent at baseline (5.8 and 1.0 hours per day respectively) than at the follow up (3.2 and 1.6 hours per day respectively). In logistic regression models, dementia severity in terms of CDR had the strongest association with institutionalization (OR 8.41; 95% CI 4.08-17.31). People with mild cognitive decline (MCI) and no support at all at baseline had a great risk of being in need of care (formal or informal or institutionalized) or dead at follow up compared to CDR 0 (no cognitive decline) (OR 11.0; 95% CI 1.37-89.3).

Conclusion. The amount of informal care of demented was lower at the follow-up than at baseline, probably due to selection effects (institutionalization and mortality). Having MCI indicated a risk of being in need of care or dead at the follow up.

**PD8 756 THE TEAM**

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Introduction: The aging process has become a concern of humankind, causing limitations and the emergence of chronic degenerative diseases, leading to dependency. The responsibility of the family as caregiver and the formal appearance of familiar conflicts are recurrent. Purpose: Develop a methodology at work in team to be developed in units of Health for mediation of disputes between families and the elderly. Method: quantitative-qualitative social research in accordance with the action research method. Meetings with team and pilot study with cases of family disputes in the Mixed unity of Health of Taguatinga – Federal District - Brazil, 2008. Results: The proposed methodology is to hold family reunion along with team multiprofessional at least two professionals who mediate in the cases of family disputes with older people, guided by health professionals, with report of the specific situation. It shows the team, family and the reason for calling. It explained the status of the elderly and / or the care of specific pathology. The team conflict and the media directs the pact of responsibilities that it is for each family member, according to the proposals raised by relatives. The meeting is recorded in deed and signed by all the final. The monitoring of cases will be by phone contact, home visits, individualized attention or call for new meetings. Having exhausted the negotiating viable the case will be forwarded to the minutes the prosecutor or its equivalent. Conclusion: the methodology of mediation of conflicts between family and elderly through meetings can be used in the Basic Health Care, as it is easy to apply methodology, which requires a small number of professionals involved.

**PD8 757 RESIDENTIAL HOMES “THE BIG CHALLENGE IN MONTERREY MEXICO”**

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Introduction: The operation of residential homes has been a subject of multiple discussions, but at the same time, has been kept in political obscurity in public health. Salinas et al in 1991 published the problematic of residential homes in Monterrey. In this study, we evaluated 10 residential homes to determine the current situation. Material and Methods: This is a qualitative, descriptive and transversal study during a 6 month period. The sample was selected randomly from 36 residential homes. The survey was carried using variables such as medical services, nursing, psychology, regulations, facilities and occupational activities. Results: 10 residential homes with 397 residents were evaluated. During the analysis, we found that 30% showed deficiencies such as stairways between floors, 20% bad hygiene in bathrooms, 30% neglect in maintenance of the facilities, 50% had no safety equipment, 50% had no permanent medical personnel, and 20% had no private medical institution that regularly cared for the patients. 100% have at least one nurse on day and afternoon shifts and 30% do not have a nurse on the night shift. All have personnel trained in first aid, but 30% could not demonstrate CPR certificates neither training to evaluate the mental status. As to psychology and therapy, only 60% have stimulation and/or occupational therapy. In regulations area, 80% do not have operations manuals and are not registered with the Ministry of Health. Conclusion: The deficiencies found confirm the data gathered in the study performed in 1991 which means that we have not made any progress in bettering the quality of the service given. We suggest that quality standards and laws to regulate the development of new and existing institutions be created so that these areas of opportunity in business can turn into areas of quality in gerontological care.

**PD8 758 PHYSICAL RENOVATION OF AN ASSISTED LIVING FACILITY AND ITS IMPACT ON RESIDENTS, FAMILIES, AND STAFF**

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Physical settings, as well as their inhabitants, undergo the process of “aging in place.” As the initial “cohort” of assisted living facilities grows older, the need for physical renovation becomes inevitable. Although the physical remodeling of a residential setting can present significant stresses to residents, families, and staff, little is known about its effects and optimal ways to ameliorate negative aspects of this process. Field observations and in-depth interviews with key participants were used to document the impact of a 10-month major renovation of an assisted living facility on its residents, their family members, and facility staff. Strategies used to minimize the stress generated by the renovations included regular meetings with all involved, a monthly newsletter on construction updates, and the hiring of a “moving liaison/counselor” to facilitate adjustment to temporary moves within the facility. Residents were polled in regard to their environmental preferences, and their feedback was incorporated into renovation plans. The positive role of construction workers

in the adjustment process was an unanticipated finding. Recommendations for facilitating residents’ adjustment to physical remodeling of assisted living facilities will be shared.

**PD8 759 DIFFERENTIAL OUTCOMES OF CAREGIVING**

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INTRODUCTION: Many studies reported on the negative consequences of informal caregiving. Less is known about positive evaluations and wellbeing among caregivers. This study explores determinants of burden, positive evaluations and wellbeing. METHODS AND MATERIAL: Data are used from the 2007 nationally selected sample of adult informal caregivers of people aged 65 and over in the Netherlands (N = 1403). Caregiver burden was examined using a 14-item scale on time restrictions and emotional involvement. Positive evaluations were indicated by eight items such as feeling appreciated, learning new things, feeling close to the care receiver. Respondents were asked to indicate their change in wellbeing through providing care: 1) change in perceived health; 2) change in psychological health; 3) change in happiness. RESULTS: Multivariate regression analyses showed that burden and declined perceived health were strongly associated with the complex care situations and higher care intensity. Positive evaluations and increased happiness were associated with personal characteristics of the caregiver and a strong motive to provide care. Higher burden increased the risk for declined subjective and psychological health. Positive evaluations contribute to increased feelings of increased happiness. CONCLUSION: Positive and negative outcomes of care giving are weakly associated and are to a large extent determined by different factors. The accumulation of burden and negative health outcomes points at a vulnerable group of carers.

**PD8 760 INFORMAL CARE-GIVING FOR THE ELDERLY: ON THE REGULATION OF PSYCHOSOCIAL WELL-BEING**

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Introduction Intergenerational family support has been identified as a key element in dealing with last decades' demographic and societal changes. In this regard special attention has been paid to the role of informal caregivers by highlighting their contribution in relieving social health care systems but also by investigating possible sources of burden and strain associated with care-giving. In a first step, the present study aimed at identifying predictors of psychological distress in care-giving by focusing on (1) characteristics of the care-giving person (e.g. age, gender, subjective health status), (2) characteristics of the care-receiving person (e.g. familial lineage), (3) the duration and contents of the care-giving task, and (4) care-related familial and financial problems. In a second step, a resource oriented approach was adopted by examining moderating influences of supportive family networks and care-giving experience on the relationship between care-related strain and psychological distress. Methods and materials A total sample of N = 270 male and female respondents was asked to complete a standardized questionnaire containing personal characteristics, information on the care-receiving person, indicators of psychological and physical strain, care-giving activities and familial relationships. The research questions were tested using hierarchical OLS regression models and structural equation modeling. Results The results underlined the differential importance of personal health, supportive family relationships, and the satisfaction with financial resources for the regulation of care-related strain. Conclusion The obtained results are discussed in view of the implementation of supportive structures for informal caregivers

**PD8 761 RESIDENTIAL ENVIRONMENTS, HEALTH CONDITIONS AND QUALITY OF LIFE IN OLD AGE IN SPAIN**

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Introduction. As people age, the residential environment mean a place where living as well as sharing relationships with family, neighbours and friends. But housing designed and owned for younger families could become not suitable for old people, and especially for those with a declining level of competence related to health and functional ability. Within this context, residential characteristics associated with the house (standards and facilities, maintenance, ...) and the neighbourhood (perceived problems in the area, accessibility to services provision, social relationships ...) could be important factors to preserve personal autonomy as people grow older. The goal of the paper is to examine the relationships between residential environment and health conditions, both measured by means of objective and subjective indicators, and their effects on Quality of Life among the older people. The assumption underlying the analysis is that better personal and living conditions (based on socio-demographic features, level of competence related to health and functioning, and residential environment) are associated with a higher Quality of Life. Methods and material. The data derive from a survey on Quality of Life carried out in 2008

to 1,100 interviewees representing people aged 60 years old and more living in family housing in Spain (random sampling method). To analyse the structure of the data set, reduce its dimensionality and find out effects between variables, bivariate and multivariate statistical techniques are applied (Cluster Analysis, Factor Analysis, Categorical Regression Analysis). Results and conclusions. Homogeneous groups of people are defined based on health and residential environment conditions. We expect to find out differences in Quality of Life due to the adjustment status between residential environment conditions and the level of competence related to health and functional ability.

**PD8 762 TOWARDS MORE INCLUSIVE URBAN COMMUNITIES FOR OLDER PEOPLE? FINDINGS FROM THE CALL-ME PROJECT**

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Introduction: A growing body of research highlights the challenges faced by older people in disadvantaged urban communities. This group is disproportionately prone to ill health, poverty, social isolation and loneliness, vulnerability to crime, and a lack of opportunities to engage in civic activities. In contrast to a growing evidence base highlighting the challenges associated with ageing in disadvantaged communities, there has been relatively little work exploring ways in which community action by older people can help to improve community well-being. This paper presents findings from the interdisciplinary Community Action in Later Life (CALL-ME) project being undertaken in socially deprived communities in four neighbourhoods of Manchester, England. Methods: The study adopts a participatory action design, involving a cycle of research built around four different forms of community initiative: a community welfare advice initiative; a community arts initiative; a community health technology initiative; and a community health initiative. Key to the project's success is the active involvement of older people and other community stakeholders at each stage of the research process. A key partner is Manchester City Council's Joint Health Unit. Findings: The paper reports findings from initial fieldwork in the study communities, identifying not only some of the strategies that have been successful in engaging with older research participants and community stakeholders, but also those that have been less successful. The paper emphasises the challenges of interdisciplinary research in ageing, especially in relation to participatory action research designs. Conclusion: The paper concludes with a discussion of the implications of the study's findings for future studies of ageing in disadvantaged urban communities.

**PD8 763 UNDERSTANDING A DIAGNOSIS OF DEMENTIA: THE ROLE OF FAMILY CARERS**

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Introduction: Studies of the disclosure of a diagnosis of dementia have primarily focused on the role of health care professionals. Much of the work on understanding the meaning of the diagnosis, however, takes place within the family. Methods: Qualitative interviews with people with dementia (n=15) and family carers (n=19) will be used to illustrate how dementia is constructed within families. Results and Conclusions: The interviews confirm that family members often share professionals' reluctance to openly speak about the diagnosis. Consequently, the extent to which shared meanings of the diagnosis are achieved within families is variable. While some families are able to discuss the diagnosis openly as an accepted aspect of everyday life, in others, the diagnosis remains unspoken and unspeakable. The implications for professionals and how they might support families to jointly make sense of a diagnosis of dementia will be explored.

**PD8 764 IMPROVING RESPITE CARE PRACTICE : THE CHALLENGE OF OPENING A DAY CARE CENTRE ON 365 DAYS PER YEAR**

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Introduction Developing a wider offer of respite care is a priority of the French Alzheimer plan that's why FEDOSAD decided to create a day care centre open on 365 days a year. Reaching potential users when they need help is possible through a 24h/24 phone number. The coordinator makes a visit at home in the 48h. The person can test one day in the centre before to integrate the group. A "homelike" building, with a secured garden gives a friendly atmosphere. Day care activities rely on a trained and qualified team. Method In order to meet the needs of people with dementia and their family carers an individual activity program is designed maintaining abilities and person's capacities, enhancing verbal or non verbal communication and offering an increased social life. A support group is offered to families carers A satisfactory questionnaire is used, 3 evaluation meetings per year with staff and families, and feedback from outsider professionals helping people in their home gives us the following results. Results For the persons with dementia, it's about a feeling of "nice place to go" with pleasure to meet other persons. From early stage to severe dementia the participants like to have activities giving pleasure and self esteem. Friendship and social links between the users For families, less guilty a better understanding of the disease, and a relation with professionals based on confidence are

observed. Conclusion: Opening the day care centre 365 per year is a challenging project which success is based a strong networking process of integrated care as well as a person centered care implies a trained and committed team.

**PD8 765 OLD PEOPLE'S TECHNOLOGY ROOMS**

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Å. LARSSON

Introduction Old people's relation to technology is poorly understood in gerontology research. There is a lack of empirical studies, which address the wholeness of individuals' use of new and old artefacts and systems and how they themselves value different technological objects. The theoretical underpinning of the research area is further more limited to a few perspectives, typically human factor based theories and/or person-environment fit models. Within environmental gerontology there has been an attempt to broaden the perspectives, which should have relevance for the study of technology and ageing. Several have argued for the necessity to integrate physical, social and cultural dimensions and adopt a time perspective. Our study of old people's technology rooms is a contribution in that direction as we use life course theory and incorporate concepts from technology studies, e.g. studies of the social shaping of technology. Methods and materials The study was done in a middle-sized Swedish city. 29 individuals, born 1913 to 1940, were interviewed on three occasions during 2004-2006. The data was collected by the use of a semi-structured questioner and a form designed to document when and how different technological objects were appropriated. Results Eight technology objects have had special importance during the participants' life course as they have been loaded with significant social and cultural values: the radio, the washing machine, the telephone, the refrigerator, TV, the car, the mobile phone and the Internet. The oldest participants (85+) have not appropriated mobile phones and Internet (2005). Conclusion The analysis supports the assumption that decisions on how technology should be used and valued are shaped by the individual's techno-biography, present needs, capabilities and future life expectations. Changes are negotiated with partners, relatives (e.g. children and grandchildren) and with peers. All participants have as old rethought their use of new and old technological objects. The attitude towards changes is pragmatic.

**PD8 766 HOUSEHOLD ARRANGEMENTS OF OLDER-ELDERLY OF THE COMMUNITY**

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Introduction: The older-elderly aging context needs to be taken into account due to the redefinition of family as social institution. Methods and materials: This is an epidemiological, cross-sectional study that characterized the household arrangement of 147 older-elderly resident in Ribeirão Preto, SP. Home interviews were carried out with specific instruments for data collection. Results: Ages between 80 and 84 years predominated. The majority receives retirement pension, from one to three minimum wages, and owns their house. They have 4.08 children and live with 2.8 people in average. Men live with their partners, while women live by themselves. Great part of households is headed by the elderly. The most frequent arrangements were families with two and three generations. Conclusion: Regarding the household arrangement, there was equivalence in the results between the ones that moved into the house of the elderly and cases when the elderly moved into the family's house, reinforcing family as protector and caregiver of the elderly.

**PD8 767 GERONTOLOGY AND THE INVISIBILITY OF OLD AGE**

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Up until the 1970s, medical doctors in Brazil who focused their practice on older adults or claimed knowledge on aging were generally seen by other doctors as charlatans of sorts. At the same time, social movements promoting the rights of the elderly transformed old age into a broad based social concern, and therefore gave Geriatrics a new respectability among Brazilian medical specialists. More recently, the Brazilian Geriatric Society, in association with international geriatrics associations, offered specialization courses in Gerontology, and granted medical doctors certification as specialists in the area of Geriatrics. Drawing its examples and content analysis from the contemporary images produced by the mass media on Geriatrics and Geriatric specialists, this paper points to how representations of old age in these mass media forms relate to new conceptions of the body and health practices that characterize the contemporary Brazilian urban context. Applauded by both a general public interested in the new technologies of rejuvenescence, and a state bureaucracy that seeks to reduce health costs by educating the public against body neglect, old age is transformed into a problem of failed consumers who are incapable of adopting appropriate lifestyles and forms of consumption targeted at combating bodily deterioration and decay.

**PD8 768 QUALITY OF LIFE OF ELDERLY RIVERSIDE.**

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With an aging population arises the importance of research on quality of life (QoL) in old age. This study investigated the factors that influence QoL, as measured by the WHOQOL-Bref instrument, and the impact of these factors in each QoL domain (environmental, physical, psychological and social) of elderly residents in a riverside community, in Brazil. This is a descriptive and cross-sectional study. For the analysis of the data, the WHOQOL-Bref scores were presented in relation to the following socio-demographic and health characteristics: gender, illiteracy, monthly income, marital status, occupational activity, living alone, presence of systemic hypertension and use of local Health Services versus Health Services in the capital in case of an emergency. Fifty-three elderly people were interviewed: 58.5% were female; 47.1% were aged between 65 and 74 years; 49.1% had a stable union; 64.2% were illiterate and 50.9% earned a minimum wage for retirement. The results have shown that for marital status there was a significant difference ( $p=0.038$ ), for the environment domain: a married person had a higher score (better QoL) on that domain compared to an elderly who was single, separated or divorced and widower. Users of the local Health Services presented lower scores compared to those who did not use this service in case of an emergency and there was a significant statistical difference ( $p=0.01$ ) for the physical domain. Although there were no significant statistical differences in the QoL domains for the other factors studied, in general the QoL of the interviewees were in a good to a very good level (scores  $\geq 60$ ). This study has shown that housing conditions, illiteracy and a low monthly income did not have a negative impact in the QoL of the elderly residents in the community studied.

**PD8 769 RELIGIOSITY AND THE QUALITY OF LIFE OF POST-OPERATIVE COLON CANCER PATIENTS**

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**Introduction:** Religious coping resources play a significant role in overcoming various forms of stressful life situations, from family conflicts to dealing with illness. In this context, considering the various functions of religion, most often cited are explication and sensitization as well as healing. The aim of this study was to examine the relationship between individual religiosity and support-seeking through prayer in the course of illness and the results of colon cancer treatment and the quality of life (QoL) of post-operative patients. **Methods and materials:** The sample population consisted of patients from the Department of Gastroenterological Surgery in Cracow. Data was collected using a structured questionnaire administered during two face-to-face interviews after surgical treatment. In total, 562 individuals took part in the interview. The interview asked for the patient's opinion about the course of their illness and the determinants related to undertaking treatment as well as different dimensions of QoL following surgery. Statistical analysis was done using non-parametric tests (Mann-Withney and Kruskal-Wallis). **Results:** The results show a significant relationship between religiosity and QoL of patients following surgery. Scales used to analyze QoL include the QOLI, FILC, RAND, VAS, and COOP Charts. Religiosity was defined in terms of prayer frequency. Better QoL in QOLI and FILC scales was noted in individuals who did not change their prayer habits after the illness. There was a significant relationship between QoL in FLIC and RAND scales and self-rated religiosity, where those describing themselves as religious were found to have better QoL than those describing themselves as non-religious, non-practising, or even deeply religious. Respondents' attitudes to religion were also significantly related to mood, pain perception, and how they perceived their QoL using COOP Charts. No significant gender differences were noted between religiosity and QoL.

**PD8 770 DECONSTRUCTING OLDER WOMEN'S IDENTITIES: IMAGES OF "IDEAL OLD AGE" AND THE ROLES OF OLDER WOMEN IN MEXICAN SOCIETY**

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**INTRODUCTION** In the West the dominant understandings of ageing construct old age as a burden, which reinforces the negative association of older people with disability, frailty, helplessness and weakness. This study with older people provides an interesting context. Mexico still has a relatively young population, in contrast to the demographic ageing of many developed countries. Previous research on ageing in Mexico has focused on older people as a social burden, rather than private experiences of growing old. There is a real necessity for a more in-depth exploration of how older women face this stage in the life-course. **MATERIALS AND METHODS** The research is a qualitative study based on multiple in-depth semi-structured interviews of 32 women aged 60 and over in Mexico. The research participants represent a wide range of social experiences. It includes women from all social classes: those with children and those without; those who cohabit with their family and/or partners; those who never married; those who live alone; and those who live in a nursing home. **PRELIMINARY FINDINGS** Analysis of these women's narratives presents 5 main and interconnected themes: (1) Self-identity; (2) relationships; (3) health; (4) activities; and (5) structural issues. All these impact on what they perceive to be a successful ageing. The ongoing analysis shows how, through their narratives, the elderly

women in this study are confronting their own self-understanding and social and cultural perceptions towards older people. It also shows how older women are not a homogenous group: amongst them there are multiple and multidimensional accounts of successful ageing which emerge from, and shape, their own identities. Definitely, what is needed is not just a shift to a feminist definition of ageing well or successfully, but rather an approach that takes into account not only gender differences and inequalities, but also the lived experience of culture and personal meaning, with a view of uncovering alternative forms and images of ageing. In this way I hope to debate, and potentially, transform the paradigm of the current ageing studies in Mexico.

**PD8 771 IRRUPTION OF THE ALZHEIMER**

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**Introduction:** As Alzheimer's Disease (AD) concerns an increasing number of patients, it is becoming a sociocultural fact. The objective was to analyse literary works on AD published in French between 1997 and 2007. **Methods and material:** Examination of the French National Library database (keywords: Alzheimer and literature), of online libraries databases or specialized Internet sites, and of editors database for the number of copies sold. Youth literature was excluded. Qualitative analysis of included works was then conducted. **Results:** 30 works - originally published in French or translated from another language - were identified including 14 personal narrations, 14 fiction books and 2 cartoons. Qualitative analysis of 6 personal narrations, 6 fiction books and 2 cartoons are presented. 7 works were sold at more than 10000 copies. **Conclusion:** The number of yearly-published non-scientific works about AD tends to increase during the period, in particular fictions, pointing up to the incorporation of this illness in the collective imagination.

**PD8 772 CLINICAL-STATISTIC DATES OF ATHEROSCLEROSIS PREVALENCE IN ST. LUKE HOSPITAL BUCHAREST BETWEEN 2005-2007**

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**Abstract:** Atherosclerosis is a chronic inflammatory complex present in the arteries with medium and great diameter and it is more often associated with hyperlipidemia and/or another risk factors. The symptomatic manifestations of atherosclerosis are particularly localised at the level of heart, brain, kidneys, small intestine or legs arteries and its main consequences are the myocardial and cerebral infarction and the aortic aneurysm. At the human body, atherogenesis develops over a long period of time, and the growth of the atherom plaques is discontinue with periods of relative quiet and rapid evolution. The extension and evolution of these lesions are accelerated by the risk factors and they prevail more stressed among the male population. The precocious increase of atherosclerosis lesions depends on age, sex, race, diet, smoking and social-economic conditions. A characteristic demographic fact, typical to Romania and as well as to developed countries, is that the number of people over 60 years old is increasing, but their health is in decline according to the data of the national inquiries. This investigation includes clinical and statistical data about the prevalence of cardiovascular and cerebral diseases and risk factors at the aged patients from St. Luke Hospital , Bucharest, between 2005 and 2007. **Conclusions:** 1. From the statistical analysis related to the groups of age, we notice that the greater prevalence is at the group of 70-79 years old patients, followed by 60-69 years old patients. 2. Females represents the biggest percent from patients analysed( over 60%). 3. As St. Luke is a Chronic Disease Hospital, we also have an important segment of patients from rural areas, reflected in the rates that are increasing from year to year up to 20%. 4. Of the total number of aged patients hospitalised in St. Luke Hospital between 2005 and 2007 over 1/3 (30%) represents patients diagnosed with cardiovascular and cerebral diseases: chronic ischemia disease, hypertension, stroke, vascular haemorrhage, vascular dementia, arteritis. They are followed by the patients with tumours. 5. Of the patients with vascular diseases, we can notice a modest yearly increase of those with angina pectoris and hypertension(2-5%) and a significant yearly increase of those with dementia(above 5%). 6. In the case of those patients diagnosed with stroke , a remarkable decrease of 10% occurred, reaching the rate of 30% of the number of patients diagnosed with cardiovascular diseases and being equal with those with hypertension. 7. Among the risk factors analysed occurred at the patients hospitalised, there are: hyperlipidemia, obesity, smoking, diabetes mellitus, and a spectacular increase of diabetes mellitus ( about 4 times more ) was noticed. 8. Hyperlipidemia as well as smoking are yearly subjected to continuous process of increase in medium rates and the obesity rate is constant (about 50%) at the aged patients.

**PD8 773 SELF-RATED HEALTH STATES: PROBABILITIES OF TRANSITION AMONG MEXICAN RURAL ELDERLY LIVING IN EXTREME POVERTY**

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**Introduction:** Self-rated health (SRH) has been associated with multiple health outcomes, including mortality. Several studies have shown associations between SRH and age, gender, marriage status, chronic illness, and functional status among others variables. In addition, longitudinal studies shows that an important predictor of SRH is precisely self-

rated health measured previously. Objective: To estimate the probabilities of transition among self-rated health states for rural elderly living in extreme poverty, and association with functional status. Methods and materials: We use self-rated health (good/very good; fair; bad/very bad) to estimate the probabilities of transition of SRH in an aging cohort of 3,144 rural and poor older adults –aged 65-74 years- enrolled in a governmental social pension program (70 y más) in Mexico. Participants completed a questionnaire with information about health and life conditions, and have two measurements, a base-line and follow-up eleven months later. Probabilities of transition were estimated using longitudinal ordinal regression models. Results: At the follow-up, 56% of older adults reported a SRH good/very good, 32% fair, and 12% bad/very bad. SRH was associated with different variables as such as functional dependence, sex, literate, and chronic illness. For these older adults, we found that it's more likely to be in the same health state for those who reported a SRH good/very good at base-line, and for those who reported a SRH fair or bad/very bad, we found that in follow-up reported a SRH good/very good and fair respectively, for both with and without functional dependence. Conclusions: SRH good/very good were the most frequent among this sample of rural and poor older adults. There was no differences in probabilities of transition in SRH according functional dependence, but a substantial proportion changed toward a better SRH, maybe for the effect of 70 y más.

**PD8 774** HEALTHY AGEING CONCEPTUALIZATIONS: OLDER MALAYS IN MELBOURNE, AUSTRALIA AND KLANG VALLEY, MALAYSIA.

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Introduction This paper reports on the qualitative findings of healthy ageing conceptualization among older Malays in Klang Valley, Malaysia and Melbourne, Australia, as part of a larger study on healthy ageing being conducted in Malaysia, China and Australia by the Healthy Ageing Research Unit at Monash University. Healthy ageing is widely promoted in service and research in Australia with strong government support. It is projected that by 2011 that nearly 23% of Australians aged over 65 will be from a culturally and linguistically diverse background. In Malaysia, an active ageing approach is adopted by the Ministry of Health in response to the aging population. The older Malays in Melbourne are a minority group of migrants, whereas Malay is the major ethnic group in Malaysia. This presentation will describe healthy aging conceptualizations among the older Malays aged 60 and above, ageing in place in Malaysia and another group of Malays ageing in foreign land in Australia. Methods and materials Focus group and individual interviews were conducted. Participants shared their opinions about ageing and ageing well. Factors contributing to age well and preparations to achieve healthy ageing were also being discussed. The transcripts were analysed using thematic analysis approach. Results Participants indicated that ageing occurs in stages and not merely chronological age. They experienced changes in conceptualization of ageing through the life process. The key issues identified constituting healthy ageing were physical, mental, social and spiritual well being, living arrangement, hope and purpose, adaptation, and participation. Similarities and differences can be discussed during the presentation. Conclusion Healthy aging concepts should be carefully interpreted according to culture and characteristics of each population. More studies on ageing in place and ageing in foreign land among the other ethnic groups are needed to inform the design of health promoting services for the ageing population.

**PD8 775** EXTENT AND CORRELATES OF DEPRESSION AMONG OLDER ADULTS IN SINGAPORE AND INDIA

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Introduction Research has established that depression is a serious problem in the elderly population. The objectives of the current study are to investigate the extent and social correlates of depression among older adults in Singapore and India. Method In India, the study area was Chennai, a metropolitan city in South India. Face-to-face interviews were conducted among randomly selected non-institutionalized older adults aged 65 years and above in Singapore (n =181) and India (n = 250). Among other instruments, a 15-item Geriatric Depression Scale (GDS), a social support scale, and several questions on social engagement activities were administered. Multiple regression analyses were conducted to find out the influence of demographic, familial, social, and health variables on depression. Results The GDS score for older adults in India (mean score = 6.06) was higher than those in Singapore (mean score = 2.6). The model as a whole explained 27% and 30% of variances associated with GDS score for Indian and Singaporean older adults, respectively. For both the countries, none of the demographic and social factors emerged significant. Both in India and Singapore, low levels of social support and poor health status increased the risk for depression. Conclusion Older adults who report physical health problems should be screened for depression. Moreover, there is a need to strengthen the family

support of older adults. The implications of findings are discussed within the socio-cultural milieu of the respondents.

**PD8 776** RELATIONSHIP BETWEEN QUALITY OF LIFE AND CONSTIPATION IN PATIENTS ATTENDING THE GERIATRIC CLINICS OF A BRAZILIAN TERTIARY HOSPITAL.

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Introduction: Constipation is very common among elderly, the main objectives of the study were to determine the prevalence of chronic intestinal constipation (CIC) in patients attending the geriatric clinics of a Brazilian tertiary Hospital and verify the impact of CIC on the quality of life (QOL) of these patients. Methods and materials: All patients attended in the geriatrics clinics of the Hospital das Clínicas de Ribeirão Preto, Brazil from September 2006 to may 2007 were considered for inclusion in the study. Those with severe cognitive deficit, intense anxiety or another emotional or physical reaction in the beginning or during the application of the questionnaire, or who were bedridden were not included in the study. 620 patients, both genders, ageing 60 years and older, were interviewed with a structured questionnaire to identify chronic constipation according Rome II criteria, and data regarding gender, age, laxative use and duration of constipation were obtained. SF-36 was used to measure QOL of the last 120 patients interviewed, irrespective of the presence or absence of chronic constipation. Results: 306 (49,2%) of 620 patients presented CIC (228 females). Female gender was associated with chronic constipation ( $p=0.004$ ) and use of laxative ( $p<0.001$ ). The risk for developing CIC increase 2,3% each year in both genders ( $p=0.004$ ). The QOL was significantly lesser in constipated than non-constipated patients in all the dominions of SF-36: physical functioning, role-physical, pain index, general health perception, vitality, social functioning, role-emotional and mental health index. The consistence on Crombach's Alph was higher 0,8 on all domains. Conclusions: prevalence of CIC is high among elderly attending a geriatric clinics of a Brazilian tertiary hospital ; CIC is strongly associated with low QOL in the elderly.

**PD8 777** HEALTH CARE POLICY FOR THE ELDERLY AND THE RETIRED IN SENEGAL

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Senegal is living its demographic transition. Now the persons aged 60 years and over represent 7% of the population; life expectancy is 58 years. The elderly before the free health care program : In Senegal there are 3 categories of older persons according to their social status of having a pension or not : the older persons who depend to the public social security for pension funds ( FNR), the older persons affiliated to the Private Institution for pension funds ( IPRES). These two categories represent 30% of the elderly. The third category is represented by the older persons without social security and pension; they represent 70% of the elderly in Senegal. These elders pay for themselves to access the public health care Only the Private Institution for Pension Funds has an adequate policy of health care for the elderly with a national geriatric centre in Dakar, The Public Social Security for Pension Funds have an incomplete health care system because its pensioners still benefit from the public health system as they used when they were civil servants but pay for the drugs. The public health care policy for the elderly: In Senegal since November 1st 2006 the government started the national free health care program for the elderly called "Plan Sesame". The program is only applied in the public health system. It provides freely all the provisions available in the public system except prostheses, renal dialysis. The drugs of the program are essential drugs of Bamako initiative, not specific geriatric drugs. The only condition to access to the program is the new numerous identity card. The assessment of the program has shown its pertinence and has identified measurements to perpetuate it regarding the shortcomings. But in term this program must turn into a global national health insurance for the elderly

**PD8 778** A STUDY ON SOCIAL PARTICIPATION OF ELDERLY WITH STROKE-RELATED DISABILITY: EXAMINING MEDIATION EFFECTS OF FAMILY SUPPORT AND PROACTIVE COPING

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Introduction: The final goal of a successful rehabilitation for elderly with stroke related disability is to increase social participation associated with independent living. Especially, social Participation focusing on social role emphasizes the concepts of functional independence that represents as the indicator of quality of life for Elderly with stroke related disability. Therefore, the purpose of this study was to investigate factors related to social participation. Also, this study examined mediation effects of family support and proactive coping. Methods: Three hundreds eighty five elderly with stroke-related disability who is living in Seoul city were participated for this study. the Structural Equation Model was used to examine the direct effect of physical function and daily hassles of social participation and the indirect effect of family support and proactive coping

as a mediator. Results: The major findings of this study were as follow: First, the direct effect of physical function on social participation was statistically significant ( $p<.001$ ) while the effect of daily hassle on social participation was not statistically significant. Secondly, examining mediator effects, family support was not proved as a mediator, while proactive coping was shown to be a mediator between physical function and social participation. After that, examination of -difference and Sobel test were performed in order to reconfirm proactive coping as a mediator. As a result, it was proved to be a partial mediator model. Conclusion: In order to maximize social participation, it is valuable to have an integrated social service system which provides not only medical service focusing on increasing physical function but also psychosocial service that can enhance coping skills in a new environment. Also, it is necessary to develop community based social services providing on stop stroke management programs to be able to increase problem solving skills.

**PD8 779** GERIATRIC PSYCHIATRY HOME TREATMENT GHT – A PILOT STUDY ON OUTCOMES FOLLOWING HOSPITAL DISCHARGE FOR DEPRESSIVE AND DELUSIONAL PATIENTS

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Much worse outpatient care is offered to elderly people with mental health problems than to younger people. Despite the fact that health-promoting factors are known, there are hardly any studies on effective bio-psycho-social care models. The team of the Association to Promote Mental Health examined the effectiveness of geriatric psychiatry home treatment (GHT) on twelve depressive and delusional patients discharged from inpatient geronto-psychiatric care in a one-year longitudinal study. The participants received mental and social treatment and care at home for one year. The following instruments were used: Functionality was surveyed by means of the Global Assessment of Functioning Scale (GAF), psychiatric symptoms by means of the Brief Psychiatric Rating Scale (BPRS) and subjective quality of life (QoL) was surveyed by means of the WHOQOL-BREF self-report questionnaire. The main findings are as follows: 1) No patient had to receive inpatient psychiatric care or be admitted to a nursing home during the study period; 2) mental QoL had improved significantly after one year; 3) functionality remained stable; 4) the BPRS scores did not deteriorate. The results confirmed us that GHT is an effective instrument for extramural care of elderly people with psychiatric disorders. The limitations of the pilot study necessitated further studies to back up the findings. The study was published in Archives of Gerontology and Geriatrics, Volume 47, Issue 1, Pages 109-120 (July 2008). The follow-up study (RCT) with 30 patients in a treatment group and 30 in control group is already in progress. Key words: geriatric psychiatry, psychosocial functioning, quality of life, mental health, home treatment model, hospital discharge

**PD8 780** THE EXPERIENCE OF OLDER PEOPLE IN INTENSIVE CARE - A PHENOMENOLOGICAL INQUIRY

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The purpose of this paper is to present the preliminary findings of a study that explored the experiences of older people who were critically ill and mechanically ventilated in intensive care (ICU). People aged 65 years and over make up a significant number of ICU admissions, a trend which is likely to continue into the next decade. Technological advances and evidenced practice have resulted in better outcomes for older people, but what do older people say about their experience of ICU and what meaning do they attach to it in their lives? Methods and Materials Five older people were recruited into the study from a 20 bed ICU at a tertiary referral hospital in regional Australia. The method for the study included In-depth face to face interviews at two weeks after discharge and repeated at six months. Interviews were audio taped, transcribed and thematically analysed. Significant statements were highlighted and categorised for emergent themes. Results Emergent themes include "encountering death", "bound and drowning", "feeling vulnerable" and "the goldfish in the bowl". Encountering death was the phenomenon of not being able to hear, feel or dream during sedation. Bound and drowning was about struggling for breath and being unable to move in order to "save themselves". Feeling vulnerable was described as feeling violated, unable to voice their concerns, feeling helpless and frightened. The goldfish bowl captures the experience of being watched constantly. Conclusion Although contemporary health care practices have resulted in better medical outcomes for older people, the experience of being in ICU and the meanings that older people attribute to this need to be addressed. Health care workers need to be sensitive to the varying levels of awareness during sedation periods. Further research is needed to explore ways in which older people's experience can be improved in ICU.

**PD8 781** COMPASSION AND CARE, EXPLORING THE DOMAIN. A STUDY ON NURSES' COMPASSION FOR OLDER PEOPLE WITH CHRONIC DISEASE.  
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Introduction: This study focuses on the effect compassion has on older people with chronic disease. The daily life of older people with chronic disease is characterised by a dependency on care as a constant and long-term factor. This study elaborates on compassion from the perspective of this dependency. The goal of the study is to describe the concept as the human aspect in care and eventually integrate compassion into a theory of care. Methods and materials: A literature review, aimed to explore the nature of compassion related to nursing care, has been performed. The review is a hermeneutic and philosophical search into the phenomenon of compassion but is conducted separately from the qualitative data collection (Annells, 2006). This qualitative phase of the study is conducted according to the principles of grounded theory and uses issues from the review for the in-depth interviews in three different care settings. Results: Specific issues on the nature of compassion will be presented and illustrated by results from the qualitative data-collection. Literature describes compassion as an emotion with a cognitive aspect but nurses and patients also emphasize the subconscious aspect. Moreover, compassion is about 'setting aside' one's own perspective in order to really see what is salient for the person taken care of. Conclusion: Compassion is an answer to suffering despite the fact that suffering will not disappear by it. The 'human aspect' in nursing care appears to be an important motivation for nurses in exercising their profession. Compassion has value for professionals in a domain that has the amelioration of suffering as its purpose. Compassion is indispensable in a practice of care where suffering exists and persists. Annells M. (1996), Hermeneutic phenomenology: philosophical perspectives and current use in nursing research, Journal of Advanced Nursing, 23, 705-713.

**PD8 782** HOW SHOULD SOCIAL SERVICE AND MEDICAL PROVIDERS COLLABORATE TO CARE FOR ELTERS? CASE MANAGERS' VIEWS

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Introduction: Chronic care management of older adults' complex medical and mental health needs requires collaboration between social service providers in aging ("aging services") and primary medical care providers. Despite appeals and even federal mandates for joint working in some countries, little is known regarding specific strategies that foster successful collaboration across organizations. Methods and materials: Three focus groups were held with a total of 25 case managers working in an aging service agency in the southeastern United States. Participants were asked questions regarding general perceptions of collaboration, perceptions of aging services and primary care and barriers and facilitators to collaboration with primary care. Results: Overall, case managers desired to collaborate with primary care personnel and to involve clients as an active member of the "team." Uniformly, they perceived that primary care personnel do not understand the role or services provided by aging services. They recognized numerous challenges to collaborating with primary care, mostly related to lack of understanding about aging services, communication barriers, and time pressures of both primary care personnel and case managers. Case managers suggested several strategies they have found effective to enhance collaboration with primary care, including highlighting common goals with primary care personnel (i.e., helping the client and family), learning the specific contact person and preferred communication mechanisms at each clinic, rapport-building with the contact person, educating them about aging services, and simplifying requests. Conclusions: Training case managers to develop rapport with primary care providers, identify shared goals, and communicate clearly and succinctly may facilitate collaboration with primary care, thereby ultimately enhancing client outcomes. Additional research is needed to develop and evaluate training curricula for case managers.

**PD8 783** SOCIAL WORKERS AND THE ELDERLY: A TIME AND MOTION STUDY

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The increasing number of people aged 65 years and over, especially those in need of health and social services has a real impact on the number of clients seen and the types of activity performed by the social workers at the Health and Social Services Centre-University Institute of Geriatrics of Sherbrooke (HSSC-UIGS). In order to guarantee accessible and continuous services to the clientele, it is important to document the way services are organized and to identify the most relevant activities to respond adequately to the needs of the elderly. The aim of this study was to improve the work organization and the provision of social work services with reliable and valid data on time spent by social workers on different activities in three programs: Home Care, Geriatric Unit, Long-Term Care Facility. To collect precise information about activities and time, we first developed and validated a list of activities that includes direct and indirect therapeutic and non-therapeutic activities. We produced a preliminary list with the help of literature reviews and experts' opinions.

To validate this list of activities, six social workers collected, during two days, their activities without taking into consideration the time. This list was divided into two subsamples (A1, A2). Two senior social workers categorized the elements from the A1 to the list of activity. Since the agreement between social workers was moderate, we modified the list and used the A2 for recategorization. The final list included 77 activities, divided into 11 categories and was included in the electronic data capture software, running on handheld computer named TEDDI to conduct a time and motion study. The social workers used the TEDDI 12 consecutive days to record all of their activities. The results have been useful in supporting the decision-making for the management of services

**PD8 784 HOME BLOOD AND PLATELET TRANSFUSIONS OF HAEMATOLOGICAL PATIENTS REQUIRING HOSPITAL ADMISSIONS**

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Introduction. The ever-increasing demand on acute hospital services requires alternative methods of delivering all aspects of health care. Hospital at Home Service (HHS) is as efficacious as a traditional ward for elderly and functionally compromised patients with acute illness. Methods and materials. A retrospective descriptive study enrolling patients admitted to the HHS needing an hospital admission from 1st January 2007 to 31st December 2007 and reporting an haematological discharge's diagnosis as primary or secondary diagnosis. HHS is a multidisciplinary team providing medical cares as a traditional clinical ward (blood tests, electrocardiogram, spirometry, pulse oximetry, respiratory therapies, intravenous fluids, blood transfusions, surgical treatment of pressure ulcers, echocardiograms, echographs, Doppler ultrasonographies and radiograms). Results. Fifty four patients were enrolled in the study over a total of 481 patients treated at home in 2007. The Emergency Department main admission's diagnoses were: 31.48% haematological acute illness, 24.1% chronic obstructive pulmonary disease or pneumonia, 11.1% heart related symptoms, 5.5% falls or fractures, 3.7% haemorrhage. The remaining 22.2% showed hypoglycaemia, temperature, porto encephalitic syndrome or pancreatic disease. As primary discharge's diagnosis 20 patients (37%) had anaemia and 7 patients (13%) had leukaemia; as secondary discharge's diagnosis 25 patients (46%) had anaemia and 4 patients (7%) had leukaemia. Two patients had a double haematological diagnosis (acute myeloid leukaemia and anaemia due to haemorrhage; anaemia and chronic lymphatic leukaemia). Mean age was  $80.9 \pm 9.6$  years. Of all patients enrolled, 34 (62.9%) needed an emocomponent transfusion for a total volume of 112 blood units and 49 platelet pools. Patients requiring at least one blood or platelet transfusion were more functionally compromised than non-transfused. Conclusion. Haematological subjects mainly frailty and highly functionally compromised with acute illnesses could be treated at home.

**PD8 785 CHARACTERISTICS OF THE VERY FRAIL COMMUNITY-DWELLING ELDERS IN INTEGRATED MODELS OF CARE**

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Background: identifying very frail community-dwelling elders in models of integrated care constitutes the first step of the case management process. Little has been written to judge which elders require these interventions. Objective: to define the characteristics of the very frail community-dwelling elders in an integrated model of care in France. Method: a comparative study of very frail elders was carried out in an integrated model of care named COPA (Coordination Personnes Agées) and in two control groups including a community-based health services and a group of elders without model of care and without health service. A total of 400 very frail community-dwelling elders (eligibility tool) in the 3 groups were compared using the InterRai instrument. Results: In the integrated model of care group (intervention group), community elders were younger with less caregivers and with a higher proportion of burn-out caregivers when they were present. In this group, elders had more cognitive impairments, had less incapacity in activities of daily living and had more difficulties for realizing the instrumental of daily living (answer telephone, take medications, transportation). In control groups, patients fell down less in last 180 days, were more painful and had higher pressure ulcers, shortness of breath and bladder incontinence. There were less influenza vaccinations and medicine prescriptions in the intervention group. Conclusion: in model of integrated care, the very frail elders were different comparing with those in the community-care services. This study permits to better define the characteristics of the population who need a case management follow-up in the community.

**PD8 786 A COMPARISON BETWEEN JAPAN AND SWEDEN WITH REGARD TO THE PROVISION OF LONG-TERM CARE IN RELATION TO NEEDS**

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Introduction: Japan and Sweden share many features when it comes to the systems of care for frail elderly persons. Both countries have a high and increasing number of elderly people and both countries acknowledge a public responsibility to provide access to long term care and services for those in need. But there are also great differences in, e.g., social conditions, cultural traditions and the role of women and family. The differences and similarities make it interesting to make comparisons with regard to the provision of long-term care in relation to needs. Methods and materials: Using datasets collected in the assessment of care needs for the Japanese long-term care insurance system in Handa municipality, Japan, and data from the Swedish National Study on Ageing and Care, Kungsholmen district, the recipients of care in the two countries have been compared with regard to different variables describing needs. Moreover, a comparison has been made of the allotted care and services given these needs. Results: The comparison shows that on average the Handa care recipients are more dependent than the Kungsholmen-population. A possible explanation for this could be differences in household patterns with far fewer elderly persons living alone in Handa than in Kungsholmen. Patterns of services provision also differ substantially. In Handa, Japan, where many elderly people live with their extended family there are many more community services outside the home. In Kungsholmen, Sweden, where many elderly persons live alone the emphasis is on home help. The costs of care given level of disability are much higher in Sweden. Conclusion: Social and cultural differences between the two countries affect perceived needs as well as the patterns of service provision even if general conditions with regard to age structure and political ambitions are similar.

**PD8 787 MANY SMALL INTERVENTIONS BETTER THAN ONE OR TWO BIG ONES? THE EUROPEAN PERSPECTIVE**

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INTRODUCTION Overviews of public services for older people often limit themselves to reporting institutional care and Home Help/Home Care, be it for individuals in surveys, for a specific country or for international comparisons. Yet, these two 'major' services are in many countries supplemented by or substituted for by other, 'minor' services. The latter are services such as transportation, meals-on-wheels, alarm systems, day care etc., that also need to be considered. METHOD We use a number of surveys to provide data on all or nearly all these support programs for selected European countries: Denmark, Norway, Sweden, Germany, England, Spain. RESULTS When all types of support programs are considered, service coverage in these countries is ca. 50 - 100 % higher than by the 'major' programs alone, and target up to eight out of ten among the very old (90+). Persons who only use 'minor' services seem to have lesser needs for support than persons who use Home Help, confirming at least some degree of targeting. CONCLUSIONS The pros and cons of varying service strategies are discussed: do these 'minor' services serve the variable needs of older people better than the rigid choice between nothing, Home Help, or institutional care? Or, are 'minor' services used as inexpensive but inferior substitutes for the real thing? The data indicate that both scenarios are realistic.

**PD8 788 EVALUATING SERVICE NETWORKS FOR PEOPLE WITH DEMENTIA AND THEIR INFORMAL CAREGIVERS: THE "EVIDENT"-PROJECT**

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In an ageing society like Germany, efficacy of care provision and other support services for people with dementia and their informal caregivers is of particular importance. Against this background, the presented project "EVIDENT" aims to evaluate the work of six service networks in North Rhine-Westphalia (e.g., in the City of Cologne). Every network intends to link the different parts of dementia supply, including medical and nursing services, different types of support, consultation, self help and the involvement of volunteers. Their networking is to facilitate access to information about dementia services and to increase service use. Different research methods are used to answer the question, if these six networks reduce care-givers' burden and enhance quality of life for people with dementia. The project is based on a literature review of innovative concepts in dementia service provision, on case studies of the six networks, on in-depth interviews with experts of dementia care provision and on a survey of informal caregivers and people with mild dementia symptoms. Characteristics models of good practice are to be identified as well as options for improvement. Finally, recommendations for action are to be developed. Since the project is still in process (it ends in February 2010), preliminary results will be presented. They show the complexity of the evaluated networks, restrictions referring to institutional and financial framework and the high commitment of network actors. Findings of the survey and the in-depth interviews give insight in service use, caregiver

burden and assessment of network activities from the perspective of informal carers and people with dementia.

**PD8 789 SHOULD FIRST-GENERATION COMPREHENSIVE GERIATRIC ASSESSMENT INSTRUMENTS BE REPLACED BY THIRD-GENERATION? COMPARISON OF THE MINIMAL GERIATRIC SCREENING TOOLS (MGST) AND THE INTERRAI ACUTE CARE (INTERRAI-AC) IN ACUTE CLINICAL PRACTICE.**

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Introduction Comprehensive geriatric assessment (CGA) has evolved. - First, CGA consisted of a collection of single-domain, individually validated, measures. - The second-generation instruments introduced health setting-specific assessment with omni-comprehensive nature. - Improving data transfer in transitional care, third-generation CGA consists of instruments with a common set of standardized items across settings. The aim of the study is to compare the usability of the first-generation MGST and the recently released third-generation interRAI-AC in clinical practice. Methods and materials A comparison based on theory is validated by an expert panel of eight geriatricians. Results Both methods aim at multi-domain geriatric assessment, each with different scope and goal. InterRAI-AC, tailored for acute settings, intends to screen all geriatric domains. Based on systematic observational data, the method triggers risk domains and suggests clinical guidelines. Four observation periods outline the evolution of patients' functioning over stay. The simplicity of the method is appropriate for application on general medical and surgical wards, filling geriatric knowledge gaps. Its' uniformity facilitates data transition across care settings. MGST contains international validated instruments (e.g. Katz, Lawton, Cornell). Assessment is usually triggered by care givers' clinical impression based on geriatric expertise. In real terms, a selection of domains is assessed only once. The components of first-generation instruments imply profound examination and assessment requires specialized disciplines. Conclusion Both approaches are mutually exclusive. A cascade-system is proposed to integrate the complementary methods in practice. First, the systematic interRAI-AC assessment detects risk domains and suggests subsequent care tracks in the form of clinical protocols. Subsequently, domain-specific components of MGST conduct in-depth examination of care needs. The proposed method can be generalized to a variety of ward-types and the MGST can be substituted by a variety of first-generation assessment tools.

**PD8 790 THE DUTCH NATIONAL CARE FOR THE ELDERLY PROGRAMME: INTEGRATED CARE FOR FRAIL ELDERLY PERSONS**

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Introduction: The Netherlands Organisation of Health Research and Development (ZonMw) has launched the ambitious National Care for the Elderly Programme (NPE) to improve care and support for elderly persons with complex needs. This four year programme is initiated by the Ministry of Health, Welfare and Sport and started in 2008. The budget is 80 million euro. The NPE is designed to ensure that care and support for frail elderly people are arranged (or rearranged) in such a way that it caters better for their demands. Those demands differ from one individual to another, and may encompass medical, psychological and social problems. Integrated care and coordination between the various parties involved should ultimately lead to improved patient outcomes for the elderly themselves. Methods: The programme consists of three subsequent steps. The first step involves the formation of regional networks. These networks comprise of all parties that can contribute to the organisation of care and support for frail elderly persons, including health care providers, welfare and informal care organisations, insurers, local authorities, and associations for the elderly. The second step is for the regional networks to develop innovative transition experiments and research projects. The final step is the dissemination and implementation of knowledge. Results: Eight University Medical Centres throughout the Netherlands took the lead in the formation of the networks. Their network proposals were formally approved by ZonMw in October 2008. Each network will continue to grow to provide as much regional cover as possible. The first transition experiments and projects of the eight networks have been developed and started in January 2009. Conclusion: The NPE has led to the formation of eight regional networks that aim to improve integrated care for frail elderly persons. Whether this approach leads to improved patient outcomes and better integrated care is still to be tested.

**PD8 791 HEALTH PUBLIC POLICIES TO ELDERLY PEOPLE: AN INTERNATIONAL LITERATURE REVIEW**

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The people aged 60 and over is about 600 millions in 2000; 1.2 billion in 2025 and 2 billion in 2050. About two-thirds of all older persons are living in the developing world

and in the developed world, the very old is the fastest growing population group. With people living longer, getting sicker and having a lot of others demands, think about public health policies is necessary and very important. This study aimed to recognize the public policies health to elderly people in an international literature since 1997 in indexed data bases. It shows that the health public policies to elderly people is poorly developed and studied, in developing world there is more publications about it than developed world and the need to study this theme is clear.

**PD8 792 MEMORY LANE CAFÉS: EVALUATING AN INTEGRATED APPROACH TO SOCIAL INCLUSION FOR PEOPLE WITH DEMENTIA AND THEIR FAMILIES**

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Introduction Memory Lane Cafés are a service funded by the Government of Victoria, Australia for people with dementia, their family carers or friends. The service is run by Alzheimer's Australia Vic (AAV) and aims to promote social connectedness and prevent isolation. It was adapted from the Alzheimer Cafés, first implemented in the Netherlands in 1997(Miesen and Blom, 2001). The Memory Lane Café model differs from the original in that: it is only accessible to people assessed as having dementia, their family carers or friends; the focus is social as well as educational; all clients have attended a six-week group program 'Living with Memory Loss', that aims to promote understanding of dementia and provide initial support and early education. Thus, new clients attend as a group, with others they already know. Methods and Materials The National Ageing Research Institute (NARI) was commissioned to evaluate the service in 2008. Evaluation included focus groups with clients, a survey of 136 clients, consultation with staff, and interviews with stakeholders. Results Clients and staff were highly satisfied with the service. Valued components included: · Integration with other services offered by AAV · Opportunity for people with dementia to attend a social activity with family carers or friends · Environment where behaviours associated with dementia are accepted. Main shortcomings of the service were: · Lack of access for people who had not completed 'Living with Memory Loss' · Under-representation of people from Aboriginal and Torres Strait Islander and culturally and linguistically diverse backgrounds. Conclusion The adapted Alzheimer Café provides a highly valued opportunity for people with dementia, their family carers or friends to interact with others in a similar situation and share their experiences. The evaluation recommended that the AAV service be further developed to meet needs of a wider group of clients.

**PD8 793 POLICY TO PRACTICE: THE ROAD TO AN INTEGRATED CONTINUUM OF CARE**

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Introduction: Writing policy is relatively easy compared to ensuring policy impacts on practice. The New Zealand Health of Older People Strategy (2002) aimed to ensure an integrated continuum of care was implemented throughout New Zealand. This government policy provides a framework to guide regional District Health Boards (DHB) to align service provision with the objectives of the strategy. The expectation is that the integrated continuum of care programme for older people is implemented nationwide by 2010. This poster reports research that evaluated whether policy was being implemented in practice. Methods: A qualitative organisational evaluation that incorporated the balanced scorecard methodology was conducted. Phase I involved content analysis of the DHB Annual Plans, while Phase II involved interviews with three key stakeholder groups, Chief Executive Officers / Senior Executive Managers; Regional Older People's Health Service Managers and local consumer advocacy organisation managers. Data analysis was performed either in relation to the strategy objectives or through inductive analysis. Results: The key stakeholder groups were positive about the planning and progress being made towards implementation of policy, however, the DHB Annual Plans showed minimal evidence of planning. Inconsistencies in relation to the extent of service alignment and consumer satisfaction were also apparent. Resource shortages, time restraints, inflexibility of policy and internal and external organisational culture were identified as barriers to implementation. The dominance of a provider focus, fragmentation of internal and external organisational processes, a lack of collaboration, and minimal customer focused evaluation of services became evident as missing pieces to an integrated continuum of care. Conclusion: Some progress has been made towards implementing the strategy suggesting some commitment to policy; however misalignment between the perceptions of healthcare providers and consumers suggests that services are not yet fully aligned with the Strategy.

**PD8 794 COST ANALYSIS OF THE GERIATRIC RESOURCES FOR ASSESSMENT AND CARE OF ELDERS (GRACE) CARE MANAGEMENT INTERVENTION**

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**INTRODUCTION:** The GRACE model has been shown to improve quality and outcomes, and reduce acute care utilization in those at high-risk of hospitalization. Our objective is to provide a cost analysis of GRACE from the healthcare system perspective. **METHODS:** Randomized controlled trial of 951 adults aged 65 or older who received care at one of 7 community-based health centers of an urban public healthcare system. The GRACE intervention includes a nurse practitioner and social worker who provide in-home assessment and care management over two years in collaboration with the primary care physician and a geriatrics interdisciplinary team, and guided by care protocols for common geriatric conditions. Main outcome measures were chronic and preventive care costs (including intervention costs), acute care costs (ED and hospital), and total costs; in the full sample and predefined groups at low-risk (n=725) and high-risk (n=226) of hospitalization. Cost data were obtained from a comprehensive database that contains actual charges for all inpatient and outpatient services which were converted to costs using cost-to-charge ratios. **RESULTS:** Baseline characteristics were similar with mean age 72 years, 76% women, 60% black, 52% perceived health as fair/poor, and mean chronic disease count 2.7. In the full sample, mean two-year total costs for intervention patients was higher but not significantly different than costs in usual care patients (\$14,348 vs. \$11,834; P=.20). Total costs were significantly higher for intervention patients in the low risk group (\$13,307 vs. \$9,654; P=.01), and lower but not significantly different in the high-risk group (\$17,713 vs. \$18,776; P=.38). Intervention patients in the high-risk group had greater two-year costs for chronic and preventive care (\$9,724 vs. 6,210; P<.001), including intervention costs (\$2,691), but this was offset by reduced hospital costs (\$7,343 vs. \$11,731; P<.001). **CONCLUSION:** The GRACE care management intervention provides improved quality at similar cost when delivered to a vulnerable elder population at high risk of hospitalization.

**PD8 795 NEED OF A HOSPITAL PROVIDING INTEGRATED CARE FOR OLDER PATIENTS AND PATIENTS WITH CHRONIC DISEASES**

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**Introduction:** The Dutch healthcare system does not provide optimal care for older patients or patients with chronic diseases. Designing hospitals specialized in care for these patients might solve this problem. Little is known about how these patients perceive the need of such hospitals. In this small pilot study, we explored their views. **Methods and materials:** We conducted 29 semiquantitative interviews with patients (mean age 68, range 44-90) and their informal caregivers (mean age 58, range 26-80), who were either visiting the outpatient clinic or were inpatients of the department of Geriatrics of the Radboud University Nijmegen Medical Centre (RUNMC) or the University Lung Centre Dekkerswald (ULCD) in Nijmegen, the Netherlands. Interviews focused on how patients and caregivers perceived the need of hospitals delivering integrated care for older patients and patients with chronic diseases and how they perceived the need of coordination by a geriatrician. **Results:** 38% of patients and caregivers were positive about having a hospital specialized in integrated care for patients with chronic diseases. Amongst inpatients of the department of Geriatrics of the RUNMC (n=7), 71% responded positive, 14% scored indifferent and 14% did not respond. Coordination of care by a geriatrician, limited to aspects of care their general practitioner was not able to provide, was considered important by 79% of ULCD patients and caregivers (n=14) and 75% of RUNMC patients and caregivers (n=12). **Conclusion:** Overall, one-third of participants was positive about hospitals providing integrated care, yet almost all RUNMC inpatients were positive. Possibly, these inpatients had more complex health problems, and therefore greater need for integrated care, while ULCD patients already received more integrated care, fulfilling their needs. Most patients saw a task for geriatricians in coordination of care. These interviews support experiments changing the management of patients with complex health problems.

**PD8 796 THE HEALTH AND WELFARE INFO CARD: IMPROVING INFORMATION SUPPLY TOWARDS AND ABOUT OLDER PEOPLE WITH COMPLEX NEEDS**

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**Introduction:** Western European care systems do not provide optimal healthcare and social services for older people with complex care needs. Lack of up-to-date patient information

hampers cooperation between professionals, and a suboptimal information supply towards older people with complex needs impairs their self-management abilities. Therefore this primary care transition project aims to develop, implement, and evaluate the Health and Welfare Info Card (HWIC). This is an individualized toolkit to be used by older people with complex needs, their caregivers, and professionals. It contains up-to-date information about the health, functional, and social situation of the older person with complex needs and, connected to this, personalized health education. Future users will be trained to utilize the HWIC. Purpose of the HWIC is to increase collaboration among professionals and to improve self-management skills of older people with complex needs and their informal caregivers. **Methods and materials:** We will develop the project following the guidelines of the Medical Research Council's framework for complex interventions, using Intervention Mapping to develop the HWIC. Future users will be involved in developing the HWIC. Using this approach, participatory problem-solving, during the development phase, increases feasibility of this healthcare transition. Information technology will be used to extract useful data from existing databases, to add new data, to keep information up-to-date, and to provide access to both professionals and older people with complex needs. The subsequent pilot phase involves implementing the HWIC for 125 older people with complex needs, as well as meticulous process evaluation. An effect evaluation will complete the project. **Results:** The project starts in March 2009. Results will be available in 2012. **Conclusion:** This study will establish whether the HWIC can improve quality of care and ultimately quality of life for older people with complex care needs.

**PD8 797 ACCREDITATION INSTRUMENT OF COMPETENCE CARE LEVEL FOR RESIDENTIAL CARE HOMES IN MACAO**

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**Introduction:** According to the Social Welfare Bureau of the Macao Special Administrative Region (SAR) Government, the proportion of the population aged 65 and over is projected to rise markedly from 8.3% in 2005 to 11.95% in 2012 with an average annual rate of 0.42%. The Macao SAR Government has proposed several reforms of elderly services, in order to improve the quality of aged care service, to meet the rapid increase of the aged population. Therefore, the Social Welfare Bureau of the Macao SAR Government invited the Hong Kong Association of Gerontology (HKAG) to develop an accreditation instrument to assess the competence care level for the Residential Care Homes in 2006. Four aspects were included in the accreditation instrument. They are the environment, facilities, human resources and management and caring system. **Methods:** The HKAG developed the drafted accreditation instrument, which based on the residential care homes' experience in Hong Kong, Macao and oversea. Then, a group of experienced assessors of the residential aged care accreditation scheme were employed to test the drafted accreditation instrument in three residential care homes in Macao purposely. The assessors' advices were used to revise the drafted accreditation instrument and sent to those three residential care homes for improving their caring service. **Results:** The accreditation instrument is reliable and suitable to assess the competence care level for residential care homes in Macao. Based on the results of accreditation instrument, the residential care home in Macao can be divided into two types. The accreditation instrument is effective to match the older persons and residential care home suitably. **Conclusion:** The accreditation instrument contributes to assess the competence care level for residential care homes in four main aspects, which provides useful guideline for enhancing the quality of aged care service.

**PD8 798 INFORMATION ON SENIORS' MORBIDITY UPON INTERNMENTS ON THE BRAZILIAN UNIFIED HEALTH SYSTEM**

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In view of seniors' high hospital costs, the present study aims at comparing the seven leading frequencies of hospital morbidity affecting seniors in 2005 and 1994, through the data on the Hospital Information System (SIH/MS). **Methodology:** Evaluation of information obtained from the Ministry of Health DataSUS database on seniors' morbidity upon internments, and calculation of standard rates adjusted by the standardization direct method with the Epidat 3.1. program. **Main results:** The diseases of the circulatory system predominated in 2005 (28%) and in 1994 (32%), with a reduction by 4% between those years; neoplasias were twice higher in 2005 (8%) as compared to 1994 (4%); infectious and parasitic diseases remained stable at 7%, in 1994 and 2005. In conclusion, hospital morbidity affecting seniors in Brazil is predominantly related to diseases of the circulatory system; at the same time, one can observe both the non-reduction of infectious and parasitic diseases, and the signaling of a recent increase in neoplasias. Comparative studies like this one are recommended as a useful tool in hospital management. **Keywords:** morbidity, senior, public health.

**PD8 799 PARTICIPATION OF FRAIL ELDERLY PERSONS IN THE DUTCH NATIONAL CARE FOR THE ELDERLY PROGRAMME**

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**Introduction:** The National Care for the Elderly Programme (NPE) is designed to ensure that care and support for elderly people with complex needs caters better for their demands. Regional networks were formed consisting of all relevant partners, including (representatives of) the frail elderly persons, care providers and financiers. All partners together draw up innovative experiments and research projects to improve care and support. Starting point is the demand of the frail elderly persons themselves. Therefore, the program aims for an active participation of frail elderly persons in all steps of networks, experiments and research projects. **Methods:** Before initiating experiments in the NPE, all networks have to ensure that client participation is embedded in the network structure. Networks choose different methodologies for participation in the following steps: 1) assessing and prioritising the needs of frail elderly persons in the region, 2) translating needs into experiments and 3) participation during conduction of experiments and projects (monitoring and evaluation). Recently, a national support project "powerful client perspective in the NPE" is launched to guarantee a powerful participation of frail elderly persons in the networks. Before deciding on means of support, the current situation of participation in the networks is analysed. **Results:** Eight networks are working on active participation of frail elderly persons in the network and projects. Lessons can be learned from a comparison between the different participatory methodologies used in the networks. Means of support for participation will be put in practise in cooperation with associations of elderly persons by exchange of knowledge and experiences and using different media. **Conclusion:** To ensure that care improvements in the NPE meet the needs of the frail elderly, an active participation structure is organised in all networks, using different participatory methodologies.

**PD8 800 EVOLUTION OF CASE-FINDING FOR DISABILITIES WITH PRISMA-7 IN EMERGENCY ROOMS IN SHERBROOKE, QUÉBEC**  
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The PRISMA-7 tool has been introduced with an opportunistic approach in two emergency rooms (ERs) in Sherbrooke to identify older people with significant disabilities. The 7 yes/no questions had been included in the triage instrument for people aged 75 and over. The positive cases were directed to the single entry point of the local health and social services centre, which then conducted assessment and eventually provided home care. The study's objective was to monitor the rate of PRISMA-7 use in ERs since its implementation (4 years ago) within the context of the population health approach recommended in Québec. During the first year of implementation, the rate of PRISMA-7 use gradually increased up to 50 to 60%, then remained stable during second and third years. This plateau can be accounted for, in part, by the scarcity of resources for assessing and delivering home-care services. It also led intervening parties to jointly decide, during the third year, to maintain rate of use in ERs at around 50%. However, the rate of PRISMA-7 use fell to 40% during the fourth year, which coincided with renovation of an ER and a shortage of nursing staff. The 50% objective remains in place. In home care, standardization procedures are ongoing for community-care waiting lists, along with a priority classification. The public-health principle stating that "treatment should be available for the screened condition," may be considered as being respected. The rate of case-finding appears logical with the services actually available for assessing functional autonomy and the corresponding home services required. In terms of the population-health approach for supporting functional autonomy, it highlights the challenges in reaching the population level. As suggested by Young & Turnock (BMJ 2001), some managers consider publishing community-care waiting lists to increase attention and, consequently, priority in the health system.

**PD8 801 WHAT LIES BENEATH: HEALTH CARE ACCESS FOR GAY AND LESBIAN SENIORS IN CANADA**  
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**Purpose of the Study:** This presentation reports on the findings of a study whose purpose was to examine the experiences of gay and lesbian seniors who currently live in the community and to identify issues, which emerged from an exploration of access and equity in health care services to this population. **Design and Methods:** The study used a qualitative methodology based upon principles of grounded theory in which open-ended interviews were undertaken with 38 gay and lesbian seniors living in three different cities across Canada. **Results:** Findings highlight several important themes including negotiation related to disclosing one's identity in a health care setting; expectations of gay and lesbian seniors in relation to access and equity in the health care system; the role that social stigma plays in the creation of these expectations and in the health care systems' responses to them. **Implications:** Several recommendations for change emerge which include: specific training within all aspects of health care settings to address the needs of gay and lesbian seniors; advocacy to ensure that all procedures and policies within mainstream health care institutions recognize the specific needs of gay and lesbian seniors; and attention to the

design of long term care services for gay and lesbian seniors that are appropriately responsive to their needs.

**PD8 802 AN ECOLOGICAL SERVICE DELIVERY FRAMEWORK TO PROMOTE WELLBEING FOR COMMUNITIES OF OLDER PEOPLE**  
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**Introduction:** It is an imperative for the retirement living and aged care sector to develop service delivery frameworks that promote healthy ageing, through compression of disease and facilitating a more productive, engaged and active older population. At the core of the evolution of this sector is the shifting emphasis from care to resident wellbeing. The application of a healthy settings approach provides a framework and processes to support this shift through an ecological approach. Within the literature relating to wellbeing of older populations there has been limited attention to understanding the determinants of health and how they shape wellbeing. This study sought to develop an ecological framework for wellbeing of communities of older people. **Methods and materials:** The research was conducted in collaboration with two retirement living and aged care providers. A three stage process was followed including analysis of resident satisfaction surveys, focus groups with industry stakeholders and interviews/forums with residents. A thematic analysis was undertaken utilising the theoretical framework of a "health promoting setting". **Results:** A number of resident identified topics significant to wellbeing were identified. These topics were clustered as the four domains of physical environment, social environment, governance and active living at the three levels of personal, communal and societal. The research suggests the four themes underpin and influence self perception of wellbeing. **Conclusions:** The domains have been constructed as an ecological framework for wellbeing of communities of older people. This framework, informed by a healthy settings approach, is now being utilised to plan, implement and evaluate service delivery.

**PD8 803 A LONGITUDINAL EVALUATION OF RESIDENT OUTCOMES IN LONG-TERM CARE INSTITUTIONS**  
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**Introduction:** The nursing homes and residential care homes in Taiwan have been launched by the health and the social authorities, respectively, and regulated under different laws. However, the role and function between these two types of institutions was frequently overlapped and less distinctive. This study aimed to explore the profiles of residents and examine the care performance between these two types of institutions by following up residents' health outcome. **Methods:** This is a longitudinal study design including four stages of face-to-face interviews: the baseline (I), the three month (II), the six month (III) and the nine month follow-up (IV) for the newly admitted residents. We had completed 325 residents' interviews at the baseline, and 231 of them have been completely followed up on four stages. The outcome measurements include: Socio-demographics, functional ability, health status, residents/families satisfaction toward institutions, the mortality, and relocations at follow-up. **Results:** At baseline, the mean scores of ADLs for newly admitted residents in nursing homes were significantly lower, and the MMSE were higher than those in residential care homes. Furthermore, the residents' satisfaction towards living rooms, environments, social interaction and participations, and the overall satisfaction to institutions were statistically higher for residents in residential care homes. However, after nine months' follow-up, it showed that the subjective views of residents' broad health status, especially the mental component scales (MCS) of SF-36, were significantly higher in residents of nursing homes when controlling for the characteristics of institutions, residents, and their health status at baseline, while other health outcome measures had become no significant difference. **Conclusions:** We found residents in nursing homes became more satisfied with their mental health status, while the other outcomes remained with no difference. This information could be valuable for the future development of long-term care in terms of policy making, resource allocation and integration.

**PD8 804 CLINICAL PHARMACIST AS AN INTEGRATED MEMBER OF THE TRANSITIONAL CARE PROGRAM IMPROVES PATIENT OUTCOMES; A PILOT**  
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**Background** The Transition Care Program (TCP) provides post acute, goal directed and multi-disciplinary short-term support for older people following acute hospitalization. In 2008, a part time Clinical Pharmacist was employed for 6 months with the aim of exploring the role of a Clinical Pharmacist as an integrated member of this multidisciplinary team. **Method** All patients entering TCP from August 2008 to February 2009 were clinically reviewed by the Pharmacist in the acute care hospital (>300 beds). A pathway that provides for effective and timely reviews and discharge planning was plotted. Follow-up visits in the community were conducted if required. **Results** A total of 30

patients were reviewed. 33% were male. The mean age was  $82.4 \pm SD 7.1$ . Time taken to see the patient from the point of referral was  $1.0 \pm 6.0$  (days) with pharmacist visits/patient  $2.5 \pm 0.86$  and total visit time/patient being  $2.9 \pm 0.69$  (hours). The number of medications on admission was  $8.9 \pm 3.2$  and medications on discharge were  $10.9 \pm 3.4$ . 121 interventions were recommended with 96% of interventions accepted and acted upon by the medical teams. This brings the number of interventions per patient to  $3.9 \pm 2.7$ . All patients were discharged with a medication transfer summary detailing medication changes and 90% received a dosing administration aid. Feedback from aged care facilities and other health professionals indicate the transfer summary was helpful in terms of longer term management. Conclusions This pilot project demonstrated that a Clinical Pharmacist was able to implement a medication management model for TCP patients successfully. Further funding has been made available based on the reduction in medication related problems and increased demand for the service. Assessment of the impact of interventions is planned.

#### **PD8 805 MULTIDIMENSIONAL NEEDS**

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**INTRODUCTION** Due to a general long term dependences and fragilities increase, in many countries professionals and policy makers will face huge challenges concerning health care planning. To address health care needs it's necessary to arrange different levels of care; home care services represent one of the most important points of the care net in geriatric settings especially. Although Italian health system has gained a considerable experience in the management of chronic diseases, there are just few evidences on real connections between needs' evaluation methods and Personalized Care Plan (PCP). Currently it isn't much clear which are the criteria that allow to assign a patient to a certain level of care. Often there isn't the systematic use of needs' evaluation method or some needs assessment's tools are applied (such as SMAF, CTMSP, MDS-HC, VALGRAF, combination of ADL, IADL, MMSE) but it's not clear which is the link with the PCP.  
**METHODS AND MATERIALS** The project - which involves as leader ARSAN CAMPANIA, as coordinator Medicasa Italia, the "Università di Modena e Reggio Emilia" and six public territorial health providers (A.S.L. = Azienda Sanitaria Locale) located in four regions in Italy (ASL of Biella, Bologna, Modena, SA3 and Palermo) – foresees the evaluation of 250 patients with different methods (the first is the method adopted by the local ASL and the second is through VALGRAF).  
**RESULTS** Results show the two main components of variability in the way of identification of PCP, in terms of professionals involved and quantity of care (measured as number of visits per week). Results show that instruments and composition of the evaluation's team have deep impact on PCP.  
**CONCLUSION** This first phase of the project has allowed to identify some criteria to ensure equity, adequacy, quality, comparability and measurability in home care services provided in different areas.

#### **PD8 806 IMPLEMENTING COMPREHENSIVE GERIATRIC ASSESSMENTS IN BELGIUM: IMPORTANCE OF TACKLING PREJUDGMENTS OF CAREGIVERS**

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Introduction Comprehensive geriatric assessments gain importance in the health and social care for the elderly. A feasibility study was conducted on the use of the interRAI evaluation instruments in the Belgian health care system. This paper offers insight into the experiences of professional caregivers and tries to address their prejudices. Methods and materials As part of a national implementation process in Belgium 20 nursing homes and 14 community service providers participated in a pilot study using the interRAI LTCF Suite and HC Suite instruments (2007-2008). Participating caregivers were general practitioners, nurses, physical therapists, occupational therapists, social workers, speech therapists, etc. After using the instruments and testing their outcome variables (CAPs) semi-structured group interviews were conducted with these caregivers (Ngroups=30, Nparticipants=90) to explore their experiences. Results Most of the caregivers considered the instruments to be very useful in order to obtain a holistic view of their clients and to discover 'blind spots', risks or problems which were unknown to caregivers. However, the main obstacles mentioned by the caregivers were the length of the instruments and the considerably high amount of time-investment. In response, the researchers constructed a web based application which allows multidisciplinarity during and after the assessment. A unique feature of the Belgian instrument is that each caregiver fills in online parts of the instrument which are related to their area of expertise. Caregivers who used this application experienced multidisciplinarity and cooperation as a solution for the time burden. Moreover, the multidisciplinary aspect ameliorated communications among professionals and their sense of being heard. Conclusion This study demonstrated that combined efforts of researches, care providers, caregivers and decision makers improve the use of comprehensive geriatric assessment instruments. Elucidating the obstacles and

prejudgments expressed by caregivers is necessary for successful implementation and for enhancing the preparedness in using these instruments.

#### **PD8 807 PERSONAL CARE IN RESIDENTIAL HOMES AND STANDARDIZATION OF WORKING PROCEDURES: PROTOCOL FOR SUPPORT ON FEEDING**

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Standardization of working procedures is important to quality of the care provided. It helps out the training of professionals and the management of residential homes reaching the quality service improvement. The need arises from the low professionalisation of formal caregivers in Portugal: despite 57% of professionals are exclusively dedicated to caring for elders, a Portuguese research study (2008) found that only 33% has attended a training course on specific topics of gerontology and geriatrics before they began to work, and 70% of them didn't attend a training course in the past 12 months. In the scope of the project "Quality on Gerontological Equipments and Services" (UnIFai/ICBAS – University of Oporto, 2008), one of the main research areas developed a set of protocols of procedures of personal care. This process occurred in two phases: (i) revision of literature concerning the proper procedures; and (ii) analysis of the best practice codes on care for elder people (by direct observation). We developed a total of 40 protocols, organized on 6 main categories - feeding, hygiene, elimination, dressing, transfers, sleep and rest. Each protocol follows the structure of activity planning (material, space and person), intervention guidelines and activity evaluation (individual and the activity itself). These protocols of procedures are innovative, because they introduce a fresh set of techniques and establish a new model of care for elder people, practically inexistent in residential homes for elders. We present an example of a protocol for support on feeding, in its three ways, (i) supervision, (ii) partial support and (iii) total support, according to the level of dependency of the person.

#### **PD8 808 DISCHARGE OF GERIATRIC PATIENTS FROM HOSPITAL – BARRIERS TO COOPERATION AT THE INTERSECTION BETWEEN CLINIC AND OUTPATIENT CARE**

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Introduction The rising economic pressure on hospital management has led to a noticeable shortening in hospital stays, and elderly people with slower convalescence are often discharged while still in poor condition. An operative aftercare system for these patients needs to be established rapidly as possible and needs to cope with requirements previously covered by hospital-based professionals. Materials and Methods The Heidelberg Institute of Gerontology conducted an analysis of the current status of the supply situation for the elderly following a hospital stay for the municipal Department for the Elderly in Wiesbaden. The focus was on the terms of cooperation at the interface between the care system for in- and outpatients. We conducted a questionnaire-based survey of 271 medical professionals, therapists, social workers and nurses in hospital departments and outpatient practices and service facilities. The objective was to examine the degree and the quality of cooperation between the professionals as well as to discuss drawbacks of this cooperation. Results Our analysis revealed considerable communication deficits. The interpretation of the quality of cooperation varied in part between the different groups of respondents. Conclusion Our results were fed back to the various groups and resulted in a range of activities designed to optimize interdisciplinary and intersectional cooperation.

#### **PD8 809 ANALYSIS OF THE LOAD OF NURSING JOB AND OF THE DAYS OF HOSPITALIZATION IN A DEPARTMENT OF CRITICAL AREA: COMPARISON AMONG PATIENT ELDERLY AND NOT**

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Purpose of the study has been to verify if the nursing assistance in patient with over 65 years can cause a great load of relief job in a department of intensive therapy and can determine more days of hospitalization, considering that with to increase some elderly population an increase of refuges of such subjects it is underlined. Analysis has been effected near the Cardiotoracic Intensive Care Unit appraising patient operated for cardiac, vascular and thoracic pathologies using the scale of NEMS (Nine Equivalents of nursing Manpower use Score). We have analyzed a total of 354 patients: 218 over 65 years and 136 with age among 18 – 64 years, in the period between June and November 2008. The patients between 18-65 years have been 73% men and 27% women; the operations effected more frequently have been: by pass 39%, cardiac valves 29%, vascular 8%. NEMS middle score has been 27.25, the days of middle hospitalization have been 3.25. The patients over 65 years have been 63.6% men and 36.4% women, the operations more effected have been: by pass 34%, cardiac valves 27%, vascular 11%. NEMS middle score 27.27, days of middle hospitalization 3.8. The data of the great elderly over 75 years (80 patients) NEMS

middle score 27.46, days of middle hospitalization 3.57; over 80 years (19 patients) NEMS middle score 27.28, days of middle hospitalization 4.1. The results gotten in 6 months of study show that the nursing load (NEMS score) and the days of hospitalization don't statistically vary in meaningful way in relationship to the age of the operated patients. What has determines a great nursing job and a great number of days of hospitalization it has been caused by the refuges of urgency and intensive care.

#### **PD8 810 STU-RET ILC: INTERGENERATIONAL LEARNING CIRCLES OF RETIREES AND STUDENTS**

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Introduction: One of the priorities in the EU is that "Life Long Learning (LLL) must cover learning from pre-school to post-retirement age". In line with this strategy, the STU-RET ILC project titled "Students-Retirees Intergenerational Learning Circles" funded by the LLP, Grundtvig sectorial programme, is addressed to university/college students and retirees who learn in intergenerational learning circles so as to acquire skills and knowledge, as well as attitudes and values, from daily experience, from all available resources and from all influences in their own "life world". Methods and materials: This two-year project comprises 5 partner-organizations (Bulgaria, Cyprus, Spain, Finland and Poland). A supportive intergenerational learning environment where intergenerational learning circles of retirees and students participate was formed with the aim of sharing their cultures and respect diversity. Collaborative work will result in learning materials to improve some of the European key competences as well as the physical activity and health awareness. Results: Learning materials (printed and Internet version) in Social skills, Adapted Sport Games and Health Issues; Basic ICT and English Language Skills have been developed for teaching both students and retirees. These materials have been evaluated by external experts in the relevant project area, ensuring their interrelation to form a coherent learning system and each area has its specific role taking into consideration the needs of the target groups today and the demands of the European knowledge-based society. Conclusion: To conclude, European seniors are expected to be more active and better in health thus increasing their willingness to participate in social and economic life. To do so, they need to maintain the Lisbon key competences through their active participation in LLL in order to stay active in the European knowledge-based society.

#### **PD8 811 THE IMPLICATIONS OF AGEING ON INTERGENERATIONAL RELATIONSHIPS**

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Introduction In the last half century, Portugal has experienced considerable demographic changes, derived from advances of medicine and quality of life with the consequent diminution of infant mortality rates. On the other hand, greater longevity and the reduction of fertility involve many alterations in the composition and internal functioning of families and an enlargement of co-existent generations. These changes in composition entail important role changes for grandparents and grandchildren alike. Today, adults perform the role of grandparents for longer periods than adults in previous generations. Likewise, children are spending more of their lives in the role of grandchildren than at any other time in recent history. Starting from these ideas we conduct an investigation, the propose was to examine the relations between the gender of grandchildren, and grandchildren-grandparents relationship. It is now our intention to present some of the results from our investigation. Methods The information was collected from a convenience sample of 259 young adult students at ISCSP – Institute of Political and Social Sciences, Technical University of Lisbon. Twenty-four college students (18 female and 6 male), with ages between 18 and 24 years old, participate on the survey by completing questionnaires about their relationship with their living grandparents. The precondition to select the participants was, having four living grandparents (maternal grandmother and grandfather and paternal grandmother and grandfather). Results The main results are, generally, that there are no qualitative differences between the relationships of grandchildren, granddaughters and grandsons, with maternal and paternal grandparents. Conclusions On scales of closeness, grandchildren rated maternal grandparents significantly higher than paternal grandparents. More particularly, grandchildren relations are more intensive with maternal grandparents - in terms of seeking, frequency of contact and affectionateness resulting in a "matrilinearity of affections".

#### **PD8 812 THE EFFECTS OF MUSIC ACTIVITIES USING TONE CHIMES ON THE ELDERLY LIVING AT HOME AND STUDENTS WHO SUPPORT THE ELDERLY**

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Introduction: Previous research reports have shown that music activities therapeutically effect elderly. Also, recently it has been shown that people who support the elderly during music activities are positively effect. The purpose of this study was to examine the effects

of participation in music activities using tone chimes on both elderly living at home and students who support the elderly. Methods and materials: Fourteen elderly living at home and nine occupational therapy students served as subjects in the present study. We assessed the psychology before and after a once a week music activities over a six week period for 1.5 hours. Students were evaluated using Quality of Life (QOL26) and General Self-Efficacy Scale (GSES), while at the same time, image of elderly evaluation using Semantic Differential method. The elderly were evaluated using Philadelphia Geriatric Center (PGC). The Mood Check List-Short Form 1 (MCL-S.1) was conducted before and after each music activity for the elderly. All scores were analyzed using a two-sample Wilcoxon test in SPSS13.0J. Results: The post PGC and MCL-S1 "pleasant feeling" "relaxation" of elderly and image of elderly scores of students were significantly better than the initial scores. However, QOL26 and GSES of students increased, but not significantly. Conclusion: The test scores are believed to be improved by the elders' consecutive communication with students, and a feeling of achievement in music which enable the elderly to feel pleasant and relaxed. The students' image of the elderly is believed to have changed due to witnessing the improvement in the elderly. This study suggests that elderly and students who participate in music activities together at the same time, show positive results scores of PGC and Mood increase for the elderly, and an improved image of the elderly was shown in the students.

#### **PD8 813 THE DEVELOPMENT OF LOCAL INTERGENERATIONAL CENTRES IN SLOVENIA**

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K. RAMOVS

The concept of local intergenerational centres which are under development in Slovenia arises from two acute social needs. The first is concern for a quality aging in circumstances where the demographical balance between generations has been destroyed. An equally acute need exists for a strong new solidarity between generations in today's living conditions. The basis of the intergenerational centres is at the same time an example of a research follow-up of good practice. After 1990 the Anton Trstenjak Institute developed a number of new programmes in order to meet both of the above needs. The fundamental programme informs the entire population about quality aging and about intergenerational solidarity. What follows is various short seminars about quality aging and quality relations between the elderly and young in families, local communities, companies and senior citizens institutions. An important element is programmes to recruit, educate and organize volunteers for personal or group intergenerational socializing with the elderly – to date several thousands have been trained. Thus several places throughout the country have acquired a self-organized social network for quality aging and growing intergenerational solidarity. After 2000 we started to systematically prepare, involving political leaders and the public, specific strategies for quality aging and solidary coexistence between generations, and on the basis of these strategies to set up intergenerational centres. These are locally adopted institutions or public-private partnerships which synergistically connect the local authorities and administration, public and civil institutions, organizations, programmes and active individuals to form a local movement for quality aging and solidary coexistence among generations in the future, as well as perform such programmes themselves. An intergenerational centre is a demanding project of community social management. Three specific examples of introducing an intergenerational centre are described: in a small rural community, in a larger town, and a regional model within a large solidarity organization.

#### **PD8 814 MEASURING THE SUCCESS OF AN INNOVATIVE INTERGENERATIONAL PROGRAM: THE HOMESHARE NSW EXAMPLE**

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Introduction The Benevolent Society's innovative Homeshare NSW program matches older people (householders), who need some company and assistance around the home, with young people (homesharers), who need somewhere affordable to live. This paper describes an evaluation of the outcomes for participants, a cost efficiency analysis conducted by the program's funders, and some of the challenges involved in evaluating innovative programs from these very different points of view. Methods and materials Householders and homesharers were interviewed at key points in the program to gauge their satisfaction with the program and its impact on their lives. In addition, family members of the householders were surveyed about the Homeshare experience from the perspective of their older relative and themselves. Analysis of the data identified key impact themes. A series of quantitative targets were also set by the funder, such as, the number of new matches per year and cost per month of homesharing, and the program was evaluated against these. The funders were also interested in the program's potential for large scale impact if implemented on a wider scale. Results The client evaluation demonstrated that the program achieved very positive quality of life outcomes for the majority of participants. It also identified factors that influenced the success of the matches and highlighted a number of challenges. The results of the funder's evaluation were mixed and demonstrated some of the challenges of evaluating the early years of an innovative program, such as the setting of realistic goals and the importance of the potential for large

scale impact. Conclusions Evaluation of Homeshare NSW demonstrated some very positive outcomes for participants but also demonstrated the challenges associated with evaluating the early years of an innovative program, and one with participants of varied ages.

**PD8 815 INTER-GENERATIONAL RELATIONS AMONGST BANGLADESHI AND PAKISTANI MIGRANTS SETTLED IN THE UK**  
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**INTRODUCTION:** Intergenerational relationships in families within minority ethnic groups living in Britain have rarely attracted interest as a topic for research or in policy circles and consequently we have a limited understanding of how migration impacts on inter-generational relations. The study aims to elicit the nature of the support exchange that occurs between the older and younger generations and who provides what to whom, and why. **METHODS AND MATERIALS:** A qualitative, narrative case study was conducted with 6 multi-generational families from the Bangladeshi and Pakistani communities in Reading, Berkshire between July 2006 to March 2007. Access to the participants was gained through personal networks and home visits. Purposive sampling was used to recruit the sample of 21 participants aged 19 to 79. The number of participants per family ranged from 3 to 4. A thematic content analysis was carried out. **RESULTS:** The case studies revealed that a wide range of support transfers between generations including: financial, physical, emotional, personal care, religious teaching and cultural values. The transfer occurs as a result of implicit and explicit negotiations of family obligations, cultural norms and emotional attachments but these are evolving. The older generation's expectation for care creates obligations within the British born second generation which are often incompatible with their own aspirations and have to be negotiated. Who provides care and support is decided by negotiation within families and by the individual's relationship and commitment to their relatives. **CONCLUSIONS:** Narrative life stories are a powerful means to investigate social interaction and changes between the generations and people's perception of family life, and place. The findings show that the changing roles and cultural expectations leave the older generation fearful that their British born second generation will not be able or willing to fulfill their expectations in the future.

**PD8 816 INTERGENERATIONAL RELATIONS OF AFRICAN MIGRANTS IN POST-APARTHEID SOUTH AFRICA: IMPLICATIONS FOR OLDER PERSONS**  
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**Introduction:** People migrating to South-Africa from other sub-Saharan African countries seem to be a continually increasing phenomenon. Initially, men migrated as mine workers to South Africa in search of work opportunities and a better life for themselves and their families. Later, the economic decline in some African countries, also motivated well-educated and highly skilled African people to migrate to South Africa. More recently, especially since the democratisation of South Africa, the political stability and the relative economic prosperity in relation to the instability in some other sub-Saharan African countries forced even more people to seek shelter and opportunities in South Africa. **Methods and materials:** The aim of this study was to qualitatively explore the experiences of migration and settlement in post-Apartheid South Africa as it relates to intergenerational issues, in the new country of residence, as well as, the country of origin. This study was conducted from the perspective of at least two generations residing in South Africa. Four focus groups and 30 in-depth interviews generated rich data of which the contents were thematically analysed. **Results:** The results obtained will be discussed from a phenomenological perspective. Specific focus will be placed on the intergenerational relations of African migrants to South Africa and on the implications thereof for older persons. **Conclusion:** Families undergo profound transformation on economic, political, social and intergenerational levels. Migration is often characterised by extended periods of separation between significant others, with severe implications for especially older persons and care management, whether remaining in their country of origin or new country of residence.

**PD8 817 INFORMAL CARE FOR OLDER PEOPLE BY THEIR ADULT CHILDREN: PROJECTIONS OF SUPPLY AND DEMAND TO 2041 IN ENGLAND**  
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**Introduction** This paper is concerned with informal or unpaid care provided by the adult children of older people. Over one in three disabled older people in England receives informal care from an adult child, yet the future supply of this form of care seems uncertain. The aim of the paper is to compare the supply of informal care to its demand in future years. **Methods and Materials** The study produces projections of informal care for older people to 2041 in England. The analysis focuses on the supply of intense care provided for 20 or more hours a week and on demand for social care by disabled older

people. Data sources include GHS data on both provision of informal care and receipt of care by people aged 65 and over. The research is part of a major study modelling ageing populations in future years, funded under the UK cross-council New Dynamics of Ageing Programme. **Results** The results show that, on the assumptions used, the supply of intense informal care to disabled older people by their adult children in England is unlikely to keep pace with demand in future years. Demand for informal care by disabled older people is projected to exceed supply by 2017, with the 'care gap' widening over the ensuing years. By 2041, there is projected to be a shortfall of around 250,000 intense carers or around 250,000 fewer disabled older people receiving intense informal care. The 'care-gap' is primarily driven by demographic changes. **Conclusion** The results suggest that, to keep pace with demand, either more adult children will need to provide intense informal care or more formal services for disabled older people will need to be provided. The research raises questions about long-term care policies that rely heavily on informal care in future.

**PD8 818 SELF-DEFINING BEING A VICTIM OF ABUSE IN RELATION TO THE HEALTH-RELATED QUALITY OF LIFE OF OLDER PEOPLE. A CRACOW STUDY.**  
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**Labeling theory** defines older age as secondary deviance, which, in consequence, increases the risk of different forms of abuse, predominantly from one's family environment . **Material and methods** This study examined the relationship between how being a victim of different types of abuse was defined by 252 older women and how this definition influenced their health-related quality of life (HRQoL). Data was initially collected in the homes of 403 older people using face to face interviews concerning their perception of different forms of abuse, as experienced by older acquaintances of the respondent, and their own self-definition of being a victim, based on experiences limited to older age. HRQoL was measured using the SF-36 test. Particular dimensions of HRQoL were defined as low provided their score was below the median. Risk of lower levels of HRQoL was done with logistic regression modeling using SPSS 15 for Windows. **Results** The risk of perceiving one's general health status as low was 6.6 times greater in women self-defined as victims of abuse perpetrated by their family in older age (95%CI=(1,04;41,7)). The risk of restricted functional status due to one's emotional state was 2.6 times greater in women who feel neglected by their family (95%CI=(1,03;6,7)). The risk of restricted functional status due to pain is 12.3 times greater in women who experienced physical abuse in older age (95%CI=(1,19;127)). The risk of restricted functional status in one's social life was 3.9 times greater in women who felt neglected by their family (95%CI=(1,27;11,8)). The risk of rating one's psychological health as low was 3 times greater in women who self-defined themselves as victims of psychological abuse perpetrated by their family in older age (95%CI=(1,16;7,71)). **Conclusions** The self-definition by older women of being a victim of different forms of abuse in older age significantly decreasing their HRQoL.

**PD8 819 CHANGES IN THE EMOTIONAL STATUS OF OLDER PEOPLE AS A CONSEQUENCE OF FEELING NEGLECTED. A CRACOW STUDY.**  
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The relationship between feeling neglected by family members, as self-reported by older people, and emotional status is very important for evaluating general health-related quality of life (HRQoL) in older age. This study examined this relationship as a predictor of general HRQoL. **Materials and Methods** The study was conducted in a simple random sample of 403 older people, including 253 (62.8%) women. Face-to-face interviews were performed among older citizens of Cracow, focusing on feelings of different forms of neglect, in relation to characteristics of their social network and family environment. HRQoL was measured using the SF-36 test. Particular dimensions of HRQoL were defined as low provided their score was below the median. Risk of lower levels of HRQoL was done with logistic regression modeling using SPSS 15 for Windows. **Results** More than 75% of those sampled were aged  $\leq 75$  years, 42.5% were currently married, and 37.3% widowed. Approximately half of the sample interacted socially with 1-3 individuals weekly (i.e., not co-resident) and  $\approx 10\%$  were socially isolated. The risk of restricted functional status due to one's emotional state rose 1.26 times (95%CI=(1,05;1,51)) if the individual felt that the needs of older people were not being met. This risk is more than 2 times greater in women (95%CI=(1,37;3,52)), though lower among those who interacted socially with more than 4 individuals weekly ( $Exp(B)=0,58$ ; 95%CI=(0,37;0,93)). The risk of rating one's psychological health as low was also 1.6 times higher in women (95%CI=(1,00;2,48)), 2 times higher in individuals aged  $>75$  years, compared to those aged  $<70$  years (95%CI=(1,07;3,49)), and approximately 2 times higher in individuals reporting a secondary or lower level of education (95%CI=(1,11;3,17)). **Conclusions** Data

confirm the significant relationship between feelings of neglect and emotional status as a predictor of general HRQoL.

**PD8 820 THE EFFECTS AND CHALLENGES ON A BASIS OF NEW LONG-TERM CARE INSURANCE SYSTEM IN JAPAN.**

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**Introduction** The long-term care insurance was launched in April, 2000 as a "system to support the care for the elderly as a collective effort of society.", in Japan. Its user population has expanded in the past five years and its usage has permeated among the people steadily. However, with these expansion and permeation, it is expected that the amount of insurance benefits and the premium which supports the former will increase substantially. Thus, the reform of the system is going to be focused on prevention. The purpose of this report is to delineate the new long-term care insurance system in Japan. I would like to present a few actual cases on the prevention of nursing care in Yamaguchi Prefecture and discuss their effects and challenges. Methods and materials The subjects were 900 elderly participant of long term care preventive enterprise in 2006. I would like to present a few actual cases on the prevention of nursing care in Yamaguchi Prefecture and discuss their effects and challenges. Results The effects of continuing prevention enterprises are highly evaluated. So, it is necessary to examine the drop-out group at prevention enterprises. It is costly to launch long term care enterprises for nutrition and oral care; as a result, there have been few such enterprises launched and also participants are on the decline. Conclusion Due to the advancement of ageing, the elderly's health building will become increasingly important. Because of the projected increase in single households and multiple households of the elderly, self-autonomy and its maintenance will become important for the elderly. In order to achieve this, it is necessary to consider training and education methods which are simple, do not depend on sophisticated tools and can be continued for a long time.

**PD8 821 CAREGIVERS IN ELDERLY CARE: WHICH POLICY INSTRUMENTS PROMOTE THE ATTRACTION AND RETENTION OF CARE STAFF IN ELDERLY CARE?**

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**Introduction** The shortage of workforce in elderly care appears to endanger the quality of care in most western countries. Various measures have been proposed but few have been fully tested in research and practice. This study aims to present an overview of instruments that Elderly care institutions use to retain and expand their workforce. The central question: Which instruments are used by managers to keep staff in the institution and what do they do to find new staff? This presentations shows a review of the literature on this problem and the solutions applied. Furthermore a study is presented of shows it outcomes of a practical research of the research group "innovation in elderly care" from Hogeschool Windesheim, University of applied sciences in the Netherlands. Methods and Materials A literature study was done in piCarta and Cinahl with keywords: shortage staff, elderly care, policy instruments period year 2000 till now. Ten semi-structured interviews where done by phone in the period October 2008 and January 2009 with managers of nursing homes and community Health Care. Interviews were taped and transcribed. Results The literature shows the shortage of care staff is not ubiquitous. Some regions have trouble finding adequate numbers of care staff, some don't and others have trouble finding the quality of workforce they need. Managers appear to use various management instruments to retain staff, such as listen to staff, being visible and accessible to the staff. However, they do not give a rationale for their strategy. Conclusion A shortage of workforce in elderly care is a problem for which various solutions are available. Managers are aware of the increasing urgency. Their choice of instruments needs to be more practice and evidence based.

**PD8 822 DOES LTC MARKET IMPROVE QUALITY OF SERVICE?: A CASE OF KOREAN LTC INSURANCE**

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1. Introduction This paper examines the radical change and its impact in service financing, provision, and governance as introducing of the Long Term Care Insurance for the Elderly in Korea. The first note worthy characteristic change is that LTC service has transformed from the very selective service which used to be applicable only to low income group to a universal service that is applicable to all income groups. The second notable change is that the service provision method has been changed from the service provision by non-profit organization that was entrusted by the state under monopolistic commission arrangement in the past to the introduction of a new open service provision arrangement in which free competition among service providers in service market and consumer choice will be emphasized. 2. Methods and Materials Analysis of quantitative and qualitative data on LTC Insurance 3. Results and Conclusion The Korean care market is wide open with minimum standards and their size will be determined by the market forces. In Korea, while control over service price is strong, the regulation of the labor market is relatively weak.

Therefore, it is very likely that there will be competition through labor cost reduction. This may lead to lower quality of service. Marketization is expected to empower care users and expand their choices. However, marketization is just one strategy out of several improvement strategies of service delivery. It does not secure service quality improvement and efficiency of resource allocation automatically. This role of the state defines the power of the liberal market: care market formation through care provider selection mechanism; control of market prices; regulation on the care labor market; system for monitoring and evaluating the quality of care services. The more the state adopts strong regulations and controls, the less the market wields its power.

**PD8 823 PLANNING FOR FUTURE LONG-TERM CARE NEEDS IN THE UNITED STATES: THE ROLE OF LIFE COURSE EVENTS IN THE DECISION TO PURCHASE PRIVATE LONG-TERM CARE INSURANCE**

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Census projections estimate that by 2050 the United States will have nearly 88.5 million individuals age 65 and older; additionally, by 2020, nearly 12 million people 65 and over will need some form of long-term care. The current public mechanisms for paying for long-term care in the U.S. will not meet the increased demand. Therefore, understanding the ways in which individuals plan for care needs has been the focus of numerous research studies. These studies demonstrate the benefits of planning for long-term care and clearly conceptualize different types of planning behavior. However, missing from current knowledge of planning is an understanding of the life course events/circumstances that encourage individuals to engage in a particular planning outcome (e.g., establish a saving account, purchase LTC insurance). Additionally, most countries have national programs for acute care, but many, with notable exceptions like Germany and Japan, do not have provisions for LTC insurance. As such, this study tracks changes in individual circumstances to provide a detailed profile of those who plan for long-term care via the purchase of private LTC insurance in the U.S. Event history analysis was used to analyze data from five waves of the Health and Retirement Study (1998, 2000, 2002, 2004 & 2006), a nationally representative sample of individuals 51 and over in the U.S. Preliminary results show that health status and education are negatively related to the decision to purchase LTC insurance, whereas race and age are positively associated with the purchase of LTC insurance. Understanding the life course events associated with planning for care needs via the purchase of LTC insurance is useful for consumers, gerontologists and public policy makers who are interested in understanding the impact of this private market product on the financing of long-term care.

**PD8 824 DETERMINANTS OF GH RESIDENTS' WITHDRAWAL**

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**Introduction:** Group homes (GH) give dementia elderly care services in familylike atmospheres. GHs were introduced from Scandinavian countries and have been considered as fascinating alternatives to traditional care facilities like nursing homes. GHs have increased rapidly after the introduction of the public long-term care insurance. Originally, their residents were supposed to be not severe, so GHs aren't obliged to have doctors nor nurses. However, the GHs which spent several years are confronted with the aggravation of their residents' health status. The aim of this paper is to clarify determinants of GH residents' withdrawal. Methods and Materials: 6,064 group homes were selected randomly nationwide (the extraction rate is 70%). Our subjects are their residents and the ones who left within one year. We did multinomial logistic regression. Categories of the dependent variables are "1. living in GH at the time of the survey", "2. nursing home placement(NH)", "3. health care facility placement(HCF)", "4. sanatorium type medical care facility placement(Sanat)", "4. hospitalization(Hosp)". The independent variables are emergency medicine, nurse, visiting nurse, home call, entity of GH, GH's foundation year, subjects' age, sex, residence period, severity and family. Results: Our final subjects are 9309 residents and 1,447 ones who left from GHs (total 1,447). The breakdowns of the ones left are NH(228), HCF(144), Sanatorium(97), Hospital(978). HCF placements were decreased by the arrangement of nurses. Hospital admissions were decreased by the emergency medicine. We found the significant differences in the places in which ones who left from GHs move among entities of GHs. Conclusion: Corporation with medicine could be effective for GHs residents to continue to live there. The residents might chose GHs considering their strong points.

**PD8 825 THE GERMAN LONG-TERM CARE INSURANCE – HAS IT BEEN A SOCIO-POLITICAL SUCCESS?**

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Fourteen years after the German Long-Term-Care Insurance has been introduced, the Federal Parliament in Germany has recently structurally reformed this insurance. The first part of the paper tells the "story of success" of the German way to regulate the rising importance of long term care socio-politically and in doing this asks for both the positive

effects as well as deficits and problems – as they are currently discussed. It will be shown that the positive effects mainly refer to the situation of the persons concerned and their caring family members. The negative effects mainly refer to the financial stability of the German Long Term Care Insurance which is threatened by different factors out of which the rising numbers of recipients entitled as well as a change in the choice of benefits. The second part of the paper will analyse the reasons for the reform. Among of the most important political proposals and options that were discussed in this context, the following are of significance: raising of benefits in cash, indexation of the financial provisions, raising of the financial benefits for persons with cognitive impairments, improvement of the local care provision by bundling and integrating existing ambulatory care structures ("Pflegestützpunkte"), introduction of individual case- respectively care management ("Fallmanagement"), promoting of prevention and rehabilitation, promotion and facilitating of sheltered housing particularly for people with cognitive restrictions, improvement of quality assurance and promoting civic involvement.

**PD8 826 NUTRIENT CONTENT OF SERVING FOOD AND USAGE OF DIETARY REFERENCE INTAKES FOR JAPANESE IN LONG-TERM CARE FACILITIES FOR THE ELDERLY IN JAPAN**

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Introduction Elderly residents in long-term care facilities have suffered from some nutrient deficiencies. However, little is known about how much nutrient content is included in serving food in long-term care facilities for the elderly. In this study, we evaluated nutrient content of serving food for their residents in these facilities. Methods and Material We sent self-administrated questionnaire to dietitians of 2770 facilities during December 2007. The survey included questions to determine the energy and nutrient content of serving food each day in these facilities. It was also to identify the usage of Dietary Reference Intakes for Japanese (DRI-J) in planning the master menu. Result A total of 1640 facilities participated in this study. When referring to guidelines, many facilities used to the present DRIs-J. Sixty-five percent of facilities provided only one set of value for energy content to residents, regardless of age and sex. The mode value of energy content was 1600kcal, which corresponds to the energy recommendation for men with the lowest physical activity level in the DRIs-J. For nutrient content, the mode value of protein was 60g in both men and women, which was the recommended dietary allowance (RDA) for men. The mode value of iron was 6.5mg for men and 6.0mg for women, which were the values as a RDA. The mode value of salt was 10mg or less in both sexes, which was the tolerable dietary goal for preventing lifestyle-related diseases (DG) for men. Conclusion Long-term care facilities are for men and women in a wide age range from 60 to 100 or over. However, the nutrient content of serving food in these facilities is the same value in most respects, regardless of age and sex. Nutrient values coincided with the DRIs-J value for RDA or DG for either men or women at many facilities.

**PD8 827 EFFECTS OF THE GLOBAL ECONOMIC DOWNTURN ON AUSTRALIAN BABY BOOMERS' FINANCIAL PLANNING**

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Introduction Australia, like other developed countries, has a rapidly ageing population, and at the forefront is the baby boom cohort which has started to retire. This study is part of a larger Ageing Baby Boomers in Australia project. The aim of this qualitative study was to explore boomers' financial planning and sources of income in retirement in the context of the global economic downturn. Methods Participants aged 50 to 62 years were recruited to 15 focus groups ( $n = 73$ ;  $m = 29$ ,  $f = 44$ ) conducted throughout Australia. The groups were organized by work/retirement status, gender and geographical location. The data were analyzed using NVivo software to identify the range of views and variations by the selected study variables. Results Boomers planned for, or were drawing from, a range of income streams and wealth holdings. These included defined benefit (guaranteed income level) and market-linked accumulation (self-funded annuity) retirement funds and other private investments. The current economic downturn has affected the planning, timing and security of those approaching retirement and those recently retired, particularly those with market-linked accumulations funds. Those with a defined benefit plan were not affected, but those drawing on accumulations funds found their income level had dropped, to the point where some were concerned about their income security. For those still working, great concern was expressed about the reduced balances in retirement accounts prompting some to delay retirement. The majority of participants discussed the possibility of having to make lifestyle changes to accommodate the change in their income. Conclusion Individual efforts and government policies designed to support financial planning and security in retirement are being influenced by exogenous events such as the economic

downturn. Participants stated they would need to work longer, or return to work, but this may be problematic in these uncertain economic times

**PD8 828 PERCEPTIONS OF EFFORTS AND REWARDS IN VOLUNTARY WORK: A FOCUS GROUP INTERVIEW**

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Introduction: A volunteer is someone who works for a community primarily because they choose to do so, and therefore volunteering may be a remarkable resource for advancing wellbeing of older people. Currently, knowledge about how volunteer workers perceive the efforts and rewards of their work is lacking. Methods and materials: We did a focus group interview among five 62-70 year old female volunteer workers to study the perceived efforts and rewards during a two month outdoor activity intervention they did with older community living people with severe mobility limitations. The tape-recorded interview was transcribed verbatim. In the preliminary analysis the first author inductively identified the key issues and themes relevant to the research question. Results: The rewards of the volunteer work arose from the sense of being useful and doing something meaningful and humane and from the social togetherness with the peers. An opportunity for personal growth was also perceived as a reward. The efforts included use of time for the activity. Conclusion: When organizing volunteer work, it is important to consider ways to display appreciation for the volunteer workers for their efforts while also providing them opportunities to share their experiences with peers. The time people are ready to invest in the volunteer work differs between individuals and this should be taken into account in order not to burden the volunteer workers too much.

**PD8 829 ELDERLY PEOPLE FLYING PRIVATE PLANES**

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Aeronautical aptitude is subject to sudden incapability while flying. Pilots, like everybody else, become old. Moreover more poly-pathologies may discreetly lead to a risk of accident. This article aims at detecting these poly-pathologies, mainly the disexecutive syndrome leading to a risk while flying. Two types of people are to be considered : - those flying solo - those flying with other people - instructors - pilots dropping gliders - air-démonstration pilots - pilots dropping parachutists - pilots using double control Finally, the Aviation doctor can rely on a certain number of "clues" to detect anomalies in the pilot's private life revealing aeronautical weaknesses. NOTION OF FRAGILITY Five criteria have been retained to define fragility: - Loss of 5 kilograms over one year independently of any particular diet - Exhaustion - Alteration of muscular strength - Reduced walking speed - Poor physical activity Out of these 5 criteria, being affected by 3 is enough to be classified in 'fragility syndrome' - The Get Up and Go test is easy to implement: From a sitting position, the patient must stand up, walk 5 meters, come back and sit down again in less than 20 seconds. If the test takes more than 20 s, the physician can consider the patient is developing putative weakness. - The Physical Performing Test established by Professor PFITENMEYER of Dijon (France) consisting of 7 tasks: - writing a sentence - simulating eating - taking a book and placing it on a shelf - putting on and taking off clothing - picking up an object and bringing it back - turning round - walking up and down 15 meters 4 points are assigned to each test with a total of 28 points The test is very useful in rheumatology to detect any deficiency. In aeronautics, mobility is essential when approaching an aerodrome, particularly if the pilot is informed of the presence of an aircraft in distress. Detecting discreet anomalies Personal and collective responsibilities of the pilots CONCLUSION Current standards for drugs and driving adapted to flying Out of the 8000 drugs quoted in the VIDAL medical dictionary, 2500 are signalled by a small car. Three colours rank the risks: - Yellow: be cautious when driving a ground motor vehicle - Orange: be extremely cautious driving a ground motor vehicle - Red: do NOT drive.

**PD8 830 AGING AT WORK UNTIL AGE 75 AND OVER / LESSONS FROM JAPAN**

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Introduction: Japan's Silver Human Resource Centers (SHRC) program is a post-retirement work program providing temporary and short-time jobs for persons aged 60 or older. This presentation aims at investigating conditions of successive employment in the latest years of life. Methods: Data were collected in 2006fy from 341 men and 99 women who were active members aged 75 and over belonging to a SHRC, located in the Tokyo metropolitan area. The independent variables were gender and the years of service or the active membership period. The moderate variable was age. The dependent variables were first, the number of job categories (v1) in which the members had engaged, and second, the

amount of pay (v2) which approximately represented working hours. Dependent variables were analyzed with a two-way ANOVA (gender ? three classifications of the years of active membership, i.e., less than 5, between 5-9, and more than 10 years). Results: With regard to v1, both of main effects and an interaction effect of independent variables were significant, i.e. women with more than ten years of service had engaged in significantly large numbers of job categories. As for v2, only a main effect of gender was significant, i.e. the amount of pay for men was significantly higher than the amount for women regardless of the years of service. Conclusions: The female retirees who had continuously engaged in SHRC jobs since their early sixties are likely to continue work in diversified ways even in their mid-seventies and over. It may suggest that workability of very old persons could be maintained and developed through continuous engagement in light and easy jobs in the earlier stage of their retirement life. It may also suggest that the SHRC program has been successful for developing diversified job opportunities for very old persons.

#### **PD8 831 ALL IN A DAYS WORK: WOMEN TRANSFORM RETIREMENT.**

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Introduction: Traditionally retirement has been seen as gateway between work and later life, implying withdrawal from productivity. This model is particularly inappropriate for women who are likely to have very disjointed working lives, and who may increase their involvement in work as they age. This research examined three different models of retirement which enabled women's diverse pathways into retirement to be identified and compared. Methods: In collaboration with the Australian Longitudinal Study on Women's Health, this work describes interview and survey data with mid-aged and older women who were either working, considering retirement, or already retired. Results: There were 59 interviews and 11 focus groups conducted. These data revealed three primary models of retirement (gateway, transitional and transformative models) and informed the development of the postal survey. The survey was sent to 900 women from the Australian Longitudinal Study on Women's Health, and 764 women responded (85%). Factor analysis of survey data identified three main domains of activity across the retirement models (social and active, engaged and purposeful, alone and quiet). While the majority of women felt fulfilled in retirement (75%), some felt overwhelmed (10%) and some felt lost (15%). Conclusions: Traditional models of retirement are increasingly seen as irrelevant to the experiences of many women, replaced instead with working part-time, working in a new or different field, or working under different arrangements. These findings show that retirement experiences for women can be eclectic, and are not necessarily the beginning of the end.

#### **PD8 832 AUSTRALIAN BABY BOOMERS' FINANCIAL SECURITY: PRIVATE VERSUS PUBLIC SECTOR EMPLOYMENT**

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Introduction Economic policy changes over the past five years have led to Australia's baby boomers redefining their retirement plans and expectations. This study is part of a larger Ageing Baby Boomers in Australia project. The aim of this quantitative study is to explore the relationship between employment sector and self-reported financial security as a key factor in the timing of retirement. Method The sample was drawn from Wave 3 of the national Household Income and Labour Dynamics in Australia survey (2003). Respondents (N=2,066) were aged 45 to 57 and in full-time employment. Variables of interest were age, gender (men N=1073, women N=993), employment sector, gross annual income and self-reported financial security. Results The majority of respondents (74%) were employed in the private sector. Preliminary results indicate that gross annual income was slightly higher for both men and women in the public sector; men in both sectors earn more than women on average; and the income gap between sectors for women (public higher by A\$10,000) was three times greater than for men (public higher by A\$3,300). In both sectors men on higher incomes rated financial security as important for timing of retirement. In contrast, women in both sectors on higher incomes rated financial security as not important for timing of retirement. Conclusion Differences in gender and sector of employment show that financial security for women maybe a significant factor in deciding when to retire and could be delaying retirement to increase their levels of financial security. With retirement income policy placing responsibility upon the individual, boomers employed in the private sector, and women in both sectors, appear to be at greater risk and may require targeted policies to achieve their desired retirement age and adequacy of standard of living.

#### **PD8 833 RETIREMENT AND PSYCHOLOGICAL HEALTH**

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Introduction: The present study is based on the two most common retirement regimes in Spain today: regular compulsory retirement at age 65, and early pre-65 retirement schemes (voluntary, progressive, and pre-retirement). The primary aim of this study was to examine the relationship between different types of retirement - compulsory retirement (age 65) and early retirement schemes (voluntary or forced) - and the different psychological health indicators (depression, anxiety and life satisfaction). Methods and materials: Semi-structured interview: 119 retired persons (31.9% women and 68.1% men) over the age of 55 ( $M = 66.40$  years,  $SD=5.91$ , range= 55-82 years). Sociodemographic and psychosocial data: SPMSQ (screening for cognitive impairment), "Ad Hoc interview", GADS (screening for anxiety and depression disorders), PGC (life satisfaction), and COOP-WONCA (health-related quality of life). Results: Retirement age ( $M=59.96$  years,  $SD=5.13$ ); length of retirement ( $M=6.48$  years,  $SD=4.84$ ); married (73.1%); primary school education (39.5%); skilled worker (45.4%); pre-retirement retirement regime (34.5%); voluntary (19.33%), illness (18.49%), forced (16.81%) and early 10.92%; income  $>\text{€}1077$  (49.1%). Statistically significant differences were found in psychological health considering type of retirement, level of anxiety (GADS) and life satisfaction (PGC), but not between type of retirement and level of depression (GADS). Conclusion: Results show a possible relationship between age and type of retirement associated with enhancement or deterioration in psychological health.

#### **PD8 834 PSYCHO-SOCIAL FUNCTIONING OF RETIRED VOLUNTEERS AT A SERVICE CENTRE**

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INTRODUCTION The focus of this presentation is to determine the factors that play a role in the psycho-social functioning of retired volunteers at the Potchefstroom Service Centre for the Aged. The positive as well as the negative psycho-social functioning areas have been measured according to a standardised measuring instrument (The MSI scale). Three components of self-perception namely inner uncertainty, worthlessness and guilt feelings have been tested as well as eight components of work values. This was done in order to better understand the retired volunteer and to place him or her at the particular service where they can mean the most to the service centre as well as where they can personally benefit the most. METHOD A systematic sample of 33% of all retired volunteers of the Potchefstroom Service Centre for the Aged were drawn. In this manner 44 participants were involved in this study. The data was of a mainly quantitative nature within the exploratory paradigm. RESULTS The study proved that if the retired volunteer is known, adhered to their expectations, put at ease and matched with the correct field of service delivery they will become loyal and longstanding service providers to the service centre. If the correct matching can be done between the older person and the retired volunteer, the organisation as well as the service centre will benefit from their services. CONCLUSION By doing socio-metric measuring of the retired volunteer a profile of the psycho-social functioning of the volunteer can be drawn up that will benefit both the organisation and the individual volunteer.

#### **PD8 835 SLEEP DURATION AND SLEEP COMPLAINTS AS PREDICTORS OF DISABILITY PENSIONS AMONG AGEING EMPLOYEES**

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Introduction Among ageing employees sleep complaints are a prevalent public health problem, but their consequences are poorly understood. Early exit from work continues in turn to be a serious economic problem. This study examined whether sleep duration and sleep complaints predict subsequent disability pensions among ageing employees. Methods and materials Baseline survey was collected in 2000-2002 among ageing employees of the City of Helsinki (n=6373, 80% women). Data on disability pensions were obtained from the Local Government Pensions Institution and the State Treasury of Finland (2000-2004) and were linked to the questionnaire data. Sleep duration was categorised into short (5-6 hours), normal (7-8 hours) and long (9+ hours). Sleep complaints during previous month included troubles falling asleep and staying asleep, waking up several times per night, and non-restorative sleep. Respondents were categorised into those with severe sleep complaints, moderate sleep complaints and good sleepers. Cox regression analysis was used to calculate hazard ratios (HR) for disability pension. Results There were 217 (3%) disability pension events during the follow-up. Age adjusted severe sleep complaints (sleep onset insomnia, sleep maintenance insomnia, and non-restorative sleep) strongly predicted disability pensions (HRs 3.4 -4.7) among women and men. Short sleep also predicted disability pensions (HR 1.4). Baseline health and health behavior accounted for part of the effects. Conclusions Sleep complaints and sleep duration predict early exit from work through disability pension among ageing women and men. To support ageing employees maintain work ability until their normal retirement age, promotion of normal sleep and

early detection and prevention of sleep complaints should be emphasized in occupational health care.

**PD8 836 THE ABILITY OF OLDER FEMALE EMPLOYEES TO CONTINUE WORKING: PREREQUISITES AND CONSEQUENCES**

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Introduction: Although women are confronted with specific obstacles in the course of their working life (e.g., less opportunities for development and advancement, lower income, problems of combining work and family life, part-time arrangements) little is known about older women's ability to continue working when faced with the prolongation of working life. Therefore, the aims of the study were a) to examine the work and employment situation of older female employees, b) to evaluate their subjective ability to remain in the work force, and c) to identify risk groups. Methods and materials: The representative sample consisted of N=1,800 older female workers (born 1947-64). Using computer assisted telephone interviews, data on socio-demographics, responsibilities for child and elder care, educational and vocational training, previous working life, future work situation, transition to retirement, the work ability index, and individual activities to extend working life were gathered. Results: The rating concerning the ability to remain in work life until the new individual statutory retirement age depended on occupational status (positive ratings of blue-collar workers vs. white-collar workers: 50% vs. 60%), and individual sectors (more pessimistic appraisals among employees of the post, the railways, hotel and catering industries). Additionally, three risk types were identified including women with health-impairments (29% of the interviewees), women with low-qualification (9%), and women with additional care-giving duties (10%). Conclusions: If the extension of the working life is to be achieved for most of the older female employees, a wide range of measures is necessary, in particular concerning the organisation of working conditions and time arrangements. Although women have a strong sense of self-responsibility for maintaining their ability to work, it is primarily up to the companies to offer support, for they constitute the environments determining the risk situation of older female employees.

**PD8 837 IMPROVING THE UNDERSTANDING OF POOR SLEEP IN LATER LIFE THROUGH THE LEGACY OF POOR SLEEP IN EARLIER LIFE**

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Background It is widely believed that sleep worsens in later life. Trouble getting to sleep, staying asleep, waking early, and an increase in daytime sleepiness has a higher prevalence among older people. Therefore the focus on sleep in later life tends to be on the physiological changes that take place, rather than on the social factors that may influence sleep quality, such as caring for an ill partner in the night. As a result poor sleep in later life is largely regarded as originating in later life. Aims and Methods This paper offers a detailed understanding of older peoples' sleep through qualitative interviews (n=62) of older people's perceptions of sleep needs, causes of poor sleep quality, and strategies to improve sleep. Results Older people reported difficulty getting to sleep, having fragmented sleep, and waking early in the morning. However, they were also often able to identify social factors that contributed to their poor sleep. Further exploration as to the origin of these factors revealed that many of the influences on the quality of their sleep earlier in life had a continuing impact on their current sleep. Such factors included previous long term shift working, caring for partners with a long term illness, worries about work, and continuing health problems. Conclusions Whilst it is important to recognize that changes in sleep architecture may influence the quality of older peoples' sleep, it is also important to take into account how the legacy of poor sleep in earlier stages of the lifecourse may continue through into later life and impact on the quality of current sleep. Asking people to reflect on their attitudes to sleep and sleep habits through a lifecourse narrative approach may contribute to a better understanding of the complex mechanisms that influence poor sleep in later life.

**PD8 838 HEALTH INDICATORS OF ELDERLY'S INSERTED IN GOVERNMENTAL HEALTH PROGRAM MANAUS-AMAZONAS, BRAZIL**

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Introduction: Studies about the elderly living in North's Brazilian Region are incipient and need to be performed to corroborate in health public policies. Objectives: the study presented here describe the methodological design about the Projeto Idoso da Floresta that analyze the main health indicators of the elderly inserted in the Estratégia de Saúde da Família (ESF-SUS) that is a Brazilian health public care program in Manaus-AM. Methods and materials: a two-stage epidemiologic study was conducted: (1º) selection of basic health

units (UBS) as unit selection; (2º) elderly selection as randomized sample unit from each UBS. Results: 1509 elderly were included in analysis, 810 (53.6%) women 6.9 years old). In $\pm$ 7.7 years old) and 699 (46.4%) men (66.8 $\pm$ 6.6 general, the elderly investigated here was married/widowed 94.8%), illiterates or with very lower education (46.5%), lived in houses (94.7%), received some external support (57.5%), was retired (64.5%) with without or lower economic income (67.9%). From the sample analyzed, 85.5% was independent and 10.3% reported to have > 04 morbidities. These results tended to be different in the Manaus's health districts. Conclusion: in general, the variable analyzed tended to be similar to results described in other Brazilian epidemiological studies. However, there are differences among districts that must be considered in the strategy of health and elderly care.

**PD8 839 CARE FOR THE ELDERLY AND DIVERSITY: A CHALLENGE FOR THE SCANDINAVIAN CARE REGIME**

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Introduction This paper focuses on diversity as a challenge to the Scandinavian care regime, which Hernes (1987) introduced as 'women-friendly', referring to the wide state responsibility for organising caring activities. Anttonen and Sipilä (1996) describe the Nordic social care regime as having extensive public care services for both children and the elderly and high female participation in paid labour. A new Anti-discrimination Act will combat discrimination on grounds of gender, transgender identity or expression, ethnic origin, religion or other belief, disability, sexual orientation or age. The Act will apply to most areas of society. This paper will concentrate on its consequences for the delivery of elderly care. Methods and materials To analyse the impact of the Act, a group of Swedish researchers will pool together and re-analyse data from several projects investigating the practice and organisation of work in paid elderly care. Research will be carried out on data covering demographic diversity, customer's choice and the value base of the care providers. Results In the Swedish context, diversity is a concept with a broader connotation than in international literature where it often is linked to demographic diversity. In social work it may be related to provision of care, to consumer (service user) choice and a diversity of care providers. Diversity could also mean diversity in values when meeting the demands of a client or a care recipient. Implementing diversity according to the Scandinavian care regime has uncovered some dilemmas connected to the structure of the Swedish public sector. Local autonomy has made it possible for each municipality to formulate its own administrative policy. This authority in public elderly care has been used to standardise services which is problematic in relation to diversity.

**PD8 840 DOES POOR HEALTH LEAD TO POVERTY AMONG UNATTACHED OLDER CANADIAN WOMEN?**

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The link between poverty and poor health is well known. Many reports indicate that poverty is the agent in this causal relationship; that is, poverty is a determinant of poor health. Most researchers find that poverty is a predictor of poor health, but do not report the inverse relationship, that is, that health is a predictor of poverty. This research is important because the nature of this relationship should dictate the systemic solutions to this population's health and poverty problems. This poster describes a study that used path analysis to predict the impact of health status and self-rated health, level of education, dwelling ownership, and number of hours worked per week on the financial security of Canadian women ages 55 to 64 widowed, separated, and divorced living alone. Using a cross-sectional sample (n=212) from Cycle 3.1 of Statistics Canada's recurrent Canadian Community Health Survey (2005), it was found that, with respect to the proposed relationships between the exogenous measures and income, 23.7% of the variance in income in the sample can be accounted for by health, hours worked, education, and dwelling ownership. This study demonstrated that (1) poor health does affect the incomes of older widowed, separated and divorced Canadian women who live alone, that is, on average, income does vary based on health; (2) other variables, that is, dwelling ownership, education, and hours worked also affect incomes; (3) hours worked mediates the effect of education on income; (4) self-rated health mediates the effect of chronic health condition(s) on income; and (5) health is predicted by income.

**PD8 841 AGEING AND SOCIAL CAPITAL IN AN AUSTRALIAN COASTAL RESORT**

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Introduction Australian policy makers have adopted the concept of social capital in framing welfare and health policies to refer to the assets of social norms, networks and trust available within communities, and have sought to identify enhancement strategies of particular relevance to older people. However little is known about how such resources might be differentially available and relevant to individuals and groups. Based on an understanding of social capital as something that is context-specific, this research describes the nature and specific features of social capital as it applies to older people in a coastal resort community. Methods and materials Data were collected in semi-structured interviews with 54 older residents, with broadly equal numbers of men and women in each

of two 5-year cohorts, 60-64 years and 80-84 years. Additional data from 103 responses to the questionnaire used to recruit the interview sample supplemented thematic content analysis of interview transcripts. Results Most older people in this study had referred to the resort area, moving away from established networks of family and friends. A few worked hard at retaining old connections and making new ones; most were more passive, with social circles more concentrated on local friends and immediate family. The group in their 60s were generally active in outdoor sports, church or social groups; those in their 80s had mostly withdrawn from active participation in such groups. Casual social contacts became more important as networks of family and friends were decimated by age-related frailty and death. Loss of access to private transport caused significant reduction in access to social activity. Conclusion Policies for older people should recognise that social capital available to an individual is a product of the social capital of the surrounding community and of the individual's own life history and circumstances.

**PD8 842 HEALTH INEQUALITIES AMONGST OLDER PEOPLE FROM ETHNIC MINORITY GROUPS IN BRITAIN**  
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The ageing of the United Kingdom (UK) population is well documented; however the ageing of ethnic minority communities and the implications for health and health care needs has received far less attention. In fact 'ageing' and 'ethnicity' are rarely integrated within health research. There are over 4.6 million individuals belonging to minority ethnic groups in the UK, with a quarter million aged 60 years or over according to the 2001 UK Census. The ageing of these communities over the next two decades places greater emphasis on the importance of empirical evidence on their health status and the policy implications in providing older ethnic elders with appropriate health care. The research will explore the sensitivity of different measures of socio-economic status for understanding health inequality in later life. The proposed research will contribute original empirical research investigating the impact of different measures of socio-economic status on health using high quality national surveys (Health Survey for England). The findings would be useful in informing which national policies (e.g. health promotion campaigns, housing, occupationally based services, social assistance) and locally based interventions (e.g. health campaigns for Pakistani older women) would be better targeted at which ethnic groups of older men and women. Improving health inequalities can have a significant positive effect on the quality of life of older ethnic minorities

**PD8 843 INTERNET/EMAIL USEAGE AND WELLBEING AMONG 65-84 YEAR OLDS IN NEW ZEALAND: SOCIAL POLICY IMPLICATIONS**  
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New Zealand's Positive Ageing Strategy (Ministry of Social Development) includes a commitment to promoting the value and participation of older people in communities. Continued opportunity for "personal growth and community participation in older age" (Goal Ten) is seen to have potential benefits in terms of wellbeing at both the individual and societal level. One potential medium through which this could be achieved is internet/email technology. Research indicates that significant groups of older people are using internet/email technology. The current study aims to discover whether this usage benefits older people's wellbeing and social participation. Using the data from a 2007 random sample of 1,680 New Zealanders aged 65-84, predictors of internet/email use were investigated, and the impact of internet use on the wellbeing of older adults. Gender, age, education, household composition, income and work status were found to be significant predictors of internet/email use. A significant positive relationship was also found between internet/email use and wellbeing using two internationally recognised wellbeing measures, the World Value Survey question and the World Health Organisation Quality of Life Indicator. Internet/email use also related to better self-rated health and increased leisure and recreation participation and leadership. It is clear from these current research findings that specific groups within society are underrepresented amongst internet users. Research findings linking internet/use with wellbeing in older age suggest it would be beneficial to introduce further social policy initiatives through the Positive Ageing Strategy. These could be aimed at increasing internet/email usage among older people, specifically targeting disadvantaged older people, for example older women who live alone. To ensure continued participation and wellbeing

**PD8 844 CONCEPTUAL AND METHODOLOGICAL CHALLENGES IN DESIGNING A NATIONAL PREVALENCE STUDY OF ELDER ABUSE IN AUSTRALIA**  
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Despite increased public policy interest in the phenomena of elder abuse, Australia lacks nationally validated prevalence data. The majority of studies that have been undertaken have been either state based and/or service located and do not give a valid picture of the extent of abuse. There are also major conceptual, methodological and cost challenges in designing a national study. In 2007 a national workshop was held sponsored by the Australian Research Council and National Health and Medical Research Council Ageing Well Research Network with researchers from several States and Professor Anthea Tinker

from UK, to review the state of elder abuse research in Australia and scope a forward research agenda. This group identified the priority need for a national prevalence study to be used as the basis for national planning as well as more detailed clinical intervention trials. Following this workshop a three state (Victoria, NSW, Western Australia) research group was established to develop the methodology for a national prevalence study, submit a grant application, and lobby government, other key stakeholders and philanthropic agencies to raise the estimated \$2m AUD funds required. One of the concerns of this group was the high cost for a relatively low yield in national prevalence studies (2.6% UK Study). A nested three state study design was developed involving both an area based household survey and analysis of agency caseloads. The conceptual and methodological challenges in designing this study for maximum yield, has required close collaboration between clinicians, researchers and senior policy analysts around both how inclusive to be of different types of abuse, and the best way of accessing and understanding abuse phenomena. This paper will elaborate on some of the learnings from this process and the conceptual framework within which the study was finally operationalized.

**PD8 845 ETHNICITY AND 'ELDERLY IMMIGRANTS' IN SOCIAL POLICY FOR OLDER PEOPLE: THE CASE OF SWEDEN**  
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International migration, brought on by globalisation, has been portrayed as a threat to Nordic welfare regimes. With ageing populations already undermining sustainability, the apparent growth in number of elderly immigrants has led to the discursive construction of this category as a social problem. How are ethnicity and 'elderly immigrants' thus portrayed in social policy for older people? Using a social constructionist perspective, a Swedish social policy document – SENIOR 2005 – has been analysed so as to examine the use of ethnicity and the depiction of 'elderly immigrants'. SENIOR 2005 is the final product of a parliamentary investigation of the ways in which future social policy can be developed to be sustainable in the long term; it can thus be regarded as one of the bases upon which policy is formed. The analysis has brought to light two contrasting ways in which 'elderly immigrants' are conceptualised. On the one hand, explicit discussions of ethnicity and 'elderly immigrants' focus on flux, diversity and heterogeneity – opposing the picture of a problematic, homogeneous group. On the other hand, ethnicity and 'elderly immigrants' are frequently mentioned in connection with a range of problems: poor health, psychological problems, lack of involvement in society, are just some of the qualities ascribed to 'elderly immigrants', which ultimately portrays them as a homogeneous group and social problem. In addition, the absence of questions of ethnicity in large parts of the text point to a frame of reference where Swedishness is the norm. Ultimately, 'elderly immigrants' are portrayed as a homogenous, marginalised, problematic group that is excluded from the national community of older people.

**PD8 846 CROSS-CULTURAL PROBLEMS BETWEEN THE CARE GIVER AND THE RESIDENT OF NURSING HOME**  
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K. ADACHI

Introduction: The aim of this study is to explore the way of enhancing the communication between the care giver and the resident of nursing home without psychological stress. Nowadays the number of Japanese populations of old people has been growing at the most rapid rates. To the contrary, the number of caregivers of nursing home is decreasing. Recently Japanese government has developed a policy getting care givers from other Asian countries, for example, Indonesia and Philippine. But Japanese people haven't been used to communicate the foreign people. So we investigated the problems to live the rest of life for old people and would like to find better way of cross-cultural communication. Methods and materials We asked 20 old people living in Vancouver in Canada with questionnaire about daily problems in the future of physical and psychological conditions. Research was done at April and May of 2008. Their anxiety were rated with 3 degree (from 0:without anxiety to 3:most worrying about). Results 20 Japanese old women replied to the questionnaire. Their averaged age was 65 years and duration of using English was 15 years. They worried about that their health will be failed and their daily life will be inconvenient. They think it depends on their physical and psychological conditions. Especially they worried about suffering dementia. Conclusion Almost Japanese old women have made up their mind to live in Canada as immigrant by themselves. But they were worrying about their ability of language when they communicate with medical doctor. Because when something is wrong with their health, they may think it seems very difficult to explain their accurate physical condition. We would like to continue the more research to clarify the factors of good conditions of communicating medical doctors and nursing home staff.

**PD8 847 LATE BLOOMERS: ELDERLY START-UPS AND ENTREPRENEURS IN GERMANY**  
A. FRANKE\* (TU Dortmund, Dortmund, Germany)

Introduction Most of the start-ups in Germany are founded from persons 35-45 years. But in 2003 in Germany a special kind of welfare instrument to promote start-ups from unemployed workers was implemented ("Me-PLC"/"Ich-AG"), which got a lot of stick, but the start-up-rate increased and figured a high proportion of women and elderly persons

(on average two years older than conventional entrepreneurs). There seems to be a wasted potential of elderly entrepreneurs particularly comparing with other countries (e.g. Iceland, Switzerland, UK). And there is a few of research about motives, experiences etc. Methods and materials In respect to the idea of "Ageing in place", I took a focus on the region of Bremen (Northern-Germany). The process steps included a literature review, a field research and 34 qualitative interviews with experts from banks etc. and elderly entrepreneurs 50 plus about motives, age discrimination and factors for fail/ success. Results By looking at the motives, interesting gender gaps were discovered. The social capital from the former job or private contacts is one of the most important success factors for elderly entrepreneurs. Their experiences with start-up promotion is quite good except with credit loaners (banks). Nearly all of them are very satisfied with their new situation and more than a half could image to work longer than 67. Conclusion Age discrimination and high ideals of an entrepreneur are still existing and important factors for the German lack of self-employed-culture. The welfare state has to implement instruments which allows start-ups for any age and phase of life (life course policy). There is still a lot of research to do about elderly entrepreneurs. Comparing studies with different countries would be interesting but also further research with a regional focus.

**PD8 848 INPATIENT CARE FOR PEOPLE WITH DEMENTIA: STAFF WELLBEING AND THE IMPLICATIONS FOR PERSON-CENTRED PRACTICE**  
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Introduction Within older people's mental health services, the threshold for admission to inpatient care is rising and staff are working with increasingly dependent and frail populations. The physical demands of this role as well as its emotional impact are considerable. Cures are generally not expected yet end of life care is seldom mentioned; staff are frequently expected to rehabilitate a person to return to an environment where adequate support is not available and deaths are a relatively common occurrence. We are focussing on the experience of working in inpatient settings for older people with dementia from the perspective of the professional carers who work most directly with them. We are interested in staff's motivation for undertaking this challenging work, what sustains them day-to-day, the coping strategies they employ, the rewards they derive from the work, and the problems they encounter. Methods and Materials This study is ethnographic, with data gathered primarily through participant observation and supplemented by assessments of the care environments through dementia care mapping, carers' questionnaires, and qualitative data derived from focus groups and individual interviews. The research is being undertaken in three different inpatient wards for older people with dementia within the Nottinghamshire Healthcare Trust; this diversity will contribute to the generalisability of our findings to other settings. Results This paper will present preliminary findings from our analysis, derived through a collaborative process involving the academic researchers, NHS stakeholders, carers, and representatives of the local Alzheimer's Society and Inpatient forum. Conclusions With a primary focus on policy and practice, we aim to identify ways to improve staff well-being and to promote the implementation of person-centred care and positive patient outcomes. Opinions in this study are those of the researchers and not of the Department of Health or NIHR.

**PD8 849 IMPROVING SOCIAL SUPPORT OPTIONS FOR THE ELDERLY IN A RURAL COMMUNITY**  
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**J. GREENHILL(1), K. DIX(1), T. MARTIN(2) - (1)** Flinders University Rural Clinical School (Renmark, Australia); (2) Renmark Paringa Hospital (Renmark, Australia)

INTRODUCTION It is now widely accepted that social networks and connections play an integral role to a person's sense of wellbeing, quality of life and their ability to cope with life stressors. The number and quality of links and connections individuals have within their community impact on their sense of isolation. Reducing social isolation is currently listed as one of the key challenges in addressing Australia's changing ageing population in the 21st century (Government of South Australia 2008). METHODS AND MATERIALS A steering group was established with community service staff enabling collaboration in the design, development and methodology of the project. Qualitative data was collected through a combination of semi structured interviews with 18 randomly selected HACC recipients and a focus group was held with community service providers. Thematic analysis of the data was undertaken. RESULTS This project identified that the social aspects of a person's life have not been considered a priority by HACC service providers and there are elderly people in the community who are isolated and largely reliant on services for social interaction and community involvement. The paper outlines the degree to which this collaborative research project enabled a paradigm shift in care provider consciousness and enabled movement from evidence to practice and ultimately better interventions. CONCLUSIONS The benefits of quality social support options to a person's health and wellbeing have not been adequately understood by community care providers. An awareness of the benefits of changing from a sole focus on ADL's (Activities of Daily Living) to incorporate a responsive consideration of social needs from the recipients' perspective has been a convergence of this project. The need for processes that enable

reflective practice and continual education for service workers is imperative to ensure services are supporting the social needs of elderly.

**PD8 850 MAINTAINING DIGNITY IN LATER LIFE: OLDER PEOPLE**  
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**L. LLOYD(1) - (1)** University of Bristol (Bristol, United Kingdom)

Introduction: This research is funded by the UK New Dynamics of Ageing Programme. It focuses on the everyday lives of 40 people aged 75+ who receive ongoing support and care from others, including families and health and social care services. Our aim is to obtain participants perspectives on dignity and the effect that dependency on others has on this. We also aim to obtain participants thoughts about and preparation for the future and the end of life, when dignity is a major concern. Method A qualitative longitudinal method is used, with a series of face-to-face and telephone interviews over a period from June 2008 to September 2010. Face to face interviews are recorded verbatim. Interviews are open and exploratory so as to enable participants to speak freely and in their own time. There are three main areas of focus: 1. Participants everyday lives, routines and relationships 2. Their experiences of receiving help and care 3. Their thoughts about the future. This methodology enables us to capture changes in perceptions of dignity as circumstances change. Results Emerging findings reveal a range of experiences, including some humiliating experiences with health professionals as well as respectful practices. There are striking differences in participants ability to withstand assaults on their dignity. The findings highlight the value of a life-course perspective to understanding differences and similarities in participants perspectives and to understanding the significance of personal relationships in both negative and positive contexts. Conclusion The concept of dignity is complex, with both objective and subjective dimensions. This research offers a dynamic perspective that takes account of individuals life-course and the relationship between past, present and future in terms of individual identity, interpersonal relationships and perspectives on dignity in the context of service provision.

**PD8 851 EXPECTATIONS OF THE PEOPLE OF THE THIRD AGE WHEN THEY TRAVEL ON TOURISM BY BUS.**  
**H. RODRIGUES DE SOUZA\*** (Uninove University, São Paulo, Brazil)

Individuals of the third age are being considered more and more important for tourist activities. The specific biological, psychological and social characteristics of the individuals of the third age have to be considered when they travel. The knowledge of the preferences and liking of these people, for example, can help to improve the travel services. The aim of this paper is to research, through questionnaires and observation, the expectations of the people of the third age, belonging to the middle-and high/middle-class in the city of São Paulo, Brazil, when they travel on tourism by bus and the facts discovered en route. We analyzed these aspects under the fields of health, culture, social relations and personal satisfaction. The results show that most of those people, when they traveled, expected to make new friends, wanted a balanced diet and tea in the evenings. Some of them were looking forward to exercising, while others just wanted to rest. A lot of them wanted to visit cultural sites, but almost all were willing to stop at stores to go shopping. Most of them hoped for parties and balls and comfortable busses during their trips. Watching the results, we verified that the amount of women traveling was always larger than the one of men, so we tried to find out the reasons, interviewing several male individuals. The results of the interviews with those individuals showed that they travel little, because they don't find interesting activities during the trips, e.g., lectures on interesting subjects, games, contests or cultural visits. Based on these results, we offer suggestions in order to improve more and more the attention given to the traveling individuals of the third age and meet with the expectations of that segment, which is getting more important day after day.

**PD8 852 PERCEPTION AND EXPERIENCE OF SAFETY AMONG OLDER NEW ZEALANDERS: IMPLICATIONS FOR WELLBEING AND SOCIAL INCLUSION**  
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Introduction Sen's capabilities based theory of wellbeing focuses on the quality of living people can achieve through their ability to convert opportunities into chosen ends with support from available instrumental freedoms. This paper examines relationships between the instrumental freedoms associated with older people's experiences and perceptions of safety, and their wellbeing in New Zealand. It identifies policy implications of disjunctions identified between the experience and perception of safety. Methods and materials Data are from a national survey of New Zealanders aged between 65 and 84 conducted in 2007. Results are based on bivariate analyses of responses to questions about experiences and perceptions of safety, personal income, overall satisfaction with life, loneliness, social participation, age, gender, marital status and residential location. Results Objective experiences of safety were very high, while subjective perceptions of safety were much lower; a finding shared with other research indicating no necessary link between the subjective fear of crime or victimisation and the objective risk of it happening. Perception of safety was positively related to personal income and participation in leisure and recreation activities, and inversely related to age and overall loneliness. Women's perceptions of safety were lower than men's. Negative perceptions of safety were inversely

related to social participation and wellbeing – even among those whose fear of victimisation outweighed their experience of it. Conclusion Distinctions between objectively and subjectively based evaluations of safety highlight the importance of measuring both in order to obtain a balanced view of the issues involved in older people's safety. Such a balanced view is a necessary basis for informing policy responses to older people's safety-related subjective needs that are consistent with both the nature of the safety-related conditions they face and their capacity to achieve inclusion, participation and integration communities.

**PD8 853 SOCIAL PARTICIPATION OF OLDER PEOPLE: DEVELOPMENT OF A NEW TYPOLOGY INFORMING SOCIAL POLICIES**

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**Introduction** In view of socio-demographic transformations, social participation has come to be considered a crucial element within leading models on aging. Social participation is said to enhance seniors' capacity to adjust to transitions throughout the life course, and as a result is quickly transforming public discourse and practices related to the social role of older people. **Methods and Materials** While the importance of encouraging senior citizens' social participation is unanimously voiced, what is meant by social participation and the means by which to attain social participation are less clear. From a planning perspective, the data concerning interventions that foster seniors' social participation is limited and fractionated. **Results** This paper reports the findings of a qualitative literature review of 98 scientific publications and 12 focus groups conducted in order to identify interventions intended to foster seniors' social participation. Based on the data reviewed, a typology of five methods of intervention was conceptualized: 1- social interaction in an individual context; 2- social interaction in a group context; 3- community activities and initiatives; 4- volunteering and informal assistance; 5- social and political involvement and activism. The validity of this typology was then tested through twelve focus groups consisted of senior citizens and with people who interact with them. The focus groups served to enhance the model with fieldwork experiences. **Conclusion** The implications of this study were three-fold. The typology organized the data aimed to foster seniors' social participation in an unprecedented way. The process related to action and research priorities drew together researchers' and seniors' knowledge, thereby potentially strengthening political decision-makers' and seniors' actions regarding social participation. Finally, the typology and process created evaluation tools that better allow researchers and decision makers to evaluate existing and future initiatives on the social participation of older people.

**PD8 854 BRAINMATICS: CAN HAND-HELD TECHNOLOGIES AMELIORATE THE EARLY ONSET OF DEMENTIA? – A MODEL FOR A LONGITUDINAL INVESTIGATION OF PRE-DIAGNOSED BUT POTENTIALLY SUSCEPTIBLE DEMENTIA SUFFERS**

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Australia is typical of OECD countries experiencing rapid ageing of the population and increases in the incidence of dementia. Recent reports show Australians who have dementia and Alzheimer's diseases have been increasing over the last two to three decades. The real cost of dementia was estimated to be \$5.6 billion in 2002 with over 162,000 cases reported (Access Economics 2004). It was further estimated that by 2050 some 730,000 could be afflicted if prevention activities are not found (Access Economics 2005). The report concludes any preventative activities that can delay the onset of dementia will lead to a better quality of life and make significant savings in future health cost. This project aims to contribute to early intervention and management of dementia. The project involves evaluating the use of hand-held technology as an early intervention measure to identify if undertaking regular cognitive training reduces early onset of dementia. It employs research of Kawashima (2005) and others that encourages brain activities in people as a way of countering brain dysfunction. Through the use of game technology, the study tests various techniques that will provide enjoyable stimuli to people's brains. The longitudinal study measures the impact of 'brainmatics', ubiquitous small game machines on cognitive function. Research undertaken (Doidge 2008) shows that the more educated, and physically and socially active a person, the less likely he/she is to fall victim to the disease. However, studies have only been able to show an association but not causality. By capturing physical, educational, and social characteristics of participants and studying their activities and cognitive progress over an extended period (which appears not to have been undertaken before), this study may unlock some secrets to ameliorating the early onset of dementia. This paper reports the literature, conceptual model, research methodology

**PD8 855 THE CANADIAN NETWORK FOR PREVENTION OF ELDER ABUSE: AN NGO APPROACH TO MISTREATMENT OF OLDER ADULTS.**

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**Introduction:** Senior abuse represents an important cause of morbidity and mortality in older adults. Only in the last 30 years has awareness of it gradually evolved, with W.H.O. international perspectives appearing in 2002. Most governments have been slow to provide leadership in this area. Canada, a bilingual (English/French) multicultural mosaic, extends almost 6000 kilometres from east to west. Its 10 provinces and 3 territories have their own mandates to address health and social services. This presentation describes the ten year experience and activities of the Canadian Network for Prevention of Elder Abuse (CNPEA), a national, non-profit, unfunded grassroots organization that has spanned a large, diverse country to address and prevent senior abuse. **Method:** Through word of mouth and email CNPEA has built a strong team of diverse stakeholders including seniors and seniors serving organizations, health and social service practitioners, academics/researchers, community developers, lawyers and police. In the absence of funding beyond in-kind contributions, initiatives undertaken by 22 members of an elected Board of Directors and a large membership is completely voluntary. Monthly 2 hour working meetings are conducted by teleconference, with detailed minutes to guide ad hoc work conducted outside of these gatherings. **Results:** CNPEA is a clearinghouse for promising approaches in the senior abuse field and a vehicle to promote awareness about mistreatment of older adults. It stimulates education on recognizing abuse and options for individual and community response. It promotes research including on tools that may better detect and respond to abuse. It encourages review of public policy at federal, provincial, and territorial levels. **Conclusions:** While an unscheduled encounter between Board members evoked the remark "Is that what you look like", CNPEA demonstrates that despite rarely meeting face to face and never as a whole group groundbreaking work can be accomplished

**PD8 856 A NEW AUSTRALIAN MODEL OF HOUSING AND CARE**

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**Introduction:** Australia's policies encourage older people to stay in their own homes for as long as possible, with the support of family and services. These policies assume secure, affordable and appropriate housing. However, while rates of home ownership among older Australians are high, inappropriate design and/or location can make staying in their own homes impossible. A premature move to residential aged care is expensive to the taxpayer and individual, is not what the majority of older people want and often jeopardises the social connections that are critical to their wellbeing. **Method:** The Benevolent Society has drawn on extensive research into Australian and overseas evidence (especially Humanitas's Apartments for Life in the Netherlands) to develop a new model of housing and care for older people. This included conducting a survey of people over 50 about their views on nursing homes, and the need for a new model. **Results:** The Apartments for Life Project is being trialled in Sydney. The key features of the model will be set out, with emphasis on what sets it apart from previous models of housing and/or care for older people in Australia i.e.: • 95% of residents able to stay in their own apartment to end of life, with community services when needed • design for a high level of adaptability • socio-economic and age diversity • provision of generous community facilities to encourage social participation and integration with the local community. The Project is in the detailed design phase. **Conclusion:** The model has the potential to overcome many of the limitations inherent in current provision by better integrating housing and care for older people, maximising their independence, autonomy and community participation, and minimising their need for high cost institutional care.

**PD8 857 LIFE QUALITY OF KOREAN OBESE ELDERLY: COMPARISON OF DEPRESSION AND LIFE SATISFACTION BETWEEN OBESE AND NON-OBESE**

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**Introduction** In Korea population of obese people is growing due to various social changes such as an increase in elderly population or a more westernized diet. This study aims to examine the difference of life quality – level of depression and life satisfaction - between obese and non-obese elderly and analyze the influential factors. **Methods and materials** Research used the data of Korean Longitudinal Study of Ageing (2006), targeting 3,925 (65+). DVs were depression and life satisfaction. IVs were economic activities, social participation, health-improvement activities. CVs were gender, age, education, chronic diseases, economic status, residential areas. Subjects were divided into obese and non-obese group. SPSS 12.0 Package was used to analyze along with ANOVA and multi-regression. **Results** First, level of depression differed according to gender, age, chronic diseases, economic status, social participation while life satisfaction according to gender, age, education, chronic diseases, economic status, residential areas. Second, obese group showed a higher level of depression among those who were females, having lower education levels, chronic diseases, less social participation while non-obese group showed among those who were females, having older ages, lower education levels, lower social status, less economic activity, less social participation, more health-improvement activities. Third, obese group showed a higher level of life satisfaction among those who were males, having higher education levels, fewer chronic diseases, higher economic status, more social participation while non-obese group showed among those who were males, having younger ages, higher education levels,

fewer chronic diseases, higher economic status, rural residential areas, more economic activity, more social participation, less health-improvement activity. Conclusion First, there are diversified factors influencing differences of level of depression and life satisfaction. Second, influential factors of depression and life satisfaction were different between obese and non-obese group.

- PD8 858 GENDER DIFFERENCES IN THE PREFERENCE FOR PLACE OF DEATH AMONG COMMUNITY-DWELLING ELDERLY IN JAPAN**  
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**Background:** The Ministry of Health, Labor, and Welfare in Japan is strongly promoting “death at home”. Research indicates that honoring the treatment preferences of terminally ill patients is critical for the provision of high quality care at the end of life. However, few studies have investigated the preference for place of death among the elderly in Japan. **Methods:** The survey was conducted from November 2006 to April 2007. Face-to-face questionnaires were given to all members older than 70 who lived in a village of Miyagi prefecture, northern Japan (n=126) and in an urban area of Kanagawa prefecture, central Japan (n=160). Subjects were aged 70 to 102 with a mean age of 77.0 + 6.1(SD). Questionnaires focused upon the place where the subjects want to be cared for when they die and demographic factors (housing status, personal medical history, degree of physical and mental independence). 150 males (average age 75.9 +5.3) and 136 females (average age 78.2 +6.6) responded. Results: 50% of respondents preferred to die at home, 33.6% in a hospital, and 5.2% in a nursing facility. No significant differences were found in the preferences of place to die among the number of family living together or by age. By gender, close to 60% of males preferred to die at home, whereas, the percentage of females who wanted to die at home and at hospital were both 40%. Conclusions: Even though an individual's personal values and the degree of physical and mental dependence can affect the desire of death at home or in a hospital, gender differences need to be taken into account. End-of-life care for elderly people should not be only home-based medical care but also other types of care.

- PD8 859 LONELINESS OF OLDER PEOPLE IN THE WELFARE STATE: THE MALE – FEMALE GRADIENT**  
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**INTRODUCTION** A common Swedish stereotype about older people is that loneliness is typical for older women, rather than for ageing men. The problem with the stereotype is that feelings of loneliness are seldom reported either for aging men or women, although some studies show a higher prevalence for women and some indicate this to be a problem primarily among older men. **METHOD** We use several national and local surveys to analyze gender differences in perceived loneliness. Most of the surveys are longitudinal, which enable us to analyze changes during ageing. **RESULTS** Older Swedes living in the community are either married or live alone, and the latter group reports more loneliness. Two marriages out of three end with the death of the husband, and control for marital status will erase most gender differences in loneliness. Yet, in the age group 80+ men who live alone report higher loneliness than women who live alone. At that age, most men are still married, but most women live alone. Both these patterns are even more pronounced in the age group 90+. **CONCLUSIONS** We interpret the results as outcomes of selection mechanisms and reflections of male-female differences in adaptation to change in marital status. Surviving men who live alone may more often be working-class and of poor health, while women who live alone are socially and health-wise a more heterogeneous group. There may also be a difference in marital background, coloring the way men and women see their situation: men more often have had their wife as their only confidant, women have a broader social network and may even see their new solitary life as a relief.

- PD8 860 AN ANALYSIS OF THE INFLUENCE OF WORK ENVIRONMENT ON THE JOB RETENTION OF HOSPITAL NURSES IN JAPAN**  
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**Introduction:** The graying of society is rapidly occurring in Japan. Nurses are one of the most important health professionals for continuous support of elderly care in the aging society. However, Japan is also facing nursing shortage like many other countries. In Japan, the high turnover rate of full-time nurses in hospitals is focused on, especially for newly graduated nurses (9.2% in their first year). It is urgently necessary to identify what factors affect their job retention. The purpose of this study was to examine how the work environment affects job retention of hospital nurses. **Methods:** A cross sectional mail survey was conducted using the Practice Environment Scale of the Nursing Work Index (PES-NWI) questionnaire among 2,211 nurses working at 5 hospitals in the Tokyo metropolitan area. In the questionnaire, nurses were also asked whether they would work at

the same hospitals next year. Logistic regression analysis was carried out, with “intention to retain or leave the workplace next year” as dependent variable, and the 5 sub-scale scores of the PES-NWI and other variables as independent variables. **Results:** Average age of the 1,067 respondents was 29.2 years old, 95.9% of them were women. About 30% of them intended to leave the hospitals in the next year. Cronbach's coefficient alphas of each sub-scale of the PES-NWI were from 0.77 to 0.85. In the logistic regression analysis, one of the 5 sub-scales, emotional exhaustion level of burnout and job satisfaction were associated with the nurses' intention to stay on, significantly. **Conclusion:** Work environment was also important factors in retaining nurses working at hospitals. In this study, we confirmed the reliability of the PES-NWI by the magnitude of alpha coefficient.

- PD8 861 SOCIAL WORK WITH OLDER PEOPLE AND PREVENTATIVE SERVICES: DEVELOPING INNOVATIVE MODELS OF ASSESSMENT AND SERVICE PROVISION FOR THE FUTURE GENERATION OF OLDER PEOPLE**  
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Wales is at the forefront of major policy initiatives that acknowledge the importance of person-centred, community-level approaches that promote and maintain the independence of older people. A critical area in achieving these policy imperatives is the development of a portfolio of services, including a quality social work service, which will promote and maintain the independence of older people. A series of qualitative focus groups and individual interviews were conducted with groups of older people aged 65 and over and a younger cohort aged 45 to 65. Themes such as experiences of and expectations for ageing, independence, environment and transitions were explored along with their views on innovative models of service provision drawn from National and International examples. Focus groups with social work professionals were also conducted aimed at exploring ways in which social workers might be enabled to be more creative and innovative in meeting needs and in assessment. Analysis suggests older people view statutory services as a direct threat to their independence. A paucity of knowledge and information relating to role, function and available support was implicated in addition to parsimonious eligibility criteria and charging policies. Further, the role of the social worker in promoting and maintaining the independence of older people is unclear. Creative and innovative practice is an undefined concept which is at odds with the present culture of risk-aversion and defensive practice designed to protect the individual professional from censure and litigation.

- PD8 862 SOCIAL INTERACTIONS : A ROLE IN SUCCESSFUL AGING?**  
MULTICENTRIC-STUDY IN AGIRC-ARRCO PREVENTION CENTERS IN FRANCE  
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**Introduction:** We describe relationships between social interactions and successful aging by a multicentric study conducted in France during 2008. **Methods:** 1172 men and women attended a checkup in one of the 10 participating prevention centers (supplementary pension institutions) located all-over the French territory. Subjects were classified into 3 groups according to their regular social interactions [RSI]: 1) RSI with parents, friends and associations (3 different types of contacts [TC]). 2) RSI with only 2 of these 3 TC. 3) RSI with only 1 or none of these 3 TC. They had to evaluate the quality of their own aging (scale from 0 to 10: successful aging). Subjects who reported less than 7/10 were considered as experiencing difficulties in aging ("unsuccessful aging"). A stepwise descendant logistic regression was used to test the independence of the relationships between social interactions and self-reported difficulties in aging. **Results:** Women were 58% (median age 66y (interquartile: 62-71)). According to the scale, 27% experienced difficulties in aging. This proportion grew with age ( $p<0.01$ ) and was higher in subjects living alone ( $p<0.01$ ), those perceiving their income as insufficient ( $p<0.01$ ), subjects reporting a low health status or currently taking several treatments ( $p<0.001$ ). Self-evaluated successful aging was strongly associated with social interactions: proportions of unsuccessful aging were respectively 17%, 25% and 41% in groups 1, 2 and 3 ( $p<0.001$ ). And, compared with group 1, odds-ratios for experiencing difficulties in aging were 1.46 [1.02-2.09] for group 2 and 3.10 [3.12-7.82] for group 3 (trend $<0.001$ ), independently of age and low health status. **Conclusions:** In this study, successful aging was strongly associated with social interactions, adding further evidence that elderly's socialisation is crucial in prevention.

- PD8 863 THE FRENCH NATIONAL ORGANIZATION AGAINST MISTREATMENT: THE FIRST SOFTWARE FOR GLOBAL VISION AND PREVENTION?**  
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**Introduction** This communication will present the French organization fighting mistreatment against elderly or disabled people, based on coordination between: - national phone number (3977); - local help and counsel; The system uses experience of long installed voluntary organizations and government services. All the mistreatment situations are registered with a software developped for the 3977, permitting data storage, securised exchanges and statistics based on the registered situations. Methods and materials This communication will present: - the organisation, from first call to help given with its call center and local structures, - security and confidentiality questions; - the different ways the software is used: for registering data regarding a call or exchanging datas between actors... - the analysis and statistics offered by the software. They are either local or national, based on all the situations integrated in the database. Results To fight mistreatment against elderly or disabled people, France is now creating a national network, using the same tools on all the territory for better knowing of mistreatment, better prevention, better action. French statistics for the 2008 year are based on 19 500 answered calls and 6 200 registered situations, which is one of the most important statistical series . Conclusion This system is using modern technologies to facilitate data exchanges between partners and to permit a global vision of mistreatments. The data collected are a unique source to know more about mistreatments and to improve politics of prevention. It's a significant contribution for international researches on these subjects. If the organisation is inherent to the administrative particularities of the country, the technology could be used by each country looking for a modern way to fight mistreatments.

**PD8 864 WELFARE STATE PERFORMANCE AND SOCIAL JUSTICE PREFERENCES IN AGEING SOCIETIES**  
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**Introduction:** The challenges of an ageing society are exerting severe pressures on the economies of most European societies in terms of both an ageing workforce and a decreasing number of people of working age. The increasing life expectancy also imposes new restrictions on the pension system and on the welfare state. As a consequence, policy makers and voters alike are increasingly questioning the welfare state and its legitimacy. Thus, it is also the topic "Social Justice" which is attracting more and more attention. **Methods and materials:** The study evaluates in a cross-national perspective how the welfare state works with reference to empirical social justice principles on the one hand, and the living conditions of the elderly on the other. Referring to actual living conditions in several dimensions of social justice, it empirically evaluates both the social justice concepts and the welfare state's performance over time, using relevant survey and panel data. The welfare states are represented by Italy, Germany, Finland, and the UK. The justice conceptions are evaluated using the ISSP data (International Social Science Project). The welfare state performance over time is analyzed on the basis of the European Community Household Panel. **Results and Conclusion:** Preliminary results suggest that the Scandinavian model is the most successful in combating poverty and providing minimum social security standards. Thus, it comes closest to social justice conceptions. The performances of both the Southern European model and the conservative model vary considerably with reference to regional differences within the countries. Therefore they are only partly more successful in combating poverty than the liberal state; moreover, when considering other dimensions of distributive justice as labor market participation it becomes evident that their welfare state performance can be even worse.

**PD8 865 RETHINKING THE GENDER GAP IN HEALTH IN OLD AGE: CHANGING GENDER DIFFERENCE IN SELF-REPORTED HEALTH THROUGH COHORTS AND PERIODS**  
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**Introduction:** The aim of this study is to examine the changes of gender differences in self-reported health in old age through cohorts in the UK from the 1970s to 2000s. Using a life course perspective, this paper discusses the process through historical and social developments that the definitions and meanings of gender in old age have changed. It challenges the conventional understanding that older women are 'sicker' and argues that more resources should be channeled for older men's health as well. **Methods and Materials:** Using the General Household Survey time-series data, this paper explores the changes in self-reported health status for men and women aged 65 and over through cohorts and historical time. **Results:** It is found that while there was significant gender difference in reporting poor health for those born between 1880 and 1920, the difference was not observed for those born between 1921 and 1940. It is also found that compared to the 1970s and 1980s, gender difference in reporting poor health in old age decreased in the 1990s and diminished to a negligible level in the 2000s. **Conclusions:** The results challenge the conventional understanding of comparative disadvantage of older women in the literature and it has shown that historical timing plays an important role in the relationship between gender and ageing. As a start, these findings imply that gender differences in old age are embedded in the historically different social environments in which individuals grew up. It is concluded that there is a need to examine gender differences in old age at

various historical timings. It implies that policies and government agencies shall reconsider its resource allocation on a more gender-sensitive basis.

**PD8 866 HOME CARE FOR SENIORS SUFFERING FROM MENTAL ILLNESS: DIMENSIONS OF THE DECISION-MAKING PROCESS**

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**Introduction:** In Québec, the population aged over 65 years old will grow from 14% to 31% over the next forty years. As with the general population, life expectancy for people identified as mentally ill tends to improve. This new reality raises challenges for the health system which presently focuses on social reintegration and social measures facilitating patients' home follow-up care. One of these challenges relates to the nature of the care to be given. In order to identify the professional responsible for this care, the decision-making process adopted by stakeholders appears to be a determining factor. This presentation explores the organisational and expressive components at stake in determining the decisional trajectory. **Methods and materials:** This study is based on open-ended interviews with two groups of stakeholders working in an organisation offering home follow-up care to individuals suffering from severe mental disorders. The interviews were conducted following a qualitative content analysis as well as a literature review of stakeholders' practice guides. **Results:** Preliminary results indicate that the dimensions relevant to the structure of service (organisational component) and those linked to the stakeholders' representations (expressive component) interact during the decision-making process. This indicates the constructed nature of the concept of "needs". **Conclusion:** Our analysis shows that a senior's psychiatric pathology does not constitute a determining factor of his or her follow-up plan. Incapacities linked to aging seem to have a greater influence. This leads to a despecification of the modalities of care for older people suffering from mental disorders and to the development of a particular representation of insanity that likens it to a handicap, to a person's dysfunctional adjustment to his or her environment.

**PD8 867 POVERTY AND DISABILITY TRANSITIONS IN MIDDLE AND LATER LIFE: IMPACT ON SOCIAL ISOLATION**

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**Introduction:** Recent research has focused on the impact of life course transitions on a variety of outcomes. In particular, studies have addressed the impact of poverty transitions on various health and disability outcomes, with some attention also given to the impact of disability transitions on other relevant outcomes, such as social isolation and participation. However, less attention has been given to intersecting transitions. As a result, little is known regarding the implications of becoming disabled when one has never been poor versus becoming disabled when one has always been poor. We know even less about the differential implications of experiencing both transitions together: becoming poor while becoming disabled. This is particularly evident in the Canadian context. **Methods and Materials:** This paper reports preliminary analyses conducted to address the impact of both poverty and disability transitions on social isolation and participation in late middle age and later life. Data are drawn from the Canadian National Population Health Survey (NPHS), Household Component, longitudinal data files (Cycles 1 to 7 (1994/95 to 2006/07). These include data obtained from a nationally representative sample of 5,404 respondents aged 50 and over when first interviewed in 1994/95. **Results and Conclusion:** Preliminary findings suggest that disability is worse for those who are always poor than those who are always rich, but that the transition is particularly difficult for those who experience transitions simultaneously. Research and policy implications are discussed.

**PD8 868 HEALTH PROMOTION AND PRIMARY PREVENTION FOR OLDER MIGRANTS: IMPROVING ACCESS AND EFFECTIVENESS**

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**Introduction:** Because older migrants are especially affected by health exposures and risks, prevention and health promotion would be of utmost importance to enhance their quality of life and to enable an independent living up to old age. Nevertheless, participation rates of older migrants in preventive and health promoting programs are rather low. The project "Health Promotion and Primary Prevention for Older Migrants" (funded by German Federal Ministry of Education and Research) aims to obtain deeper insights into the requirements concerning the access to and the effectiveness of preventive and health promoting activities and measures. **Methods and materials:** A qualitative research approach with three interview periods (in 2008, 2009, 2010) is used including 120 in-depth interviews with older migrants (40 attendants and non-attendants of prevention offers per period), 30 expert interviews (10 experts per period), and four workshops with older migrants and experts. **Results:** Results of the first research period show that social contacts, personal exchange, communication and activities with peers, especially those from the same country of origin, are of high importance for prevention and health promotion. Regular meetings and the possibility to communicate in native language promote the participation in and the sustainability of special health promoting measures (offers for

exercise, recreation and nutrition etc.). Conclusion: The results indicate that a more intensive and more target group-oriented cooperation between social service providers and health system on the community level would be an important step to improve access and effectiveness of health promotion for older migrants.

**PD8 869 INCIDENCE OF STROKE ACCORDING TO INCOME LEVEL IN AN ELDERLY COHORT: THE 3C STUDY**

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Introduction Under the age of 65, stroke like most other diseases has been shown to follow a gradient favouring those at higher socioeconomic levels. The majority of strokes however occur in older people and less is known about the social gradient and the risk of stroke in the elderly. Methods and materials Between 1999 and 2000, the "3-City" cohort enrolled 9294 non-institutionalised French residents aged 65 years or more. Baseline information included socioeconomic status and cardiovascular risk factors. Occurrence and type of stroke were ascertained during the 6 years follow-up period. We used Cox proportional hazards models to examine the relation between stroke incidence and income, adjusting for potential confounding factors. Results Complete data was available for 8087 participants, of which 2802 (35%) were in the high income category (> 2287€ per month). These were younger, more likely to be male and to live with a partner. They were less frequently overweighted, hypertensive or diabetic (all p values <0.05). Stroke incidence rate was 4.28 per 1000 person-years (95% CI: 3.68-4.98). Stroke incidence was higher among the high income group and this association was marginally significant in multivariable models (hazard ratio 1.37; 95% CI:0.99-1.89). High income was significantly associated with a higher incidence of ischemic stroke (age and sex adjusted hazard ratio 1.54; 95% CI:1.07-2.22). This association remained significant when potential confounders were taken into account (hazard ratio: 1.67; 95%CI: 1.15-2.41). Conclusions In this cohort of older adults, high income was associated with higher risk of ischemic stroke over 6-year follow-up, despite lower prevalence of risk factors. Selective survival could be one possible explanation for this unexpected finding.

**PD8 870 USING AUSTRALIA'S AGED CARE ASSESSMENT PROGRAM (ACAP) MINIMUM DATA SET TO INFORM POLICY AND PRACTICE**

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Introduction The Aged Care Assessment Program (ACAP) is an integral part of Australia's aged care system. Its core objective is to assess the needs of frail older people comprehensively and to facilitate access to available care services appropriate to their needs. The National Data Repository was commissioned in 2004 to collect the ACAP Minimum Data Set and to report on the data using Key Performance Indicators. In this paper, examples of the role and value of the NDR will be presented. Specifically, the dataset was used to address the questions: whether provision of community services reduces the risk that older people will be admitted to residential care; and if so, for which groups. Methods and materials Data from the 2006-2007 MDS were used. Records were selected for clients who were living in the community at assessment. Multivariate logistic regression was used to compare clients recommended to the community with those recommended to residential care. Results Clients who used Home and Community Care (HACC) or packaged care services prior to assessment were more likely than those who did not to be recommended to the community rather than to residential care. HACC was particularly effective for clients with no carers or from non-English-speaking countries. However, use of residential respite increased the likelihood of being recommended to residential care. Conclusion Administrative by-product data can usefully be employed to address questions of theoretical and practical interest, as well as providing useful information to inform policy. The data sets are large enough to investigate subtle features of the data such as interaction effects. For example, the ACAP MDS demonstrates that community services are particularly effective in supporting specific subgroups of older people in the community, such as those who do not have family carers or are from culturally diverse backgrounds.

**PD8 871 SHEDDING THE LIGHT ON MEN: THE WOLLONGONG MEN'S PROJECT**

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Introduction Men's sheds are community based organisations where men can enjoy each others company and where self-worth can be promoted. At the same time skills can be developed for both the individual and the community. For older men these sheds offers the opportunity to make new mates and to form a new retirement identity by offering many of the positive things that paid work offered them. They are seen as a positive approach to men's health and social needs and as a result many Australian State and Territory Health Services have funded and/or promoted them from a health promotion perspective. The Wollongong Men's Project has operated as a shed-based group program since October 2005. The aim of the project is to provide a group of retired and/or unemployed men from

a multicultural background with opportunities for developing practical skills with a view to reducing their social isolation and increasing their self-esteem and sense of purpose. The project provides a shed space, resources, a community cultural arts worker and a multicultural health worker who work with the men on a range of skilled based activities. Methods and materials Evaluation was carried out using a Participatory Action Research (PAR) process together with a range of data collection tools. Results The evaluation has shown that the men have an increased sense of purpose and self confidence as a direct result of their involvement in the project. They have also broadened their social networks and have increased their skill levels. Conclusion The evaluation of the Wollongong Men's Project has provided some valuable lessons. All-male social support networks, without the usual self destructive or hazardous behaviours associated with male bonding rituals, are an important development in health promotion programs that can do the preventive work that the mental health system has largely abandoned.

**PD8 872 DEVELOPING AGE FRIENDLY COMMUNITIES: PEOPLE, PROCESS AND PLANNING PROGRESS IN A NEW ZEALAND BEACHSIDE COMMUNITY.**

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The Bay of Plenty is a high growth coastal region that traditionally attracts retirement settlement. Planning for ageing communities is a challenge for health board and local governments as an integral part of sustainable urban development. A Health Impact Assessment (HIA) project was commissioned to provide input to improving the built environment, town facilities and health service delivery planning at Waikite Beach. It is envisaged that this project will inform future regional planning initiatives in high ageing communities. The study engaged residents, local organizations and stakeholder service providers in processes to determine improvements needed to enable elders to 'age-in-place'. The methodology utilized a national evidence-based model for undertaking HIA processes. Community outcomes were further analysed based on the WHO Age-friendly Cities model to identify key socio-economic determinants of health actions. Participants indicated that there are major barriers such as transport, and health service contracts that limit their ability to remain socially connected or maintain independence within a caring and supportive community. The lack of integrated planning to date is also a barrier to local elder initiative and leadership. Maori people have concern over unresolved land issues that affect their wellbeing in the current urban growth environment. The study shows that planning for age friendly communities will require pro-active advocacy to achieve timely responsive planning by informed and age aware local government and health authorities. The study outcomes reflect a potential for collaboration to address key socio-economic determinants of health. The outcomes indicate a need to foster planning for participation in community activities to maintain elder wellbeing and independence. There is a need for further planning to address equity in the integration of primary health service delivery options to ensure quality care and support.

**PD8 873 LONELINESS, SOCIAL NETWORKS AND MORTALITY AT AGES 70, 77 AND 85**

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Introduction: We examined the influence of changes in loneliness and social support networks upon mortality during 18 years of follow-up among an elderly cohort and determined the gender-specific nature of this relationship. Materials and Method: The study is based on data collected from the Jerusalem Longitudinal Cohort Study (1990-2008), which has followed a representative sample of 605 community-dwelling elderly people. Subjects were randomly selected from an age homogenous cohort born 1920-1921 and were aged 70, 78 and 85 when data were collected at baseline in 1990 and at follow-up in 1998 and 2005. All-cause mortality from age 70-88 was determined according to the National Death Registry. Subjects underwent comprehensive assessment of numerous domains, including a single item question concerning sense of loneliness, as well as parameters of social networks. Results: At age 70, 78 and 85 the rates of subjects who reported being lonely were 33.1%, 31.6% and 35.8% respectively. Sense of loneliness was found to be stable throughout the period of follow up among the majority of the respondents. Among the 605 subjects followed from age 70 over 18 years, Kaplan-Meier survival charts showed a significant association between loneliness and reduced survival. Loneliness among men was found in bivariate analyses to be a risk factor for mortality. Although Cox proportional hazards models found that loneliness itself was not a significant predictor of mortality, nonetheless several social network factors (marital status at the baseline and living arrangements) were found to predict mortality among men. Conclusions: Loneliness and solitude among elderly men can be a risk factor of mortality. The findings imply that attention should be given to this high-risk group.

**PD8 874 RETIREMENT, ASSET OWNERSHIP, AND LIFE SATISFACTION AMONG OLDER ADULTS IN SOUTH KOREA: DO ASSETS MATTER IN LATER LIFE?**

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Introduction. Although retirement is a significant life-course event, many older adults retire without savings and assets enough to sustain economic security in later life. Economic

insecurity may hamper older adults' psychosocial well-being such as life satisfaction. In light of asset effects buffering economic hardships, this study examines (1) to what extent assets are positively associated with life satisfaction among Korean older adults, and (2) whether assets moderate the negative relationship between retirement and life satisfaction. Methods. This study analyzed the first two-wave (2005 and 2007) panel data from the Korean Retirement and Income Study with the nationally representative sample of older adults aged 50 and above (N=5,390). Retirement was measured as a dichotomous variable. Asset measures were decomposed into financial assets, home ownership, other real assets, and debt. Considering the multidimensionality of life satisfaction, a latent class analysis (LCA) was used to classify homogenous subgroups based on the associations among six items. We used a multiple imputation technique for missing values. Results. LCA found three-class models as the best classification at both waves: high life satisfaction class, moderate life satisfaction class, and low life satisfaction class. We also found dynamic patterns in the classes for the 2-year period. By and large, life satisfaction showed downward changes for the period. Retired older adults showed higher probabilities of being the low life satisfaction class. Homeownership and other real assets increased the likelihoods of being high life satisfaction class. In addition, we found that assets partially moderate the negative impacts of retirement on life satisfaction. Conclusion. This study supports activity theory for successful aging. The findings also suggest that asset ownership has significant effects on life satisfaction in later life and that asset-building programs should be developed to help people prepare later life after retirement.

**PD8 875 EXPECTATIONS OF NEW ZEALAND BABY BOOMERS AND POLICY ISSUES - VALUING OLDER AGE**

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Introduction: New Zealand differs from other western developing countries in some significant ways. Population ageing is not as advanced, the total population is small, and policy responses are made in the context of a highly centralised political administration. The country now faces the prospects of a comparatively large baby boom cohort coming into older age and the challenge of how to accommodate their expectations. This paper will present findings from PhD research with baby boomers about those expectations and policy implications. Methods: A series of eleven focus groups were held around the country to explore older and younger boomers' attitudes to old age and lifestyle expectations. The resulting data was analysed to identify common beliefs and values, which were then contrasted with current policy values and paradigms. Results: New Zealand baby boomers expect to age differently from previous generations and are keen to pursue individualised alternative lifestyles as they age. Despite high expectations for their own active and healthy ageing, most felt they were not well prepared for older age. They commonly felt they had been a lucky generation, having benefited from a supportive welfare state and prosperous conditions that no longer existed. They were concerned about the level and quality of support available and were wary of policy that might reduce choice, autonomy and freedom. Conclusions: New Zealand baby boomers believe they have been at the forefront of social change and expect to draw on previous experience to collectively influence policy in the future. While it remains unclear on which issues they will converge, the boomer cohort has the potential and inclination to advocate for social change. Processes of policy development will need adaptation to effectively work with, and not against, this cohort.

**PD8 876 EFFECTS OF A CONSUMER-DIRECTED VOUCHER ON SATISFACTION, EMPOWERMENT, AND HEALTH & DISABILITY STATUS**

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Introduction: While there has been increasing interest in the use of consumer-directed vouchers to finance long term care goods and services, few studies have examined the effects of such vouchers on patient satisfaction, empowerment, and health and disability status. Methods and Materials: The Medicare Primary and Consumer-Directed Care Demonstration was a 24-month randomized controlled trial that included a consumer-directed voucher intervention. The present study (N=803) compares the Voucher (n=419) and Control (n=384) groups. Generalized linear models for repeated measures, linear regression, and ordered logit regression were employed. Results: The study sample had a mean age of 77.9 years, one third was male, and 3.7% were members of racial or ethnic minorities. A total of 27.0% had evidence of definite cognitive impairment, and participants were dependent in a mean of 2.4 ADLs and 3.6 IADLs. In the Voucher group, 94.0% received reimbursement from the Voucher benefit for goods or services including 82.1% for adaptive and assistive equipment, 62.5% for consumable care goods, 44.6% for in-home workers, and 41.0% for environmental modifications. The average subject received a mean total of \$2,165 (SD=\$1,844) in Voucher payments. Patient and informal caregiver satisfaction with the Voucher program was very high, about 4.5 for each on a scale of 1 (not at all satisfied) to 5 (completely satisfied) at both 10 and 20 months postbaseline. Even so, the Voucher intervention had no impact at 22 months on five measures of empowerment including general self-efficacy, health self-efficacy, and chance, internal, and powerful others health locus of control, as well as on five health and

disability status measures including self-rated health status, SF-36 PCS score, SF-36 MCS score, number of ADL dependencies, and number of IADL dependencies. Conclusion: Despite very high satisfaction, the Voucher intervention appeared to have little effect on patient empowerment and health and disability status.

**PD8 877 REGULATION OF RESIDENTIAL AGED CARE IN AUSTRALIA - TURNING KNIGHTS INTO KNAVES?**

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Introduction Residential aged care services in Australia have undergone a regulatory revolution with the introduction of the Aged Care Act in 1997. Services are accredited by an external agency every three years and must meet 44 Residential Aged Care Standards to receive government funding. This paper explores the economic assumptions that have underpinned these changes. It debates whether regulatory changes have resulted in improved care outcomes for older people living in residential aged care services. Method Le Grand (1997) argues there has been a fundamental shift in the assumptions about human behaviour that is reflected in policy design in human services, shifting from assumptions of altruism (knightly behaviour) to self interest (knavish behaviour). This paper explores whether the assumption of self interest as argued by Le Grand is embedded in the regulatory framework for residential aged care services in Australia introduced through the Aged Care Act 1997. Le Grand's research is used to analyse the relationship between changes in regulation of residential aged care services and economic theory, in particular the assumption of self interest. The paper analyses Accreditation outcomes for residential aged care services in Australia between 1997 and 2003. Results The research highlights how the regulatory changes have increased reporting and documentation requirements of residential aged care with little evidence of improved care outcomes for older people living in residential aged care services. The research highlights that regulatory changes have reduced staff time and availability to provide care. Conclusion There needs to be a more sophisticated debate about the purpose of regulation of residential aged care services in Australia focusing on ensuring high quality care outcomes for older people rather than on documentation and auditing processes. The economic assumption of self interest of all actors underpinning these changes need to be challenged.

**PD8 878 BETTER UNDERSTANDING AND ADDRESSING LONELINESS FOR OLDER AUSTRALIANS**

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Introduction For many older Australians, loneliness is a pressing social and health issue. As Australia's population ages, greater numbers of people aged 65 years and over are likely to experience negative social, emotional, and physical health problems associated with loneliness. Supported by an ARC grant in collaboration with industry partners in two Australian states this study provides in depth understandings of loneliness. Better understandings of what loneliness is has assisted service providers to develop more targeted interventions and strategies designed to address loneliness in older people. Methods This qualitative study involved 60 interviews with older people across two Australian states and four focus groups in each state with service providers. Sampling was purposive, and included people from metropolitan and rural areas and older people from a range of living situations. Data was analysed thematically. The analysis then informed the development of strategies to assist in the management of that loneliness. Such strategies were designed to strengthen existing practice and develop new practices where appropriate. Findings / Results There are five dimensions of loneliness which have emerged from the analysis: loneliness as private; relational; connectedness, temporal; and readjustment. While each dimension is distinct, all are intertwined. The dimensions demonstrate that loneliness is complex and diverse, bound to the context in which it is perceived, understood and experienced. While loneliness may be connected to social isolation it is distinct from it. Four demonstration projects will be discussed to show how these findings can be translated into, and impact on, practice. Conclusion Having an in-depth understanding of loneliness from the perspective of older people and service providers provides a conceptual basis for generating solutions to prevent loneliness or to enable older people to manage themselves.

**PD8 879 EFFECT OF NON-CONTRIBUTORY SOCIAL PENSION PROGRAM OVER DEPRESSION AMONG POOR AND RURAL MEXICAN ELDERLY. A DISCONTINUITY REGRESSION DESIGN**

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Introduction. Recently (2007) a social pension program (70 y más) was implemented in Mexico, whose beneficiaries are older adults aged 70 and over. The program consists in an unconditional transfer of 50 dollars monthly, and actions of social promotion and

participation. Aspects evaluated includes economic, health (physic and mental), and nutritional outcomes. Also includes an application of Geriatric Depression Scale (GDS) to identify older adults with depressive symptoms (DS). Objective. To evaluate the effect of 70 y más over DS in a population of rural and poor older adults. Methods and materials. We applied a discontinuity regression design to evaluate the effect of 70 y más based on rules of operation of the program, which determines that older adults beneficiaries are those aged 70 over and lived in rural areas (less than 2,500 inhabitants). So that we have two control groups, one based on age (1,500 older adults aged 65-69) and other 1,500 (aged 70-74) based on non intervention areas. Intervention group includes 1,500 older adults aged 70-74. We have two measurements, the base-line (before program stars) and one follow-up eleven months later. Results. Prevalence of DS were 28% for intervention group, 28.5% for control group based on age, and 36% for control group based on residence area. For control group based on age, we didn't find effect of 70 y más over DS ( $OR=0.95$ ,  $p\text{-value}=0.30$ ), whereas for control group based on residence area, the program diminish the probability of having DS ( $OR=0.12$ ,  $p\text{-value}<0.001$ ). Conclusions. Although depressive symptoms were frequent in this population, the program 70 y más seems to have a positive effect on prevalence of depressive symptoms, especially when comparing older adults of the same age but with different places of residence.

**PD8 881 SOCIAL AND CULTURAL CONSTRUCTION OF ELDER MISTREATMENT: DEFINITION, PERCEPTION, AND HELP-SEEKING BEHAVIOR AMONG KOREAN OLDER PERSONS**

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Elder mistreatment detrimentally affects an older person's physical, psychological, and social well-being. In contrast to a rapidly growing trend of elder mistreatment among older adults, research in this area has been sparse in Korea. The purpose of this study is to document socially and culturally-embedded definitions of elder mistreatment voiced by older persons. This study also aims to identify risk factors associated with perceptions of and help-seeking behavior for elder mistreatment. By using six hypothetical elder mistreatment scenarios representing five major types of elder mistreatment, a mixed-methods approach was employed with a sample of 124 Korean older persons drawn by a quota sampling strategy. Findings indicated that the vast majority of definitions generated by the sample were defined on the basis of their cultural and social contexts. Korean older persons showed less sensitivity to elder mistreatment, especially when perceiving problems of self-neglect, neglect, and physical mistreatment in a couple. A negative attitude toward seeking help was found with higher preference of seeking informal types of help rather than formal help. Korea older persons try to keep their family names and to protect their adult children even in painful elder mistreatment situations. Findings point to the importance of the incorporation of cultural and social contexts when formulating elder mistreatment prevention and intervention programs, and designing social welfare policies for Korean older persons.

**PD8 882 TRANSITIONS IN LIVING ARRANGEMENTS AND PSYCHOLOGICAL WELL-BEING OF THE KOREAN ELDERLY**

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Relatively high prevalence of co-residence between older parents and adult children in Korea is generally interpreted as a structural manifestation of traditional family norms - filial piety. However, recent socioeconomic changes in Korea have called this into question. This study examines the relationship between transitions in living arrangements and psychological well-being among Korean older persons. Data came from a three-wave panel study of Hallym Aging Longitudinal Study. The baseline data of Wave 1 (2003) consisted of the 1,991 respondents aged 61 and over who had at least one living child, then became 987 for the third interval (2007). Living arrangements consists of five categories: living alone, living with spouse only, living with married children, living with unmarried children, and living with grandchildren. Psychological well-being was measured by the PGCMS developed by Lawton. The relationship between transitions in living arrangements and psychological well-being was analyzed by using multivariate OLS regression. More than quarter of the elderly made transitions in living arrangements from 2003 to 2007, indicating remarkable unstability over this time period. Transition from living with adult children to living alone, from living with spouse only to living alone, and from living with adult children to living with grandchildren were associated with worse psychological well-being. Associative factors of psychological well-being varied by gender, health status, and income.

**PD8 883 A COMPARATIVE STUDY ON LONELINESS OF ELDERLY IN SOUTH KOREA -FOCUSING ON URBAN AND RURAL-FISHING VILLAGES-**

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Race of aging are more faster rural fishing villages than urban in Korea. Also psychological emotional problems of elderly who suffered are getting serious because of industrialization and modernization. Loneliness is as opposite as urban and rural fishing villages, so we should deal with loneliness according to characteristic of areas. This study

made a comparative study of the facts affecting the loneliness of elderly according to urban and rural fishing villages of Korea. Data were collected from a survey of 289 older adults(urban 151, rural fishing villages 138), who are 65 years and over, residing in Korea, were interviewed through trained researchers. Predictor variable were personnel factors, health factors, and social environment factors. In result, first, means score of loneliness among respondents was 50.8(SD 5.1), urban 51.0(SD 5.9), and rural fishing villages 50.6(SD 4.2). Second, the results of urban areas found that there were significant differences among independent variable including age, education, self-esteem, life satisfaction of personnel factors. On the other hand, the results of rural fishing villages found that there were significant difference among independent variable including life satisfaction of personnel factors and level of social activity of social environment factors. Finally, the factors affecting on the loneliness in urban area were self-esteem and life satisfaction of personnel factors. On the other hand, the factors affecting on the loneliness in urban area were life satisfaction of personnel factors, physical activity status of health factors, and level of social activity of social environment factors. We going to suggest as follow to relieve the loneliness of elderly and to achieve the successful aging for elderly with psychological emotional problems. First, distinctive intervention should consider according to residential district. Second, services for elderly --must be extended to emotional and interpersonal perspectives from physical perspectives. Also, services for elderly need to change to departmentalization and specialization.

**PD8 884 THE ELDERLY IN SERVICE DEAD ZONE: A CASE STUDY OF A RURAL COMMUNITY IN SOUTH KOREA**

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Introduction: As elderly people in rural communities in the world, those people in S. Korea are frequently excluded from health and social services. Long distance to the services, lack of resources and facilities within a community, and barriers of access to service information are a part of the problems they are experiencing. Their situation became more deteriorated as a long-term care program launched in 2008. Service agencies in private sector are shrinking in providing their extra resources voluntarily for the elderly, as it becomes more competitive for them to acquire financial subsidies from the government and to attract future clients. All of these make the rural elderly in S.Korea more difficult to be out of 'Service Dead Zone'. Methods and materials : This project selected a small town of 'Kee Jang Goon'(a county) for a case study. Focused group interviews were employed to collect data from the elderly in the town, influential service providers, and public officials in asking about problems, resources, and possible solutions. Researchers also visited the site and observed residential situations, transportsations, service facilities. Results : The elderly in 'Dead Zone' are found to be 1) those who are eligible for the long-term care, but not using the service due to a financial burden; 2) the elderly living alone, or living with their grandchildren, but no services from public or private agencies. These population have no inner resources(e.g., young neighbors) to help them in checking their daily life at close and responding for their urgent needs. Another problem is that service agencies in the community are scattered and not successful in making a collaboration. Conclusion: This project suggests an integrated service model by a public/private blending. In particular, participation of a local government in service management and recruitment of grass-root volunteers from the neighborhood are clearly stressed for successful implementation of the model. Further discussion about applicability of the practice implications from this project to other countries is presented.

**PD8 885 PRACTICE FOR ASSESSING SOCIAL FUNCTIONAL CAPACITY IN INTERVIEWS**

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Introduction Measurements on physical functional capacity are well known, but the measurement of social functional capacity contains more assumptions. Social functional capacity is usually evaluated in research interviews. So far, there hasn't been a suitable research method for analysing the interaction between the interviewer and the respondent. The measurements have mainly been restricted to self-assessments. The presentation will study two social functional capacity assessment questions which originated from the national Health 2000 survey in Finland. The questions referred to taking care of matters together with other people and presenting matters to unknown people. This research aims to examine whether it is possible to find hints about the interviewers using the ongoing interview as an evidence of the respondent's social functional capacity. The objective is to describe the interactional practices of interviews. Methods and materials The data consisted of thirty-three videotaped interviews made during the years 2007-2008 in Finland. The interviewers were qualified healthcare personnel. The respondents were participants of projects related to functional capacity. Methodology was ethnomethodological Conversation Analysis. Videotaped interviews were transcribed and analysed in detail. Results The analysis identified several practices related to the social functional capacity assessment questions. Respondent and interviewer formulated their responses by drawing evidence from the ongoing interview. The respondent formulated an answer referring to the interview interaction between interviewer and respondent. The interviewer focused on the ongoing interview by uttering a suggestion of the respondent's social skills, an argument against the respondent's self-assessment, or an assessment of the

proceeding of the interview. Conclusion The results indicated that the interviewers considered the interview interaction as an evidence of the respondents' social functional capacity. However, the current measurements do not utilize this kind of evidence. For the development projects, the results will offer a basis for a new model of assessment practice.

**PD8 886 SOCIAL ISOLATION OF THE ELDERLY IN THE URBAN AREA OF TOKYO**

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**INTRODUCTION** The purpose of this paper is to estimate the prevalence rate of the socially isolated elderly in Tokyo, Japan and to describe their socio-demographic characteristics. **METHODS and MATERIALS** The subjects were 2,907 elderly who actually lived alone, randomly selected from residents' registration of Itabashi Ward of Tokyo. Home-visit interviews were completed for 1,391 elderly. They were asked to name up to 10 persons with whom they had intimate relationships, including relatives, friends and neighbors. Then they were asked to report the frequency of meeting and contacts by telephone, letter and e-mail with each one. Based on these responses, the "extremely isolated" was defined when they had no person with intimate relationships, and the "semi-isolated" was defined when they had at least one intimate person but the frequency of contacts with them was very limited. **RESULTS** 1) The prevalence rate of the socially isolated (extremely isolated + semi-isolated) elderly was 10.8 to 16.6% of the elderly living alone. 2) The majority of them were male and tended to be unmarried or childless and at the very low income level. 3) Approximately 80 to 90% of them had hardly perceived instrumental supports from other persons. **CONCLUSION** The results of this study suggest that the prevalence rate of the socially isolated elderly is very low in comparison with the previous studies either in Japan or other countries. It does not necessarily mean, however, that rate of those elderly in Tokyo is comparatively lower. We would rather say that our operational definition of social isolation is relatively more validate and reliable than those of the previous studies because of our data collection about detail social networks on the dyad-base. Concurrently, it is predicted that the socially isolated elderly will steadily increase according to the rapid increase of the elderly living alone in Japan.

**PD8 887 A DEPARTMENTAL IMPLEMENT OF PREVENTION OF MISTREATMENTS TOWARDS ELDERLY PEOPLE**

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Docteur Bernard Duportet (Président AGE 91), Delphine Guillemet, (Directrice AGE 91), Docteur Marie-France Maugourd (Gériatre, Chef de service, Hôpital G. Clemenceau, Assistance Publique-Hôpitaux de Paris). **Introduction** The fight against elder abuse needs detection and treatment of abuse cases but also prevention. Since 1999, in Essonne (France) an area of 1.200 000 inhabitants including more than 220 000 people over 60 years, a formation is conducted to the professionals of nursing homes and home care. This study describes this action of information, assesses impacts and gives some information about methods. **Methods and materials** This study describes the organization set up by the association, contracts signed with authorities, programs, training officers, methods of valuation. The objectives of action are specified: growing awareness of reality of mistreatments and risks represented by the Alzheimer's disease, phenomenon of abuses, offering professionals times to speak freely of their work and difficulties. From 1999 till 2008: 1 281 sessions of sensitization (950 on mistreatments, 331 on Alzheimer's disease) were given to 11 700 trainees. The upper rate of contentment (80 %) is analysed. Results A significant evolution was noticed in individual and collective behaviours as in organization of care: • better knowledge of the individual or group mechanisms driving to abuse and mistreatment. • location of risk factors in the family, and in social and professional situations, allowing professionals to construct tools of prevention and to manage crisis situations. • a positive attitude in professional practice **Conclusion** The departmental implement is specific by its length, its global character (detection, sensitization, education) on a determined territory and by the collaboration between public area and associative area. It is included in the French national program of prevention of mistreatments. It represents a model likely to be included into any local or national prevention of mistreatments policy.

**PD8 888 SEGMENTS: KNOWING THE NEEDS OF ELDERLY PEOPLE**

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**Introduction** Governments in most Western encourage a shift from supply-driven to demand-driven care provision. In aging societies, it therefore becomes increasingly important for providers of housing, welfare and care to gain insight in the needs of elderly. This is complicated since they obviously differ in several ways, which influences their needs and demands. Segmentation research is known for providing insight in classes of clients that share some common needs characteristics in combination with other

characteristics such as health, age, marital status etc. Creating segments gives insight in the multidimensional diversity among elderly and enables providers to approach their clients in a more demand-based manner. In this paper we address the needs of elderly by means of segments with the following research question: What are the needs of elderly in long-term care? **Methods and Materials** Long-term care segments have been constructed by means of a questionnaire on the use of and needs for services in housing and long-term care, which was filled out by 2,423 people aged 55 years and over. To unravel the segments, the method K-means was used in SPSS. Results Five long-term care segments have been characterized: 1. vital elderly barely need help; 2. future-oriented vital elderly resemble vital elderly, but prefer adaptations in their house; 3. lonely-coping elderly are mainly lonely combined with some need for assistance; 4. cognitive-restricted coping elderly are in need of many adaptations and care because of physical and cognitive restrictions; 5. needy elderly resemble the before-mentioned segment, but are additionally in need for physical care. **Conclusion** Segments give insight in the multidimensional diversity among elderly and can as such be analyzed as a holistic and complex dependent variable. For segment development several dimensions have to be taken into account, however, these dimensions might vary among different domains, such as long-term care or loneliness.

**PD8 889 THE SOCIAL WELL-BEING OF RESIDENTS IN EXTRA-CARE HOUSING IN ENGLAND**

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**INTRODUCTION** Extra-care housing is a development of sheltered housing that aims to meet the housing, care and support needs of older people, while helping them maintain independence in their own private accommodation. Schemes usually offer social activities, and provide communal and social facilities with the aim of addressing social isolation and building community. A consequence of moving into a care setting is that older people's levels of activity and social well-being are particularly reliant on that community; thus, a move into extra-care provides both challenges and opportunities for improvements in social well-being. This project focused on two extra-care villages and 13 smaller schemes during their first year of opening, and aimed to identify: • Schemes' approaches to developing social activities • Residents' experiences of these approaches • The effectiveness of these approaches in fostering individual social well-being and a supportive social climate. **METHODS** Six months after opening, four residents and two staff members were interviewed in each scheme about the development of the social life. At 12 months, a survey of 600 residents and interviews with a subsample of 175 identified individual views on the social life at each scheme, participation levels, well-being, and social climate. **RESULTS** All schemes took a resident-led approach to providing social activity, but there was considerable variation in the way this approach was implemented in terms of staff and resident involvement in organising social activities. This was associated with the size of the schemes and characteristics of the resident population – some smaller schemes had a larger proportion of people dependent on others for help. **CONCLUSIONS** Residents' experiences of extra-care depend on both their personal and the scheme's characteristics and approach to social activity. Implications of the results for the management of social activities and for wider social well-being within extra-care housing will be discussed.

**PD8 890 TITLE NOT RECEIVED**

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1. Different periods of life fix age distinction in rhythms of biological and social time. Structural organization of age stages is not the attitude of hierarchy, or cyclic recurrence and "chain". 2. In the theoretical space of the general doctrine of man's life the old age is considered as a final stage focusing on value experience of a man. If age might be defined as a measure of immersing in life, then the old age is a deep immersing, a space for diverse senses fixed in human memories, which can be found in language, gestures, etiquette, household orientation, age "filters" and "amplifiers". 3. Ontological pressure of "old age" in the individual history of a man and demands the judgment in varying contexts of society. In the modern world the old age can not be perceived as irreversible replacement of a man on the periphery of social life and gradual way out from its use, on the contrary, it is possible to discover intensification of its importance and from that point of view of social functions, and by way of staying in space of limiting senses.

**PD8 891 IN THE THIRD AGE WITH PHYSICAL IMPAIRMENTS**

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**Introduction** In writings of scholars in the ageing field a relatively good health and functional state stands out as a prerequisite of a leisurely active pensioner life style. For example, in his theory of the Third Age Laslett argue that even if the conditions of a self-fulfilling Third-Age-life style often is most favourable when retired, it is not the chronological age as such that opens the door to the Third Age. What Laslett describes as crucial, however, is a person's health and functional state. According to Laslett's theory it is impossible to enter the Third Age with extensive impairments. Other scholars have pictured an active pensioner's ideal as a problem since it excludes disabled seniors. The

aim of this presentation is to contribute to the discussion about the relationship between health and function and the possibilities of "ageing successfully". Unlike previous interventions in this debate, not only the challenges, but also the opportunities of entering the Third Age with impairments will be considered. Methods and materials The presentation is based on a Swedish qualitative interview-study of 20 persons between 56-72 years. The period in which they had lived with physical impairment ranged between 30 and 66 years. Results The interviewees descriptions of their everyday lives shows that it is not unreasonable to surmise that a pensioner with extensive impairments can achieve a modern pensioner ideal, if only the necessary environmental conditions exists. General developments in welfare, technical improvements and improvements within the area of support are commented upon as changes that have contributed to the Third-Age-like lifestyle of the interview subjects. Conclusion The study displays the importance of considering the social and environmental context when formulating theories about the relationship between health and function and "successful ageing".

#### **PD8 892 UNIFIED ASSESSMENT – POLICY, IMPLEMENTATION AND PRACTICE**

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Introduction The introduction of unified assessment (UA) processes in Wales heralds opportunities to develop more consistent approaches to the assessment and management of care that are underpinned by an agreed evidence base and inform the development of person-centred, outcome-focused support. This presentation considers the effects of UA from key stakeholder perspectives, including older people, family carers and staff working in health and social care organisations. Methods and materials We report findings from: a postal survey of older people (n=280) and their carers (n=280); in-depth interviews with older people (n=35) and separate interviews with their carers (n=35); semi-structured interviews with staff (n=87); and, three focus groups with staff. Quantitative data were analysed using SPSS Version 15. QSR Nvivo 7 supported analysis of the qualitative data. Results UA challenges traditional service-led approaches to supporting older people and has facilitated positive changes to practice. It encourages the development of person-centred, outcome-focused approaches. Assessment tools, developed in response to UA Guidance, place greater prominence on capturing information in the older persons' own words and making explicit a set of agreed outcomes to be achieved. The increased emphasis on problem-solving and maintaining independence, by drawing on older peoples' existing strengths, has improved care planning and service planning processes and prompted practitioners and service providers to think more creatively about support. Improvements in the ways practitioners consider and evidence risks to independence are noted. Set against these positive changes are problems relating to the definition and measurement of outcomes, as well as concerns about raising expectations amongst older people and unwieldy assessment documentation. Conclusion If the vision of outcome-focused support is to be fully realized, further training is needed to help practitioners: reflect on the definition and measurement of outcomes; allay fears about raising expectations; and, embrace the potential of wider community resources in achieving outcomes.

#### **PD8 893 METROPOLITAN VERSUS NONMETROPOLITAN VARIATION IN PLACE OF DEATH IN BELGIUM, THE NETHERLANDS AND ENGLAND**

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Introduction Place of death is considered an indicator of good end-of-life care, with home death preferred by most terminally ill patients. Previous research suggests substantially more hospital death and less home death in the metropolitan versus non-metropolitan regions of Europe. This study therefore examines metropolitan versus nonmetropolitan variation in place of death in Belgium, the Netherlands and England. Methods and materials Death certificate data of all deaths in 2003 were linked to census data. Place of death of those dying of 7 conditions likely to benefit from palliative care (cancer, heart/renal/liver failure, respiratory/neurodegenerative disease, HIV/AIDS) living in 6 English, 3 Dutch and 2 Belgian metropolitan regions was compared to that of nonmetropolitan residents. When examining differences in place of death (home vs. hospital; care home vs. hospital), multivariate analysis was used to control for possible confounders: cause of death, sex, age, income, social support, and available hospital and care home beds. Results Those living in metropolitan regions less often died at home and more often in hospitals, compared to nonmetropolitan patients. In Belgium and the Netherlands they also more often died in care homes. Multivariate logistic regression analyses showed that, even after controlling for possible confounders, those in nonmetropolitan regions were more likely to die at home and less likely to die in hospitals than those in metropolitan regions (OR: Eng:1.26; NL:1.49; B:1.74). In England, those in nonmetropolitan regions were more likely to die in a care home and less likely to die in

hospital than metropolitan residents (OR: 1.34). Conclusion Dying in Europe's metropolitan regions is less likely to occur at home and more likely to occur in hospital than in nonmetropolitan regions. This inequality could point at different end-of-life care in metropolitan regions, and suggests the need for a metropolitan approach to end-of-life care in all care settings.

#### **PD8 894 SURVEY AMONG FINNISH GERIATRICIANS – COMPARISONS BETWEEN 2001 AND 2008**

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Introduction: In order to get insight of geriatric care and its development in Finland, we organised a postal survey among geriatricians in 2001. The questionnaire included items about work positions, work satisfaction, and general views about geriatric care. Methods: A largely identical survey was renewed in 2008 and compared to those in 2001. Also new items were included. The survey was distributed to all Finnish geriatricians (n=167 in active work). Results: Response rate was 60% (101 with specialty in geriatrics, 11 in training) all respondents in active work. As compared to 2001, the proportion of women (74%) had increased and specialty profile changed: more geriatricians had a background in general practice in 2008 than in 2001. The working profile and views about geriatricians' work were largely similar to those in 2001. Half of respondents were occupied by communities either in open care or primary care hospitals, 19% were occupied by secondary or tertiary hospitals. Of all respondents, 44% were in leading positions. Geriatricians were considered to be needed especially in memory clinics and in rehabilitation, somewhat less so in acute care. Majority of responding geriatricians considered general practitioners with additional geriatric training to be most appropriate to treat older patients with common problems. In general, geriatricians in 2008 were satisfied with and optimistic about their work — even more than in 2001. Every respondent was happy to have chosen geriatrics, 81% reported to carry on very well or reasonably well in their work, and majority also reported to be able to influence the geriatric care in their community. Biggest challenge was to increase geriatric knowledge and skills in health care in general. Conclusions: According to geriatricians, geriatric care has developed favourably in Finland and geriatrics is a rewarding speciality. More geriatric education is, however, needed generally in health care.

#### **PD8 895 THE HEALTH CARE EXPERIENCE OF THE OLDEST OLD IN THE UNITED STATES**

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Introduction: The oldest old are the fastest growing segment of the U.S. population, yet the medical literature provides us with scant information on health care for this population. In the setting of uncertainty about benefits and harms, we examine the health care experience including practice variation in delivery of screening for occult cancer and technologically aggressive end-of-life care among people 80 years old and older. Methods and Materials: Retrospective cohort study comparing utilization across Hospital Referral Regions (HRR) in the U.S. with focus on 8 regions in NY, FL, TX, and CA. Participants were 20% national sample of fee-for-service Medicare beneficiaries who are 80 or older in 2003 (n=1,548,836). Measures included testing for occult cancer, end of life care, costs, institutional use, care transitions and longitudinal care as determined by billing. Results: Across HRRs in the U.S., there was wide variation in the percent men 80 and older having a screening prostate specific antigen(PSA) test (5-54%), women having a screening mammogram (10-34%) and in the end-of-life experience among the oldest old (2-14% having mechanical ventilation and 2-14% having a feeding tube placed in the last 6 months of life). Among the 8 HRRs selected, regions with lower likelihood of aggressive end-of-life care and PSA testing in men 80 and older, relied more on primary care specialties with less fragmentation across physicians. Across all regions, frequent care transitions between institutions were common with 28-52% of elders having 5 or more transitions. Conclusions: The healthcare experience for the oldest old in many regions of the United States was fragmented and the care may not have been aligned with preferences or lead to clinical benefit in this vulnerable population. Improving health care for this vulnerable population will require local efforts to improve collaboration across providers and improved provider skills in supporting decision quality.

#### **PD8 896 THE DIFFICULT PROGRESS OF GERONTOLOGY AND GERIATRICS IN SLOVENIA**

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The history of gerontology and geriatrics in Slovenia reminds us that in order to function successfully, any specialized branch needs constant support from its own professional environment as well as from politics – or else even the best-launched project may come to a halt. At the initiative of the pioneer of Slovene gerontology and geriatrics, Dr. Bojan

Accetto, an Institute of Gerontology and Geriatrics was established in 1966. Till 1988, the Institute was a place that developed modern gerontology and geriatrics, trained a whole range of profiles, did research work, and participated in international exchange. After Accetto's departure the Institute was renamed a Clinic for Vascular Diseases. Every attempt to reinstall the geriatric profession ended in failure, for lack of adequate interest within the health service. This is quite paradoxical considering that due to increasing life spans and low fertility rate the number of older people has soared and that the elderly even have their own political party, which makes it to parliament at each general election and whose members hold ministerial offices. The push that has moved Slovenian gerontology and geriatrics from its standstill came not from within the health care services but from sociology. The Anton Trstenjak Institute for Gerontology and Intergenerational Coexistence has been promoting gerontological issues since 1992. Under its influence the spreading of gerontological and geriatric knowledge has acquired support from the Slovenian Medical Society, the Medical Chamber, and the Slovenian Academy of Sciences and Arts. Since 2008, preparations have been taking place to reintroduce gerontological/geriatric education into every medical school and university. Thus, after a twenty-year interruption, the clinical field may continue the legacy of the institute founded, forty-four years past, by Dr. Bojan Accetto.

**PD8 897 MANAGEMENT IN VERY OLD PATIENTS HOSPITALIZED FOR LOWER RESPIRATORY TRACT INFECTION A STUDY PATTERNS IN FRENCH HOSPITALS**

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**Introduction:** In patients hospitalized with lower respiratory tract infection (LRTI), an older age is associated with a poor prognosis and may reduce physician adherence to practice guidelines. **Objectives:** To assess processes of care together with their agreement with national guidelines and outcomes in elderly patients hospitalized for LRTI in public hospitals of Brittany (France) and whether differences are observed in very old patients (VOP) ( $\geq 85$  years) compared to younger patients ( $< 85$  years). **Methods:** A retrospective cohort study of adults hospitalized in geriatric and internal medicine departments was conducted between October 1, 2004 and March 31, 2005. Patients included had an International Classification of Diseases, 10th Revision diagnosis of LRTI and no comorbidity with cancer or with other infectious diseases. **Results:** 531 patients were included and proportion of patients with community acquired pneumonia was similar in the 2 groups (55%). 195 were VOP and were more likely to be women ( $p < 0.01$ ) and to have suspected aspiration pneumonitis ( $p < 0.04$ ). 97% patients were admitted to the emergency department and 98.5% were prescribed antibiotic therapy during hospitalization. The lack of measurement of renal function before antibiotic administration was frequently (35%) and similarly observed in both groups. Initial inpatient antibiotic prescription was in agreement with guidelines (90%) in both groups. Parenteral route was less likely to be used in VOP than in younger patients (53% vs 72%,  $p = 0.05$ ). Referral to a specialist was less frequent in VOP group (8.7% vs 14.6%,  $p = 0.048$ ). VOP showed higher mean overall length of stay (15.3 d vs 12.7 d,  $p = .0009$ ) and higher in-hospital mortality (7.7% vs 2.1%,  $p = .0018$ ). **Conclusion:** Quality of inpatient care was similar in very old and younger patients with community-acquired LRTI. Lack of measurement of renal function before initiating antibiotic administration may result in potential worse outcomes in VOP due to higher frailty.