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ABSTRACTS

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Contents

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O-001

Hospital discharges are deficient in meeting frail patients' needs without cross-sectional interdisciplinary interventions

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Introduction: Readmissions can lead to progressive impairment and increased mortality but may be prevented through increased coordinated cross-sectoral collaboration. A geriatric nurse, physiotherapist, or occupational therapist from the Discharge Liaison Function (DLF) at Copenhagen University hospital, Herlev has assisted frail patients at discharged from hospital to home since 2010. The purpose of DLF is to minimize errors and shortcomings and ensure security at sector crossing.
Methods: An observational study evaluating needs of DLF interventions. Frail patients were identified by discharging department. Prior to discharge, DLF checked the medication list and discharge summary. They accompanied the patient home, assessed functional capacity, ensured necessary aids, home care and medications. Reasons for readmissions within 30 days, reported adverse events (AE) and initiation of further social or medical interventions were registered.
Results: DLF has assisted 4.615 patients, median age 83 years (24–105). AE were reported for 14% of patients, most common errors in the discharge summary (29%) and medication inconsistencies including lack of online prescriptions (40%). In totally 2.130 patients (46%) additional interventions were initiated based on the patient's needs—most frequently additional home care and aids. The most common causes of readmissions were falls (17%), pain (9.8%) and gastrointestinal problems (9.3%). Readmission rate was 20.8% which is comparable to readmissions for all (also non-frail) patients + 65 years in the Copenhagen area.
Key conclusions: Half of frail patients discharged with DLF needed additional services and frequently medication inconsistencies were uncovered. Continued focus on cross-sectoral cooperation is needed. DLF may ensure security at sector crossing.

O-002

Frailty as a factor of worsening outcome in short-term stroke recovery

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Background: Frailty is an important clinical and biological syndrome characterized by vulnerability status to stressful situations that plays an outstanding role in stroke.
Objectives: This study analyses the role of frailty in short-term stroke recovery.
Methods: Clinical Frailty Scale (CFS) was used to estimate basal frailty in patients $\geq$ 65 years assessed by stroke code in emergency department since 01 November 2021 until 31 March 2022. Stroke severity was measured applying National Institute of Health Stroke Score (NIHSS) in the urgency first assessment and in the hospital discharge. The difference between the both NIHSS values were adapted as categorical data (NIHSS Improvement greater than or equal to 75% versus improvement inferior to 75%). The chi-square test was used to compare frailty and improvement of NIHSS. The other variables were obtained from de clinical chart of patients.
Results: 123 patients with transient ischaemic attack, ischaemic attack or haemorrhagic stroke were included. Median age was 79 (65–97) years and 50.4% were men. 64 patients (52%) were in the no frailty group (CFS 1–3). In the frail group the patients were older and with a high proportion of men. The no frailty and mild frailty group showed a better recovery of the NIHSS than frailty group ($p < 0.05$).
Key conclusions: Frailty has an important role in the immediate post-stroke recovery. Further studies are needed to understand the mechanisms of impact of frailty in the long-term stroke recovery as well the consequence of frailty prevention in the stroke prognosis.

O-003

Frailty in older community-dwelling adults at risk of hospitalisation

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Introduction: An ageing population encourages re-alignment of healthcare for older adults to focus on early recognition and timely treatment of emerging disease. Frailty may be a key factor for this. This study aimed to investigate whether frailty was associated with 6-month mortality, hospitalisation, or institutionalisation among community-dwelling older adults.
Methods: As part of the intervention arm of the PATINA study, we analysed data on adults $\geq$ 65 years living in three Danish municipalities who had an increasing need for home care. Frailty was assessed using the Clinical Frailty Scale (CFS) (range 1–9; 1 = 'very fit', 8 = 'very severely frail', 9 = 'terminally ill'), CFS 9 were excluded from analyses. Primary outcome was 6-month mortality; secondary outcomes were hospitalisation and institutionalisation within 6 months. Sub-distribution hazard ratios (sHR) were derived using Fine-Gray competing risks model (reference; CFS = 1–3).
Results: Analyses comprised 1,116 older adults (66.7% women) with mean age 84.5 years (SD:7.9). Median CFS score was 6 (range: 2–9). Within 6 months, 159 (14.2%) had died; only CFS 8 was associated with mortality (sHR 5.56; 95% CI 1.6–19.2; $p < 0.05$). Within 6 months, 425 (38.1%) had been admitted to hospital, which was evenly associated with all CFS levels, from 4 (sHR 4.39; 95% CI

1.65–11.6; $p < 0.05$) to 8 (sHR 3.63; 95% CI 1.03–12.8; $p < 0.05$). While 163 (14.6%) were institutionalised, this showed no significant association.
Conclusions: Frailty is associated with risk of 6-month mortality and hospital admission but not institutionalisation. Surprisingly, risks did not increase proportionally to CFS, which may call for care when applying CFS in this population.

O-004

Frailty screening associates with risk of hospitalization and functional decline in older patients with inflammatory bowel diseases

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Introduction: Older patients are rapidly becoming a large proportion of the Inflammatory Bowel Diseases (IBD) population. In this study, we investigated the association of frailty with hospitalization and decline in quality of life (QoL) and functional status in older patients with IBD.
Methods: A prospective multicentre cohort study in IBD patients ≥ 65 years using frailty screening (G8 Questionnaire) and geriatric assessment, covering the somatic, activities of daily living, physical, mental and social domains. Outcomes were all-cause hospitalization during 18 months, QoL (EQ5D-3L) and functional decline (Instrumental Activities of Daily Living, (IADL)). The following confounders were used in the analysis: age at baseline, biochemical disease activity (C-reactive protein ≥ 10 mg/L and/or fecal calprotectin ≥ 250 μg/g) and comorbidity (Charlson Comorbidity Index).
Results: Of 405 patients, median age 70 years, 196 (48%) had a positive frailty screening, 160 patients (39.5%) had 2–3 geriatric deficits, 32 (7.9%) had 4 or 5. All-cause hospitalizations occurred 136 times in 96 patients (23.7%). Positive screening or 4–5 geriatric deficits associated with higher all-cause hospitalizations (adjusted (a)HR 1.8, 95% CI 1.1–2.8; aHR 2.8, 95% CI 1.3–5.9). Decline in QoL was experienced by 108 (30.6%) patients, decline in functional status by 46 (13.3%). Frailty screening was independently associated with decline in QoL (aOR 2.1, 95% CI 1.2–3.5) and functional status (aOR 3.4, 95% CI 1.6–7.6), whereas geriatric deficits were not.
Conclusion: Frailty associates with worse health outcomes over time in older IBD patients. Further studies are needed to assess the value of implementation of frailty screening in routine IBD care.

O-005

Examining the relationship between frailty prevalence, mortality and the Socio-Demographic Index in Europe

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Introduction: Frailty is associated with population ageing, especially in European countries, increasing the risk of numerous adverse health outcomes. Research at the individual level indicates an independent association with lower socio-economic status. This study examines differences in frailty prevalence and mortality in European countries according to socio-economic development.
Methods: We performed a secondary analysis of data from adults aged ≥ 50 in 12 countries included in wave 2 of the Survey of Health, Ageing and Retirement in Europe. Follow-up data were obtained at wave 4. Development was measured using the Socio-demographic Index (SDI). Countries were dichotimised into middle-upper and upper SDI quintiles. Frailty was measured using a 70-item frailty index (FI) (score ≥ 0.25) and a modified Fried's Frailty Phenotype (FP) (≥ 3/5 positive criteria). Logistic regression was used to assess mortality odds ratios (OR), adjusting for age and sex.
Results: Frailty prevalence varied by instrument, ranging from 6–41% for the FI-70 and 3–20% for the FP. It was lowest in Switzerland and highest in Poland, correlating strongly with country SDI scores ($r = 0.8$). Adjusting for age and sex, the SDI was independently associated with frailty prevalence, measuring using the FI-70 (OR = 2.08, 95% CI:1.87–2.33) or FP (OR = 2.41, 2.08–2.79). While mortality was lower in countries with higher SDI scores (7.2% vs. 8.4%), it was statistically insignificant after adjusting for age, sex and frailty status.
Conclusions: Lower country SDI scores were associated with higher frailty prevalence but did not independently predict mortality, adjusting for age and sex, irrespective of the measure used.

O-006

Voice parameters and frailty score: correlation awaits to be used in clinical setting

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Introduction: Voice intensity and voice health are parameters physicians encounter daily in routine work and are used intentionally and unintentionally to evaluate general health. Although it is an important predictor of adverse health outcomes in the elderly, available frailty scores are seldomly used by clinicians. The association between frailty and voice parameters is scarcely studied. Voice recording and analysis can be a simple, short and easily available technique for assessing frailty. This study evaluates the association between a validated frailty score (Rockwood frailty score), and well-accepted voice parameters obtained from a voice recording.
Methods: The study included 53 geriatric patients (over 65 years old) hospitalized in rehabilitation wards in a tertiary medical center in Tel Aviv, Israel. Participants' frailty was assessed using Rockwood frailty score. They were recorded by a smartphone, using a simple recording application, counting from 1 to 10 and backwards. The recordings were analyzed, and peak and average volume were derived for each participant.
Results: Preliminary analysis of the data reveals weak correlation between the patients' frailty score and voice parameters peak volume and average volume ($R < 0.3$). Better correlation ($R = 0.3$) is shown for the counting backwards section of the recording.
Conclusions: The correlation between frailty and voice parameters hasn't been established. Thorough analysis of the voice samples and prolonged, more strenuous samples might reveal better correlation and are presently explored. Proving such a connection using this method will aid in identifying vulnerable patients.

O-007

The burden of frailty and its components according to cognitive status among 5378 participants of the PolSenior2

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Introduction: The phenotype of frailty and the scope of therapeutic actions that may be employed will depend on the cognitive status of the patient.
Methods: We did a cross-sectional nationally-representative survey of health of 5987 older persons. During the study visits frailty was assessed according to the criteria by Fried et al. and cognitive status was assessed based on the MMSE. The participants were divided into robust, pre-frail and frail. According to the MMSE results cognitive status was divided into normal, MCI, and mild, moderate and severe dementia.
Results: The 5378 participants with non-missing data, mean (SD) age 75.0 (9.4) (% women) were included. The 2758 persons with normal MMSE, 35.7% were robust, 55.1% were pre-frail and 9.2% were frail. The corresponding values for MCI were 24.3, 62.4, and 13.2. Among the persons with the MMSE in the dementia range, the mild dementia subjects were robust in 11.5%, prefrail in 57.3% and frail in 31.1%. The corresponding values for moderately demented and severely demented persons were 4.7, 37.9, 57.4% and 0.0, 14.7, 85.3%, respectively. Exhaustion (19.2–82.2%), low physical activity (14.9–75.0%), weakness (27.7–78.0%), and slowness (58.9–97.4%), but not shrinkage (8.2–15.0%), increased from MCI to severe dementia.
Key conclusion: The MMSE compatible with suspected dementia irrespective of the severity is related to lack of robustness or nearly so. All persons with cognitive frailty will require therapy and not merely prevention of physical frailty.

O-008

Frailty detection among primary care older patients via an automated tool: the Primary Care Frailty Index (PC-FI)

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Background: The prompt identification of frailty is the first step to offer personalized care to older individuals. Primary care is ideal to implement a frailty screening on a large scale. We aimed to detect and quantify frailty among primary care older patients, by developing and validating an automated primary care frailty index (PC-FI) based on routinely collected health records and providing sex-specific frailty charts.
Methods: The PC-FI was developed using data from 308,280 primary care patients $\geq$ 60 years old (range 60–108) part of the Health Search Database (HSD) in Italy (baseline 2013–2019), and validated in the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K; baseline 2001–2004), a well-characterized population-based cohort including 3,363 individuals $\geq$ 60 years old (range 60–104). Potential health deficits part of the PC-FI were identified through ICD-9, ATC, and exemption codes and selected through an optimization algorithm (i.e., genetic algorithm), using all-cause mortality as the main outcome for the PC-FI development. The PC-FI association at one, three and five years, and discriminative ability for mortality and hospitalization were tested in Cox models. The convergent validity with frailty-related measures was also verified in the external dataset using logistic models. The following cut-offs were used to define absent, mild, moderate and severe frailty, respectively: < 0.07, 0.07–0.14, 0.14–0.21, and ≥ 0.21.
Findings: Mean age of HSD and SNAC-K participants was 71.0 years (55.4% females) and 72.4 (64.9% female), respectively. The PC-FI included 25 health deficits and showed an independent association with mortality (hazard ratio 2.03–2.27; $p < 0.05$ for all) and hospitalization (hazard ratio range 1.25–1.64; $p < 0.05$ for all) and a fair-to-good discriminative ability (c-statistics range 0.74–0.84 for mortality and 0.59–0.69 for hospitalization). Among Italian primary care patients, 34.2, 10.9 and 3.8% were deemed mildly, moderately, and severely frail, respectively. In the SNAC-K cohort, the associations between PC-FI and mortality and hospitalization were even stronger than in the HSD and PC-FI scores were associated with physical frailty (adjusted odds ratio 4.25 for each 0.1 increase; $p < 0.05$; area under the curve 0.84), poor physical performance, disability, injurious falls, and dementia.
Conclusion: Almost 15% of primary care patients $\geq$ 60 years old are affected by moderate or severe frailty in Italy. We propose a reliable, automated, and easily implementable frailty index that can be used to screen the primary care population for frailty.

O-009

Use of Vulnerable Elders Survey Scale (VES-13) for targeting patients candidate to comprehensive geriatric assessment in a heart failure clinic: identification of frailty profiles

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Introduction: Frailty is a highly prevalent and significant predictor of all-cause mortality and hospital readmissions in Heart Failure (HF), but there is not a standard screening tool to detect it in HF patients. Vulnerable Elders Survey Scale (VES-13) could be useful to identify outpatients for geriatric assessment in a HF clinic.
Methods: From March 2021 to May 2022, 84 patients $\geq$ 65 years old were included in our analysis. Patients with end-stage cardiologic disease/in need of palliative management were excluded. Nurses

derived patients after their first visit in a HF Clinic for a comprehensive geriatric assessment (CGA) if VES-13 $\geq$ 3. We describe frailty profiles from the initial CGA, by using the Short Physical Performance Battery (SPPB) and Frail-VIG frailty index (FI) tools.
Results: Cohort characteristics were (mean $\pm$ SD): age 80.9 $\pm$ 5.7 years; VES-13 score 6.4 $\pm$ 2.8; Barthel I. 75.9 $\pm$ 20.1; Lawton I. 3.5 $\pm$ 2.7; Pfeiffer test 2 $\pm$ 2; Charlson I. 3.3 $\pm$ 1.5; Number of falls 1 $\pm$ 1.5; drugs' number 12.8 $\pm$ 3.8; Frail Scale 2.3 $\pm$ 1.2; Frail-VIG FI 0.38 $\pm$ 0.13; 72.6% with Clinical Frailty Scale score $\geq$ 5. Physical function parameters were: Timed Get Up & Go 19.2 $\pm$ 6.6 s, SPPB 5.7 $\pm$ 2.7. Frailty profiles identified by CGA (Means of: VES-13/SPPB/Frail-VIG FI): 6 (7.1%) were robust/pre-frail (3/7.5/0.18), 21 (25%) presented initial/mild frailty (5/7/0.28); 46 (54.8%) moderate frailty (7/5/0.39), 11 (13.1%) severe/advanced frailty (7/4/0.59).
Key conclusions: CGA confirmed frailty in 92.9% of patients with VES-13 positive, 54.8% with moderate frailty. Further analysis will allow us to know if this approach also adds value for prognostic outcomes and could led to tailored interventions on frailty.

O-010

The Functional Continuum Scale in relation to hospitalization density in older adults

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Introduction: There is a need to know the relationship between function and hospitalization risk in older adults. We aimed at investigating whether the Functional Continuum Scale, based on basic and instrumental activities of daily living and frailty, is associated with hospitalization density in older adults.
Methods: Cohort study, with a follow-up of 12 years. A total of 915 participants aged 70 years and older from the Frailty and Dependence in Albacete (FRADEA) study, a population-based study in Spain, were included. At baseline, the Functional Continuum Scale, sociodemographic characteristics, comorbidity, number of medications, and place of residence were assessed. Associations with first hospitalization, number of hospitalizations, and 12-year density of hospitalizations were assessed using Kaplan–Meier curves, Poisson regression analyses, and density models.
Results: The median time until the first hospitalization was shorter toward the less functionally independent end of the Functional Continuum Scale, from 3.917 days (95% confidence interval [CI] 3.701–3.995) to 1.056 days (95% CI 785–1.645) ($p < 0.001$). The incidence rate ratio for all hospitalizations increased from the robust category until the frail one, and thereafter it decreased until the worse functional category. Those who were dependent on basic activities of daily life presented an increased hospitalization density in the first 4 follow-up years (58%), those who were frail in the third- to-sixth follow-up years (55%), while in those prefrail or robust the hospitalization density was homogeneous during the complete follow-up.
Key conclusions: The Functional Continuum Scale is useful for stratifying the risk of hospitalization and for predicting the density of hospitalizations in older adults.

O-011

Association of urinary and double incontinence with one-year mortality in older female hip fracture population

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Introduction: Incontinence and hip fractures are known to be associated with increased risk of mortality. Our aim was to investigate the association of urinary incontinence (UI) and double incontinence (DI, concurrent UI and faecal incontinence) with 1-year mortality among older female hip fracture patients.
Methods: All 1468 female patients aged $\geq$ 65 and treated for their first hip fracture in Seinäjoki Central Hospital, Finland, during 2007–2019, were included in a prospective cohort study. Age- and multivariable adjusted Cox proportional hazards models were used.
Results: Of the women with no incontinence, UI and DI, 15% (n = 78), 23% (n = 159) and 35% (n = 60), respectively, had died during the 1-year follow-up. UI (hazard ratio [HR] 1.72, 95% confidence interval [CI] 1.31–2.26) and DI (HR 2.81, 95% CI 1.8–3.66) were associated with 1-year mortality when adjusted for age. The associations of UI and DI lost their predictive power in the multivariable analysis while age over 90 (HR 2.32; 95% CI 1.57–3.44), living in an institution (HR 1.37, 95% CI 1.04–1.77), impaired mobility (HR 1.37, 95% CI 1.04–1.77), poor nutrition (HR 2.09, 95% CI 1.52–2.86), having 4–10 (HR 1.98, 95% CI 1.18–3.32), or over 10 medications (HR 2.64, 95% CI 1.53–4.53), and late removal of urinary catheter (HR 8.14, 95% CI 4.68–14.3) remained associated with 1-year mortality.
Conclusions: Our findings indicate that underlying frailty is likely to account for differences in mortality between the continence groups rather than incontinence itself. Incontinence is a useful marker for frailty in older women with hip fracture.

O-012

G8 and mG8 to predict functional decline and walking impairments in older patients receiving chemotherapy for colorectal cancer

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Introduction: Resilience to active anticancer treatment among older patients vary. Many experience weight loss, physical decline, falls and hospitalization during treatment, often leading to early discontinuation of chemotherapy. Screening for vulnerability might help identify patients at risk of these adverse outcomes for older people.
Methods: Patients aged $\geq$ 70 years receiving chemotherapy for colorectal cancer (CRC), were screened for eligibility for the GERICO trial with the G8 frailty screening tool. We evaluated the ability of the G8 (cut off $\leq$ 14 for vulnerable) and modified G8 screening tool based on G8 (mG8) (cut off $\geq$ 6) to predict weight loss, physical decline, dizziness, falls and hospitalization during treatment with a chi square test.
Results: Totally 297 patients (median age 75 (70–91)) were included in this analysis. More vulnerable than fit patients experienced functional decline (G8: 42% vs. 14%, $p = 0.006$ and mG8: 28% vs. 17%, $p = 0.035$) and weight loss (2.5%) during treatment (G8: 21% vs. 10%, $p = 0.027$). More vulnerable patients fell during treatment (G8 21% vs. 10% $p = 0.042$) and hospitalization was more frequent among vulnerable patients (G8: 31% vs. 16%, $p = 0.009$ and mG8: 34% vs. 13%, $p < 0.001$). Dizziness were reported for 21% of patients, with no prediction using G8 or mG8.
Conclusion: Patients with G8 or mG8 vulnerability were more likely to experience functional decline and hospitalization during chemotherapy than fit patients. G8 also predicted falls and further weight loss. Appropriate interventions should be offered older patients with CRC assessed vulnerable with G8 or mG8 to maintain function and walking ability during chemotherapy.

O-013

Impact on physical function of the + ÀGIL Barcelona program in community-dwelling older adults with cognitive impairment

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Introduction: Older adults with cognitive impairment (CI) have higher multimorbidity and frailty prevalence, lower functional status, and, consequently, an increased likelihood to develop dementia, non-cognitive deficits, and adverse health-related events. + AGIL, a real-world program for frail older adults in a primary care area of Barcelona, is a pragmatic, multicomponent intervention implemented since 2016. It includes a multifactorial intervention (i.e., physical activity, nutrition, sleep hygiene, revision and adequacy of pharmacological treatment, detection of undesired loneliness and screening for CI) to improve physical function in community-dwelling older adults. We aimed to assess the longitudinal impact on physical function among community-dwelling frail older persons with CI.
Results: 194 participants were included (82 with CI, 112 without CI, based on previous diagnosis or the Mini-COG screening tool), 68% women, mean age (81.6, SD = 5.8) yo. Participants were mostly independent in Activities of Daily Living (mean Barthel = 92.4, SD = 11.1). A physical activity program (10 weekly sessions by an expert physical therapist) showed high adherence (87.6% attended $\geq$ 75% sessions). At three months, there was a clinically and statistically significant improvement at the Short Physical Performance Battery (SPPB) and its subcompenents in the whole sample and after stratification for CI. At six months, SPPB and gait speed remained stable in the study sample and subgroups. CI had no significant impact on the improvement of the SPPB or gait speed.
Conclusion: Our results suggest that older adults with CI can benefit from a multidisciplinary integrated and comprehensive geriatric intervention to improve physical function, a component of frailty.

O-014

A multi-disciplinary approach to transforming eye care services for care home residents

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Introduction: Care-home residents can have variable access to eye care services & treatments. We developed a collaborative approach between optometrists, care-homes, primary & secondary care to enable personalised patient-centred care.
Objective: To develop and evaluate an integrated model of eye care for care-home residents.
Methods: Small scale plan-do-study-act (PDSA) studies were completed in three care-homes in London between November 2021-May 2022. Processes were compared to historical feedback & hospital-based ophthalmology clinic attendances (Mar 2019–2020). Hospital-like assessments were piloted at two care-homes for feasibility & acceptability. Further piloting utilised usual domiciliary optometry-led assessment with multidisciplinary meeting access to reduce duplication of assessments and to evaluate MDM processes and referral rates.
Results: Visual acuity & pressure measurement was 100% successful at care-home compared to hospital outpatients (71.7% visual acuity, 54.5% pressures). Examination was faster than in hospitals (16 vs 45–60 min) with less time away from usual activities (32 min vs 6 h). DNA rates reduced (26.7–0%), secondary care discharge rates improved (8.4–32%). Hospital eye service referral were indicated in 19%-23%, half of which were for consideration of cataract surgery. Alternative conservative plans were agreed at MDM for residents who were clinically too frail or unable to comply with treatments avoiding 33% unnecessary referrals.
Conclusions: Home-based eye care assessments appear better tolerated and are more efficient for residents, health and care staff. Utilising an MDM for optometrists to discuss residents with ophthalmologists/MDT members enabled personalised patient-centred decision-making. Future work to test this borough wide is in progress.

O-015

Breast cancer in the elderly: therapeutic management in common practice according to geriatric status and frailty

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Introduction: With global population aging, breast cancer will be increasingly encountered in clinical practice. Breast cancer is the most commonly diagnosed cancer among women, surpassing lung cancer as the leading cause of global cancer incidence in 2020. It is the fifth cause of cancer mortality worldwide Moreover, newly diagnosed breast cancer patients increase among the higher age groups, with an actual median age of 63 years at the diagnosis and an incidence peak at 74 years in France. Management decisions are challenging due to the heterogeneity in this specific population where geriatric frailties are sometimes more predominant than the consequences of cancer themselves. Despite specific recommendations, treatment guidelines differ between European countries and the few consensus on how to optimally treat old patients reflects the lack of evidence based knowledge in this under-represented population in large clinical trials. In order to improve the therapeutic decision in older patients, by taking possible weaknesses into account, Geriatric 8 frailty screening tool (G8) was introduced, identifying patients who may benefit from a Comprehensive Geriatric Assessment (CGA). By identifying health problems of clinical importance and by preventing the onset of decompensation during oncological management, CGA could lead to subsequent improvement of the patient's quality of life.
Materials and methods: Newly diagnosed Estrogen Receptor (ER)-positive breast cancer female patients older than 80 years old, treated in our Regional Cancer Centre from January 2011 to September 2018, were retrospectively selected Variables collected from patient database included demographic data, tumour characteristics, surgical and medical treatment performed, comorbidities and personal treatments, results from the comprehensive geriatric assessment if performed, survival status and date of death.
Results: Among the 291 analysed patients, 213 (73.2%) patients had upfront surgery. Hundred and ninety five patients (67%) underwent a G8 screening test. Median score was 13 (range 1–16), 155 (79.5%) patients had a pathological score ≤ 14. Hundred and eighty four patients (63.2%) patients benefited from a CGA. combining G8 score and Balducci classification, 62 patients had no G8 score nor CGA (21.3%), 48 (16.5%) patients had a G8 score ≤ 14 not followed by a CGA, 47 (16.2%) patients were considered as fit with a G8 score $>$ 14 or Balducci 1, 95 (32.6%) considered as vulnerable patients and 39 (13.4%) as frail patients. The rate of upfront surgery was significantly different according to Balducci classification ($p < 0.001$): 88.7% for fit patients, 81% for vulnerable patients Balducci 2 and 5.1% for frail patients Balducci 3. Among the vulnerable patients (Balducci 2), Get Up and Go Test was more pathological for patients without surgery but initially proposed compared to those who went through surgery. ADL ≤ 5 was more frequent for patients without surgery as well as weight loss Overall survival was 81.5% at 2 years, 95% CI [76.2%; 85.7%]. It was significantly lower for patients without upfront surgery (proposed or not) comparatively to initially operated patients ($p < 0.001$). Among patients with initial surgery, overall survival was lower for the 76 vulnerable patients (Balducci 2) comparatively to the 45 fit patients with an overall survival at 3 years of 68.3% [55.5%; 78.1%] and 84.5%[66.6%; 93.3%] respectively ($p = 0.010$).
Conclusion: There are few studies in elderly women over 80 years old in oncology, especially with a 3-year follow-up period. Surgery remains the therapeutic of choice in the non-metastatic RE positive breast cancer, even in a geriatric population, with a satisfying 3-year overall survival. Despite accessible and easy to use tools, the screening of frailty in this population is still suboptimal. Failure to detect vulnerable patients potentially exposed them to treatments from which they might no benefit and even be harmed. Thus, there remain potential for improvement in detecting and establishing specific corrective measures for frail patients with cancer, in order to provide optimum medical care.

O-016

Improved postoperative outcomes after prehabilitation for colorectal cancer surgery in older patients: an emulated target trial

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Introduction: The aim of this study was to assess the effect of a multimodal prehabilitation program on perioperative outcomes in colorectal cancer patients based on real-world data using an emulated target trial design.
Methods: An emulated target trial design including overlap weighting based on propensity score was performed to reduce the impact of confounding-by-indication. The study consisted of all patients with newly diagnosed colorectal cancer, between January 2016 and July 2021, in the Jeroen Bosch Hospital, who were candidate to elective colorectal cancer surgery and had a higher risk for surgical complications. Both an intention-to-treat and per-protocol analysis was performed to evaluate the effect of prehabilitation compared to usual care on perioperative complications, length of stay (LOS) and number of readmissions.
Results: 251 patients were included, median age 73 years, 52,5% male, 44% polypharmacy and 40% ASA III/IV. There was a significant risk reduction in the occurrence of overall complications for patients in the prehabilitation group with an absolute risk reduction 0.24 (95% CI: 0.10–0,38). Compared to patients in the usual care group, patients undergoing prehabilitation had a 55% lower comprehensive complication score(95% CI 32–71%). Additionally, there was a significant reduction of LOS from 7 to 5 days.
Conclusions: This study showed real-world evidence of the effectiveness of a multimodal prehabilitation program in colorectal cancer surgery with a significant reduction in complications and LOS. The methods used in this study can serve as an example for future research on prehabilitation.

O-017

Improving ceilings of care and resuscitation discussions in acute geriatric wards

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Introduction: Older people with frailty are at increased risk of death following hospital admission. We aimed to improve the frequency of ceiling of care discussions in older patients admitted to geriatric wards.
Methods: Prospective electronic notes review of randomly identified patients admitted to acute geriatric wards in August 2021, November 2021, and March 2022. Interventions included face-to-face teaching and feedback, provision of fliers, electronic updates, and discussion at teaching meetings.
Results: 228 patients were included with average age 82.9(64—105), average CFS 5.8(2–9). 27 patients (11.8%) died, 26 with DNAR order in place. 38(49.4%) patients in August 2021 had ceiling of care and resuscitation discussion. In November 2021 this increased to 49(69%) patients, and 63(78.8%) in March 2022. Outcome of discussion: DNAR for 139(61%) patients and for CPR 10(4.4%) patients. 1(0.4%) needed further discussion with family while 78(34.2%) had no discussion; Outcome of discussion for ceiling of care was 113(49.6%) patients for level 1, 24(10.5%) patients for level 2, 4(1.8%) patients for level 3. 84(36.8%) patients had no discussion while 3(1.3%) patients needed further discussion. 227(99.3%) with patients and/or relatives. One of the main reasons for not discussing CPR status included the patient being perceived to have "a good baseline" (30.8%). No clear reason documented in 53.8%.
Key conclusions: Frequency of ceiling of care discussions increased consistently across the project period. Our data suggest that it is achievable to incorporate escalation of care discussions into routine inpatient care. Further work will focus on handover of care decisions to primary care.

O-018

Features of neurocognitive disorders among postmenopausal women

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Introduction: Estrogen deficiency can be defined as the initial stage of a causal chain that causes an increased risk of cognitive impairment or even dementia in postmenopausal women.
Materials and methods: The total number of patients included in the study was 224, divided into four groups of 56 patients each, evenly distributed by age categories, as follows: the first group aged between 50 and 64 years (adult women); the second group aged 65–74 years (young elderly), the third group aged 75–84 years (elderly), and the last group was patients aged 85 years or older (long-lived women). Parameters considered: gender, age, level of education, place of residence (urban/rural), economic status, marital status, comorbidities, and cognitive function.
Results: The prevalence of depression in postmenopausal women, as a risk factor for the development of neurocognitive disorders, was highest in "young" elderly women, followed by adult women. The prevalence of dementia in postmenopausal women was highest in long-lived women, followed by the elderly themselves. A correlation was found between women of different ages diagnosed with dementia and the prevalence for various risk factors, as follows: adult women with dementia associated an increased prevalence of low economic status (58%), compared to the young elderly with dementia, which associated an increased prevalence of alcohol consumption (71%). Among adult women diagnosed with anxiety, the risk factor with the highest prevalence was presence of cardiovascular disease. In contrast, elderly women diagnosed with anxiety had as predominant risk factor alcohol consumption, equal to low economic status (64%), as well as bone mass loss.
Conclusions: Significant reduction and change of ovarian function during menopause has many consequences, both on short and long term. They lead to a varied clinical pictures and making patients prone to the development of complications due to the presence of several risk factors, including a higher prevalence of neurocognitive disorders.

O-019

Mental Health Related Quality of Life at Baseline Predicts Dementia: findings from the EPIC-Norfolk prospective population-based study

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Introduction: Lower Health Related Quality of Life (HRQoL) predicts dementia in older adults in the USA. Whether this association persists in other populations or mid-life, when interventions to prevent or delay cognitive decline may benefit, is unknown.
Methods: 7,452 community-dwelling participants (57% women; mean age 69.3) attended the European Prospective Investigation of Cancer-Norfolk study's third health examination and answered the Short-Form Health Survey (SF-36), measuring HRQoL. Longitudinal associations between standard deviation differences in Physical Component (PCS) and Mental Component Summary (MCS) scores, as well as eight SF-36 sub-scales (physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, mental health), and incident dementia were explored using Cox Proportional Hazard regression (median follow-up 10.7 years). Additionally, cross-sectional relationships between HRQoL and global cognitive function were explored using Logistic regression ($n = 4435$). The cohort was examined as whole and by age-group (50–69, > 70), considering socio-demographics and co-morbidity.
Results: Higher MCS scores predicted lower dementia risk (HR 0.76, 95% CI 0.69–0.83) and odds of poor cognitive function (OR 0.82, 95% CI 0.76–0.89), with similar observations across age-groups (e.g.,

incident dementia: 50–69yrs- HR 0.76, $p = 0.006$; > 70yrs- HR 0.77, $p < 0.001$). Protective associations were also observed between higher role-emotional and mental health scores and dementia. In younger participants, point estimates suggested protective associations between higher PCS scores and both dementia (HR 0.91, 95% CI 0.72–1.16) and poor cognitive function (OR 0.81, 95% CI 0.72–0.92), but no associations were observed in the > 70 age-group.
Conclusions: Lower mental HRQoL may help identify adults in mid and late-life at risk of developing dementia.

O-020

Dementia & Delirium Team: a novel multidisciplinary service to promote high quality care and improved outcomes for inpatients with cognitive frailty

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Introduction: We established the Dementia and Delirium (D&D) team at North Middlesex University Hospital in June 2020 to support diagnosis, investigation and management of inpatients with dementia, delirium and cognitive frailty. We hold a weekly multidisciplinary (consultant old-age/liaison psychiatrist, consultant geriatrician and dementia nurse specialist) meeting and ward-round. Our aim was to understand the team's impact on patient assessment, care and readmissions.
Method: We assess patients using a proforma based on comprehensive geriatric assessment and best psychiatric care, and generate personalised action plans for each patient. We examined proformas (December 2020-May 2021) and calculated the frequency and range of recommended actions, and 30-day readmission rates of those reviewed by the team between June-November 2020.
Results: 83 proformas were reviewed. An average 4 actions (range 1–8) were generated per review. The most frequent action (8%) was advice on basic delirium care including managing constipation and urinary retention, orientation strategies, sitting patients out and helping patients contact family. Other common actions included advice on psychotropic medications (7%), prompting use of the hospital's Dementia Care Bundle (6%), and discussing CPR and treatment escalation (5%). 53 different action points were generated. Of 243 patients assessed, 30-day readmission rate was 17%, compared with 25% across London hospitals.
Conclusions: The variety of actions generated demonstrates the individualised and holistic approach, reinforcing basic principles of delirium and dementia care and providing specialist advice on pharmacological management and advance care planning. This may contribute to the lower readmission rates in patients reviewed by this team.

O-021

Longitudinal cognitive pattern in patients with chronic kidney disease: the CKD Rein Study

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Background: Chronic kidney disease (CKD) is associated with an increased risk of neurocognitive disorders (NCD). The global Mini Mental State Examination (MMSE) is often used to screen for cognitive impairment but the effects of CKD on the different cognitive domains of MMSE have never been explored in these patients.
Methods: Cognitive pattern of 3003 patients with stage 3–5 CKD, included in the Chronic Kidney Disease-Renal Epidemiology and Information Network (CKD-REIN) cohort, was assessed on at least 3 occasions over a 5-year follow-up using the MMSE score. We performed linear regressions and linear mixed models, with global MMSE and its several domain scores as the response variables, and the estimated glomerular filtration rate (eGFR) with CKD EPI—creatinine formula as the main studied exposure.
Results: Patients (66.8 years, 65.3% men) had preserved global cognitive function at baseline (mean MMSE score 26.9/30 $\pm$ 2.9, median 28/30, interquartile range 25–29) and mean eGFR at 33 ml/min/1.73m^2 $\pm$ 12.2. After adjustment for age, sex, education level, depressive symptoms, psychoactive drug intake, cerebrovascular disease, heart failure, and history of depression, a lower eGFR (per 10 ml/min/1.73m^2 decrease) was associated with a decrease in the orientation score of 0.02 points (out of 10) [95% CI, -0.04; -0.0003], and in that of praxis of 0.009 points (out of 1) [95% CI, -0.02; -0.001].
Conclusion: Even before the occurrence of clinically evident NCD, orientation and praxis domains are affected in patients with CKD. This result justifies the need to screen first for these domains in the CKD population.

O-022

Cognitive frailty and 5 years all-cause mortality among community dwelling older adults: results from Malaysian Elders Longitudinal Study (MELoR)

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Introduction: Cognitive frailty (CF) has been is characterized by the simultaneous presence of both physical frailty and cognitive impairment (CI) among older adults without dementia. The aim of the present study was to evaluate the mortality rates among people with CF compared to the general population of Malaysia according to age and sex.
Methods: Data from the Malaysian Elders Longitudinal Research (MELoR) study were utilized. Baseline data were obtained from home-based computer-assisted interviews and hospital-based health-checks collected between 2013–2015. Cognitive function was

assessed with the Montreal Cognitive Assessment (MoCA). Physical frailty was determined using the Fried's criteria. The study population was dichotomized into CF and non-CF groups according to MCI and frailty status.
Results: A total of 1268 participants were followed up in 5–6 years. The incidence rate ratio, IRR (95% CI) of all-cause mortality in CF vs. Non-CF was 3.06 (2.23–4.20). According to sex, similar IRR was reported with, 3.26 (2.17–4.90) in men and 3.06 (1.85–5.06) in women respectively. Age stratification yielded IRR (95% CI), 1.49 (0.40–5.59),1.23 (0.34–4.47), 2.79 (1.22–6.28), 3.88 (2.22–6.78), and 2.25 (1.29–3.92) for those aged 60–64, 65–69, 70–74 and 75 + years respectively.
Key conclusion: Our findings indicate that CF increases mortality rate among older people living in a low-to-middle-income country. Further studies on the underlying mechanism of CF are now required to determine potential treatment targets.

O-023

The relationship between physical performance and cognitive functioning in patients with disorders along the heart-brain axis

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Introduction: Cardiovascular diseases along the heart-brain axis are related to reduced cognitive and physical functioning. However, little is known on the interrelation between physical and cognitive functioning in these conditions.
Methods: We included 566 participants (age 67.9 ± 8.8, 35.7% female) from the Heart-Brain Connection study; 129 healthy controls, 162 with Heart Failure (HF), 109 with Carotid Occlusive Disease (COD) and 166 with Vascular Cognitive Impairment (VCI). Cognitive functioning was assessed with neuropsychological assessment; composite z-scores were calculated for memory, language, attention & executive functioning. Physical performance was assessed using gait speed, the Short Physical Performance Battery (SPPB) and physical activity using metabolic equivalent hours per week (METpw). Multiple regression analysis was used to test the association between physical and cognitive function.
Results: Cognitive functioning in all domains was lowest in the VCI group ($p < 0.001$), while physical performance was lowest in the HF group ($p < 0.001$). Reduced gait speed was associated with reduced attention in all patient groups (β [95% CI]; HF: 0.23 [0.05–0.42]; COD: 0.25 [0.07–0.43]; VCI: 0.18 [0.03–0.34]), but not in healthy controls (-0.04 [-20 to 0.12]). Similar results were found for SPPB and attention. In HF, gait speed (0.31 [0.09–0.54]) and METpw (0.16 [0.00–0.32]) were related to memory performance. No significant results were found in other cognitive domains.
Key conclusions: Physical functioning and cognitive functioning are related in patients with diseases along the heart-brain axis, particularly in the attention domain. This suggests that cardiovascular mechanisms underlie this relationship.

O-024

Determinants of cognitive decline in a community living population aged 70 and over, followed up for two years

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Key-words: cognitive decline, cognition, Comprehensive Geriatric Assessment, frailty.
Introduction: The aim of this study was to investigate clinical predictors of the evolution of cognitive performance in non-demented older adults.
Methods: We analysed data of a prospective cohort (the FrailSafe study) of community-dwelling individuals of ≥ 70 years old, free of dementia and disability at baseline. Cognition was evaluated by MoCA and MMSE at baseline and along the follow-up period (from one to two years). Demographic parameters, medical history, comorbidities, frailty and autonomy status, assessment of physical and social activities were recorded at baseline. We analysed the relations among those variables and the cognitive status' evolution using univariate and multivariable analysis.
Results: The 269 subjects were followed for at least 1 year. After adjustment for initial value, subjects deemed frail (following Fried's criteria) at baseline lost 1.5 points/year versus -0.5 points/year for the non frail in MoCA ($p = 0.0007$). For MMSE, frail subjects lost -0.5 points/year versus no point loss/year for the non frail ($p = 0.008$). These differences persisted at multivariable analysis adjusted with age, sex and initial value ($p < 0.0001$). Low physical performance (5 times sit-to-stand test) was also correlated with a cognitive decline after adjustment for age, sex, and initial value: -1.5 points/year in MoCA ($p = 0.0003$) and -1point/year in MMSE ($p < 0.0001$) if test failed, versus no change in MoCA and MMSE if time < 10 s. Poor audition was also related to loss of almost 2points/year in MoCA and -1point/year in MMSE, whereas those with fair audition lost 1point/year in MoCA ($p = 0.008$) and no change in MMSE ($p = 0.0004$).
Conclusion: Variables of the Comprehensive Geriatric Assessment, like frailty, physical performance and audition, can contribute to an earlier identification of older people at higher risk of cognitive decline. Further research is required regarding possible interventions on these domains for a potential cognitive decline risk reduction.

O-025

BPSD in different dementia disorders: a large-scale study of 10,000 individuals residing in long-term care facilities

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Background: The majority of individuals with dementia will suffer from behavioral and psychological symptoms of dementia (BPSD). These symptoms contribute to functional impairment and caregiver burden.
Objective: To characterize BPSD in Alzheimer's disease (AD), vascular dementia (VaD), mixed (Mixed) dementia, Parkinson's disease dementia (PDD), dementia with Lewy bodies (DLB), frontotemporal dementia (FTD), and unspecified dementia in individuals residing in long-term care facilities.
Methods: We included 10,405 individuals with dementia living in long-term care facilities from the Swedish registry for cognitive/dementia disorders (SveDem) and the Swedish BPSD registry. BPSD was assessed with the Neuropsychiatric Inventory—Nursing Home Version (NPI-NH). Multivariate logistic regression models were used to evaluate the associations between dementia diagnoses and different BPSDs.
Results: The most common symptoms were aberrant motor behavior, agitation, and irritability. Compared to AD, we found a lower risk of delusions (in FTD, unspecified dementia), hallucinations (FTD), agitation (VaD, PDD, unspecified dementia), elation/euphoria (DLB), anxiety (Mixed, VaD, unspecified dementia), disinhibition (in PDD), irritability (in DLB, FTD, unspecified dementia), aberrant motor behavior (Mixed, VaD, unspecified dementia), and sleep and nighttime behavior changes (unspecified dementia). Higher risk of delusions (DLB), hallucinations (DLB, PDD), apathy (VaD, FTD), disinhibition (FTD), and appetite and eating abnormalities (FTD) were also found in comparison to AD.
Conclusion: Although individuals in our sample were diagnosed with different dementia disorders, they all exhibited aberrant motor behavior, agitation, and irritability. This suggests common underlying psychosocial or biological mechanisms. We recommend prioritizing these symptoms while planning interventions in long-term care facilities.

O-026

Association of personal wealth and income indicators with healthcare costs among people with Alzheimer's disease

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Introduction: We assessed how different indicators of wealth (disposable income, income redistribution, assets subject to taxation, taxes and tax-like payments and liabilities) are associated with hospitalization and healthcare costs among persons with Alzheimer's Disease (AD) before and after the AD diagnosis.
Methods: This nationwide study included 70,531 people who received clinically verified AD diagnosis in Finland between 2005–2011 and were community-dwelling at the time of diagnosis. Data on income indicators were obtained from Statistics Finland. Data on costs and hospital stays for 12-months period from five years before to two years after AD diagnosis were obtained from national registers. Associations of wealth indicators with costs and accumulated hospital days were investigated with multivariate mixed-effect negative binomial regression.
Results: After adjustment for age, region, gender, marital status, comorbidities, expensive medications, use of psychotropic and antidementia medication and the highest occupational class before AD, people with higher disposable income and income redistribution were more likely to have higher total healthcare costs during the whole follow-up period (OR, 95% CI for the highest quintile vs. lowest quintile 1.09, 1.08 − 1.10 and 1.11, 1.09 − 1.12 respectively). Higher taxable income, taxes and taxable wealth associated with lower accumulation of hospital days during total follow-up period (0.87, 0.86 − 0.89, 0.94, 0.92 − 0.96 and 0.86, 0.84 − 0.89 respectively).
Conclusions: Although Finland has been considered to be a dementia-friendly country, with less marked wealth disparities, our findings suggest that income/wealth disparities are still associated with accumulation of healthcare costs and hospital days among people with AD, with altered pattern over time.

O-027

Knowledge and involvement of geriatricians in the management of older adults with HIV and HIV specialists' attitude towards a joint approach: a National Survey

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Introduction: Half of the people with HIV are currently older adults. Comorbidity, frailty, and geriatric syndromes are prevalent and appear at an early age. Our aim is to test the knowledge and involvement of geriatricians in the management of older adults with HIV and the HIV specialists' attitude towards a joint approach to these patients.
Methods: We developed a survey with 12 specific questions for geriatricians and another for HIV specialists. The surveys were distributed through the National Scientific Societies during the last week of March 2022. They were completed anonymously and voluntarily.
Results: 94 geriatricians (G) and 63 HIV specialists (H) answered. 71,2% of the geriatricians would feel uncomfortable if they had to evaluate a patient with HIV. 86.1% have seen one or no older patients with HIV in the last year. 79.3% of the HIV specialists believed that geriatricians should be involved in the management of older adults with HIV. Both groups agreed that the approach to these patients should be multidisciplinary (G91.9% vs H79,3%), that specific training is needed (G91.4% vs H80,9%), and that the criteria to refer an older adult with HIV for a comprehensive geriatric assessment should be the presence of frailty and/or other geriatric syndromes rather than the chronological age (G82,9% vs H87,3%).
Conclusions: Geriatricians have a lack of knowledge about older adults with HIV and are not involved in their management yet. HIV

specialists are open to co-management of older HIV patients. Specific training is needed to ensure the best approach to them.

O-028

Evaluating rehabilitation needs of patients hospitalised with COVID-19: a retrospective cohort study using electronic health records

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Introduction: Functional decline is frequently observed in patients hospitalised with COVID-19, but rehabilitation needs compared to non-COVID-19 patients have not been reported using routine healthcare data.
Methods: This retrospective observational cohort study used consecutive adult non-elective admissions across three hospitals in Edinburgh, Scotland where COVID-19 PCR testing was undertaken between March 2020 and August 2021. Rehabilitation was recorded as the number of contacts with any relevant health professional and total minutes of therapy delivered in hospital, or within 30 days of discharge. An Inverse Probability of Treatment Weighting (IPTW) analysis was used to adjust for class imbalance in age, sex, baseline comorbidities and length of stay between COVID-19 positive and negative groups.
Results: The study population consisted of 2,074 COVID-19 and 87,472 non-COVID admissions. Mean age was 61 ± 21 years and 55% were female. In the unmatched analysis, more COVID patients required any rehabilitation during their admission (1,114 [54%] versus 19,803 [23%] of non-COVID patients, $p < 0.001$). After IPTW-adjustment, COVID-19 patients received significantly more rehabilitation contacts (Weighted Mean [WM] = 13 per patient versus 9, Standardised Difference [STD] = 0.27, $p < 0.001$) and greater rehabilitation time (WM = 425 min versus 302, STD = 0.21, $p < 0.001$) compared to non-COVID counterparts. The time to first rehabilitation contact was similar between groups (WM = 5.4 versus 5.1 days, STD = 0.04).
Conclusion: COVID-19 patients have more complex rehabilitation requirements than inpatients with similar pre-admission characteristics and length of hospital stay. Electronic Health Record data can be utilised to adequately prioritise treatment of high-risk individuals.

O-029

How has the COVID-19 pandemic affected places of death in an ageing country?

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Introduction: In the COVID-19 pandemic period, due to the difficulties in patients' applications to health centres, changes have occurred in the places of death of older adults. Our study investigated the change in the places of death of older adults in Turkey, which is one of the countries most affected by the pandemic.
Methods: Patients admitted to the geriatric outpatient clinic of a university hospital from 01.01.2013 to 29.02.2020 were included. After 01.03.2020, it was accepted as a pandemic period, and the deadline for deaths was taken as 28.02.2022. Place and date of death were recorded as hospital or out-of-hospital death.
Results: While 6190 patients died, their median age was 81.0 (IQR: 75.0–87.0) and 54.6% (n = 3381) were female. 4567 (73.8%) patients died in hospitals. The highest mortality ratio (22.7%, n = 1403) was in the 80–84 age group. While the median age of those who died during the pandemic was higher than before ($p < 0.001$), there was no difference between the sexes. During the pandemic, the hospital mortality ratio was higher than before ($p = 0.06$). Advancing age increased the out-of-hospital mortality ratio (< 0.001). While the age groups with the highest mortality ratios before the pandemic were 80–84, 75–79 and 85–89, respectively, this order was 80–84, 85–89 and 75–79 during the pandemic.
Conclusion: During the pandemic period, the hospital mortality ratio of older adults has increased in Turkey. This situation is one of the indicators that despite the high burden created by the pandemic, older adults could been treated in hospitals in Turkey.

O-030

Physical fitness in older adults during the COVID-19 pandemic—comparison between Sweden and Germany

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Introduction: During the first wave of the COVID-19 pandemic in 2020, measures to handle the pandemic differed significantly in Sweden and Germany. While sports facilities in Sweden remained open, they were closed for about 3 months in Germany. The purpose of the study was to compare the time-course of physical fitness in active older adults in Germany and Sweden.
Methods: 9144 German (DE; ♀5220, ♂3924, 69 ± 7 yrs) and 431 Swedish (SE; ♀251, ♂180, 69 ± 6 yrs) older adults, training in a chip-controlled fitness-circuit, were included in the analysis. The product of the applied training weight and repetitions performed on the leg extension device (leg score) was used to compare the last session before the lockdown in Germany with the first 5 sessions after the lockdown. ANOVA (country*session) was used to compare physical fitness during the pandemic.
Results: ANOVA revealed significant effects for the factors session ($p = 0.001$), session*country ($p < 0.001$) and country ($p = 0.015$). While the leg score was equal in both countries before (DE vs. SE: 1219 ± 744 kg vs. 1238 ± 785 kg; $p = 0.593$), it was significantly reduced in the German population after the lockdown (1123 ± 713 vs. 1245 ± 926 kg; 0.001), which was still visible at the 5th session (1170 ± 724 vs. 1249 ± 841 kg; $p = 0.031$).
Key conclusions: Older adults in Germany trained with about 100 kg less per session after the lockdown, while participants in Sweden maintained their training values. As reduced strength in the lower limbs is a fall risk factor in older people, this aspect has to be weighed against the effects of the stricter measures in Germany.

O-031

Effectiveness of Covid-19 vaccines in preventing SARS-CoV-2 infection, hospitalizations and death among elderly nursing homes residents in a health area of Madrid

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Introduction: Coronavirus-19 disease (COVID-19) is a widespread condition in nursing home (NH). The aim of this study was to describe the vaccines effectiveness in preventing SARS-CoV-2 infections, hospitalizations and death from the second to the sixth wave in thirty-eight NH in a health area of Madrid.
Methods: Prospective study of all NH residents diagnosed with COVID-19 in thirty-eight NH in a health area of Madrid from June 2020 to March 2022. Number of patients diagnosed in each NH, date of diagnosis, hospital admission, SARS-COV-2 variant, date of the vaccination campaign and mortality related to COVID-19, were registered.
Results: One thousand sixty-nine NH patients were diagnosed with COVID-19. During the different waves, the number of patients diagnosed, hospitalizations and deaths were: Second wave (June-11thDecember 2020): 387, 23 (6%) and 23 (6%). From the start of the third wave in December 2020, to the end of the vaccination campaign with m-RNA vaccine, in March 2021: 134, 42 (31%) and 43 (32%). Fourth wave (April-June 2021) No COVID-19 patients. Fifth wave (July-14thOctober 2021): 69, 10 (14%) and 0 (0%). Sixth wave (15thOctober-March 2022): 688, 28 (4%) and 27 (4%). The predominant variant was delta during second to fifth waves and omicron in the six wave.
Conclusions: The vaccines are effective in preventing SARS-CoV-2 infections; hospitalizations and death in this group of patients. Vaccines have reduced transmission of SARS-CoV-2 when delta variant was predominant. Omicron variant has been much more infective, but has produced fewer clinical severities and deaths.

O-032

Clostridium difficile infection prognosis remains severe in the oldest. A study based on French national health insurance claims data

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Incidence of Clostridioides difficile infections (CDI) remains high in many european countries and community cases increase. Clinical signs are various, from simple diarrhea to severe symptoms with risk of death. Recurrence concerns up to 25% of patients. We conducted a real life study with the objective to describe recent epidemiology of CDI in France between 2015–2019 (incidence, patients characteristics, treatment, prognosis and risk factors associated with CDI), during hospital stay and also in the community.
Methods: Cross-sectional retrospective study (Clocidia) including patients $\geq$ 18 years, with a diagnosis of CDI according to French national health insurance claims data. We categorized the CDI cases per the probable origin of the infection (i.e., healthcare-associated, community- associated). Patients were separated in 3 groups: health-associated CDI with in-hospital treatment (group A), CDI diagnosed in the community with treatment given in hospital (group B), CDI diagnosed and treated in the community (group C). Analysis were performed according to age: 18–49, 50–64, 65–74, 75–84 et $\geq$ 85 years.
Results: 64,512 patients belonged to group A (53.1% $\geq$ 75 years old); 13,393 belonged to group B (44.7% $\geq$ 75) and 60,446 to group C (16.8% $\geq$ 75). Incidence rates of hospitalized and community-treated CDI episodes (2015–2019) were stable over the period. Health-associated CDI was respectively twice and four 4 times more frequent in patients aged 75–84 and $\geq$ 85 (> 200/100000 in the latest). Community incidences in these age groups were respectively 50 et 65/100000. Main associated comorbidities were cancer, chronic respiratory disease, renal chronic failure and diabetes. Rates of in-hospital mortlality and mortality at one year were always higher in the oldest, no matter the group: respectively 16.9 and 32.9% in patients aged 75–84; 18.9 and 39.1% in patients $\geq$ 85 (group A); 6.4 and 15.1% [75–84]; 11.5 and 27.1% $\geq$ 85 (group B). Rates of mortality at one year for patients in Group C were respectively 15.6% [75–84] and 30% $\geq$ 85. Antibiotic treatment with fluoroquinolones, immunosuppressive treatment and chemotherapy were significantly associated with recurrence at 3 and 6 months.
Conclusion: This study allows recent epidemiological data and confirms the higher rates of incidence and bad prognosis in the oldest also reported in the community.

O-033

Functional decline, long term symptoms and course of frailty at 3-months follow-up in COVID-19 older survivors, a prospective observational cohort study

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Background: Aging is one of the most important prognostic factors increasing the risk of clinical severity and mortality of COVID-19 infection. However, among patients over 75 years, little is known about post-acute functional decline.
Objective: The aim of this study was to identify factors associated with functional decline 3 months after COVID-19 onset, to identify long term COVID-19 symptoms and transitions between frailty states after COVID-19 onset in older hospitalized patients.
Methods: This prospective observational study included COVID-19 patients consecutively hospitalized from March to December 2020 in Acute Geriatric Ward in Nantes University Hospital. Functional decline, frailty status and long term symptoms were assessed at 3 month follow up. Functional status was assessed using the Activities of Daily Living simplified scale (ADL). Frailty status was evaluated using Clinical Frailty Scale (CFS). We performed multivariable analyses to identifyfactors associated with functional decline.
Results: Among the 318 patients hospitalized for COVID-19 infection, 198 were alive 3 months after discharge. At 3 months, functional decline occurred in 69 (36%) patients. In multivariable analysis, a significant association was found between functional decline and stroke (OR = 4,57, p = 0,003), history of depressive disorder (OR = 3,05, p = 0,016), complications(OR = 2,24,

p = 0,039), length of stay (OR = 1,05, p = 0,025) and age (OR = 1,08, p = 0,028). At 3 months, 75 patients described long-term symptoms (49.0%). Of those with frailty (CFS scores ≥ 5) at 3-months follow-up, 30% were not frail at baseline. Increasing frailty defined by a worse CFS state between baseline and 3 months occurred in 41 patients (26.8%).
Conclusions: This study provides evidence that both the severity of the COVID-19 infection and preexisting medical conditions correlates with a functional decline at distance of the infection. This encourages practitioners to establish discharge personalized care plan based on a multidimensional geriatric assessment and in parallel on clinical severity evaluation.

O-034

Adjuvanted recombinant zoster vaccine (RZV) offers long-term protection against herpes zoster for groups of adults ≥ 50 years of age (YOA)

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Background: RZV showed 97.2% efficacy in preventing herpes zoster (HZ) in adults ≥ 50 YOA (mean follow-up: ∼ 3.2 years post-vaccination). We evaluated persistence of vaccine efficacy (VE) until year (Y)8 and immune responses until Y10 post-RZV vaccination by age groups.
Methods: In 2 phase III long-term persistence studies (NCT02723773, NCT02735915) with Y8 (interim analysis) and Y10 follow-up data, participants previously received 2 RZV/placebo doses 2 months apart. VE and immunogenicity (anti-glycoprotein E [gE] antibody concentrations, gE-specific CD4[2 +] T-cell frequencies [cell-mediated immune (CMI) responses]) were evaluated overall and by age groups (50–59, 60–69, ≥ 60 and ≥ 70 YOA). We used mathematical models to predict persistence of VE and immunogenicity 20 years post-vaccination.
Results: VE was 90.9% (95% confidence interval [CI]: 88.2–93.2%) over the ∼ 7.1 years post-vaccination follow-up period. VE at Y8 remained high (84.1%; 95% CI: 64.4–94.0%) across all age groups (50–59 YOA:92.3%, 60–69 YOA:81.8%, ≥ 60 YOA:80.0%, ≥ 70 YOA:79.0%). Modelling predicts that VE (based on Y8 data) would persist across age groups with 1.5% (50–69 YOA) and 2.3% (≥ 70 YOA) annual waning. Anti-gE antibody concentrations remained ∼ sixfold higher than pre-vaccination levels at Y8 and Y10. CMI responses remained ∼ sixfold (Y8) and ∼ 3.5-fold (Y10) higher than pre-vaccination levels. Modelling predicts that immune responses (based on Y10 data) would remain above pre-vaccination levels ≥ 20 years post-RZV vaccination.
Conclusions: RZV provides high and persistent efficacy against HZ for all age groups. This long-term benefit is important for HZ prevention in the adult population as the risk of HZ increases with age.
Funding: GlaxoSmithKline Biologicals SA.

O-035

Risk of death and symptomatology of COVID-19 in nursing home residents after COVID-19 booster vaccination

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Introduction: The COVID-19 booster vaccination was started in nursing homes (NH) from November 2021, and the omicron variant of the virus emerged. Yet, the effect of the booster on the disease course of COVID-19 was currently unknown. Therefore, we investigated the symptoms and risk of death after a COVID-19 infection in boosted NH residents and compared this group to NH residents without a booster or COVID-19 and to previous COVID-19 waves.
Methods: Population-based longitudinal cohort study with electronic health record data. Data on vaccination status, age, gender, type of care, comorbidities, and date of death were extracted between 1 January and May 18, 2022. Risk of death and symptomatology of COVID-19 were compared between NH residents with a booster (Booster +) and without a booster (Booster-/?). Moreover, we compared the Booster + group with a group of residents where COVID-19 was ruled out despite a clinical suspicion of COVID-19 (COVID-19-). Finally, we compared our current results with previous waves of COVID-19.
Results: Boosted NH residents (n = 3.149) had a milder disease course and symptomatology compared to the Booster-/? group (n = 1.228) and previous waves of COVID-19. Only having a cold was more frequent in the Booster + group. Risk of death was much lower in the Booster + group (6%) than in the Booster-/? group (12%), COVID-19- group (13%, n = 1.295) and previous waves (22%-42%).
Key conclusions: Despite the omicron variant having a milder disease course, our results indicate that boostering of NH residents was still effective; boostering was characterized with milder symptomatology and lower mortality.

O-036

Clinical guidelines and best practices to improve the management of elderly patients with dementia and multimorbility. a systematic review

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Introduction: CAREPATH is an Horizon 2020 funded project aiming to generate a digital health solution, supported by an information and communication technology infrastructure, for care based on the current best practice guidelines, optimizing it for specific regions and health systems, for treatment and management of multimorbid patients with mild vognitive impairment or mild dementia.
Objective: to do a systematic review of clinical practice guidelines on multimorbidity, dementia, Alzheimer's disease and behaviour associated to dementia and chronic diseases of high impact. This review is part of CAREPATH project.
Methods: a systematic review was carried out following the PRISMA 2020 guidelines based on 4 different research strategies: 1. Guides on specific diseases: frailty, sarcopenia, malnutrition, diabetes, heart failure, chronic obstructive pulmonary disease, asthma, chronic renal disease, cerebrovascular accident, coronary artery disease and hypertension. 2. Guides on multimorbidity and comorbidity. 3. Guides on dementia and Alzheimer's disease. 4. Guides on behavioural symptoms associated to dementia. Inclusion criteria: clinical guides, guide revisions and meta-analysis of English language guides on detailed topics published between January 2017 and December 2021. The sources consulted have been: Guidelines International Network, PubMed, UpToDate, Cochrane, OMS, NICE, SIGN, website of relevant specialty societies and consultation with representatives of the Spanish Geriatrics and Gerontology Society.
Results: A total of 170 clinical guides which finally met the inclusion criteria were selected. The PRISMA diagram will be provided as a figure.
Key conclusions: this review will be the first step to elaborate a specific guide for the treatment of patients with comorbidities and dementia.

O-037

Developing Australia's new clinical practice guidelines for the appropriate use of psychotropic medications in people living with dementia in residential aged care

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Introduction: An overreliance on psychotropic medications in aged care was highlighted by Australia's Royal Commission into Aged Care Quality and Safety. An 18-member multidisciplinary Guideline Development Group (GDG) was formed to develop The Clinical Practice Guidelines for the Appropriate Use of Psychotropic Medications in People Living with Dementia and in Residential Aged Care. Aims: To describe the process for developing evidence-based recommendations and good practice statements related to psychotropic medication use in people living with dementia and in residential aged care.
Methods: Clinical questions were developed, adapted, and prioritised through stakeholder consultation and review of existing Australian and international guidelines. Clinical outcomes were rated according to their importance for treatment decision making. Systematic reviews were conducted to synthesise recent randomised controlled trial and observational study evidence. The Grading of Recommendations, Assessment, Development and Evaluation (GRADE) method was used to rate the certainty of evidence and determine the strength of recommendations.
Results: The GDG prioritized 10 clinical questions regarding benefits and harms; discontinuation; as needed (PRN) use; and interventions to improve appropriate use of antipsychotics, benzodiazepines, and antidepressants. Fourteen conditional recommendations and 43 good practice statements were developed. Recommendations and good practice statements highlight the need for regular review of benefits and harms, adverse event monitoring and involving the person living with dementia and their substitute decision-maker in psychotropic medication decisions.
Discussion: The GRADE process provided a structured approach to consider the broad range of factors that guide psychotropic prescribing, dispensing and administration for people living with dementia in residential aged care.

O-038

Reduced kidney function is associated with poorer domain-specific cognitive performance in community-dwelling older adults

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Introduction: Whilst chronic kidney disease (CKD) has been associated with cognitive impairment, the association between reduced estimated Glomerular Filtration Rate (eGFR) and domain-specific

cognitive performance is less clear and may represent an important target for the promotion of optimal brain health in older adults.
Methods: Participants aged > 60 years from the Trinity-Ulster-Department of Agriculture (TUDA) study underwent detailed cognitive assessment using the Mini-Mental State Examination (MMSE), Frontal Assessment Battery (FAB) and Repeatable Battery for Assessment of Neuropsychological Status (RBANS). Poisson and linear regression models assessed the relationship between eGFR strata and cognitive performance.
Results: In 4,887 older adults (73.9 ± 8.3 years; 67.7% female), declining eGFR strata was associated with greater likelihood of error on the MMSE/FAB and poorer overall performance on the RBANS. Following robust covariate adjustment, findings were greatest for GFR < 45 ml/mL/1.73m2 (Incidence Rate Ratio [IRR]: 1.17; 95% CI 1.08,1.27; $p < 0.001$ for MMSE; IRR: 1.13; 95% CI 1.04, 1.13; $p < 0.001$ for FAB; β: -3.66; 95% CI -5.64, -1.86; $p < 0.001$ for RBANS). Additionally, eGFR < 45 ml/mL/1.73m2 was associated with poorer performance on all five RBANS domains, with greatest effect sizes for immediate memory, delayed memory and attention. Associations were strongest in those aged 60–70, with no associations observed in those > 80 years.
Conclusions: Reduced kidney function was associated with poorer global and domain-specific neuropsychological performance. Associations were strongest with eGFR < 45 ml/min/1.73m2 and in those aged 60–70 years, suggesting that this population may potentially benefit from potential multi-domain interventions aimed at promoting optimal brain health in older adults.

O-039

Impact of cumulative exposure to anticholinergic and sedative drugs on cognition in older patients attending memory centers (MEMORA cohort)

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Introduction: With worldwide aging, cognitive impairment (CI) is a growing concern and implementation of prevention means have become a health priority to avoid/delay dementia and its consequences (autonomy loss, health costs). Early exposure to anticholinergic and sedative drugs (ASD) might be a risk factor of CI. The main objective of this study is to measure association between previous cumulative ASD exposure (Drug Burden Index DBI) and cognition in a longitudinal study.
Methods: This study included patients from MEMORA cohort [1] (attending memory center) with at least 2 MMSE measurement (≥ 6 months apart) and medication data from regional Primary Health Fund database, between November 2014 and December 2020. DBI has been linearly cumulated until each MMSE measurement and categorized (no exposure, moderate or high exposure). Association between MMSE and DBI was assessed by multivariate linear mixed model with random slope and intercept.
Results: Overall, 1,970 patients were included in this analysis with 5,900 measurement points (mean follow-up = 2.78 years). At baseline, 68.0% of patients had moderate DBI and a mean MMSE of 21.1. Multivariate linear mixed model showed significant MMSE decrease of respectively 1.74 and 1.70 point per year for patients with moderate DBI (p-value < 0.001) and high DBI (p-value = 0.005), steeper than patient without any exposure (-1.26point/year, p-value < 0.001). Significant association were also found with educational level, depressive disorders and functional autonomy.
Discussion: Long-term exposure to ASD was significantly associated with poorer cognitive functioning in this longitudinal study. In this perspective, medication review focused on ASD deprescribing could be implemented early to reduce CI.
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O-040

Cholinesterase inhibitors and reduced mortality in patients with Alzheimer's dementia and congestive heart failure

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Introduction: Cholinesterase inhibitors (ChEIs) are approved for treatment of Alzheimer's dementia (AD). ChEIs inhibit the enzyme acetylcholinesterase, increasing the duration of action of acetylcholine in the central and peripheral nervous systems. ChEIs are known to be anti-inflammatory and in the heart also have negative chronotropic effects. Observational studies have indeed associated the use of ChEIs in AD with lower risk of myocardial infarction, stroke and death. Here we investigated the association of use of ChEIs with mortality risk in patients with congestive heart failure (HF) and AD.
Methods: Data from SveDem, www.svedem.se was linked to the Swedish Patient-, Prescribed Drug- and Cause of death registries. In a propensity score matched cohort, the association between ChEI use and all-cause death was examined with Cox proportional hazards model.
Results: The matched cohort included 455 patients with HF and AD who initiated ChEI within 90 days of the dementia diagnosis and 455 non-ChEI users. During a median follow-up time of 2.14 years, 549 deaths occurred. Compared to non-initiators, ChEI use was associated with 21% lower risk of death (adjusted HR 0.79; 0.66–0.96). Galantamine and donepezil (0.64; CI 0.47–0.87 and 0.80; CI 0.64–0.98) but not rivastigmine (0.96; CI 0.73–1.28) were associated with lower risk of death.
Conclusions: This study supports previous reports that treatment with ChEIs in AD is associated with reduced mortality risk. We here show that this association is also found in patients with HF and AD but with

differential effects among the ChEIs. Further studies are needed to elucidate the mechanisms.

O-041

Cognitive performance is associated with kidney function in patients with chronic kidney disease: results from the CKD-REIN cohort study

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Introduction: Chronic kidney disease (CKD) is associated with cognitive impairment in general population, among several other risk factors. We aimed to assess the association between kidney and cognitive functions in patients with CKD and to evaluate if this association is independent of cardiovascular risk (CV) factors, CV disease, and depression.
Methods: The Chronic Kidney Disease-Renal Epidemiology and Information Network (CKD-REIN) cohort included 3033 patients with CKD stage 3–5, followed for 5 years. Cognitive function was assessed with the Mini Mental State Examination (MMSE), and glomerular filtration rate (GFR) was estimated with the CKD EPI formula. We applied unadjusted and adjusted linear mixed models for cross-sectional and longitudinal analysis, to explain MMSE score. We assessed the risk of incident cognitive outcome (hospitalisation or death related to cognitive International Classification of Disease ICD-10 coding), with a Cox proportional hazard model.
Results: The mean age was 66.8, the mean estimated GFR (eGFR) was 33 mL/min/1.73 m2, and 393 patients (13.0%) had an MMSE score below 24 at baseline. Baseline estimated GFR (eGFR) was positively associated with the MMSE score at baseline and during follow-up and with incident cognitive outcomes before and after adjustment for demographic characteristics, depression, CV risk factors and disease. A 10 mL/min/1.73 m2 decrement of eGFR was associated with a 53% increase in risk of cognitive outcome ($p < 0.001$) before and 34% ($p = 0.02$), after adjustment.
Key conclusion: Lower eGFR is associated with worse cognitive function in patients with CKD, independently of demographics characteristics, cardiovascular injury, and depression.

O-042

Association of tramadol with risk of dementia among older adults with musculoskeletal pain

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Introduction: Multiple animal and human studies showed conflicting results on the association between the use of tramadol and cognitive decline. In a recent epidemiological study, the use of tramadol was not associated with an increased risk of Alzheimer's disease. Further, the effect of tramadol on other types of dementia, such as vascular dementia, is still unclear.
Methods: Among non-cancer musculoskeletal pain patients aged at least 70 years without a history of dementia, stroke, or opioid use disorder in the Korean National Health Insurance Service database, cumulative first-ever tramadol use was determined during 2003–2007. The outcome was overall dementia, Alzheimer's disease, and vascular dementia over 10 years. Cox proportional hazards regression was used to determine the adjusted hazard ratios (aHRs) and 95% confidence intervals (CIs) of dementia according to cumulative tramadol use.
Results: Compared with cumulative duration of one to 14 days ($n = 32,647$), those of 15–90 days ($n = 25,829$) and 91–365 days ($n = 8,760$) showed increased risk for overall dementia (aHR = 1.10; 95% CI = 1.06–1.15 and aHR = 1.10; 95% CI = 1.06–1.15, respectively) and Alzheimer's disease (aHR = 1.11; 95% CI = 1.06–1.15 and aHR = 1.15; 95% CI = 1.08–1.22, respectively). For vascular dementia, compared with cumulative duration of one to 14 days, those of 15–90 days showed increased risk (aHR = 1.14; 95% CI = 1.02–1.28).
Key conclusions: The use of tramadol may be associated with a higher risk of developing dementia. Further studies are warranted to confirm the findings of our study.

O-043

Network-based care facilitates a sustainable transition towards integrated primary dementia care: the DementiaNet cohort study

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Introduction: Rearrangements in primary care are needed to cope with the increasing number of people with dementia living at home. Care integration is a promising strategy to achieve a more sustainable health care system. With DementiaNet, an integrated network-based program, we facilitated collaboration between healthcare

professionals from medical, care and social domains. We aimed to evaluate the effects of the DementiaNet program on quality of care and network collaboration.
Methods: In a mixed methods cohort study, networks adopted the DementiaNet approach, which was offered during a two-year tailor-made program. Networks started between 2015 and 2020 and follow-up ended in 2021. Yearly, networks collected data on their quality of care (scored 1–4) and network collaboration was assessed by conducting semi-structured interviews with the network leader(s) which were used to obtain a network maturity score (range 1–4). Growth modelling was used to identify differences in quality of care and network collaboration over time.
Results: Thirty-five primary care networks participated and consisted on average of nine professionals. Network collaboration and quality of care increased significantly in the first two years (respectively, 0.35, $p < 0.001$; 0.29, $p < 0.001$), which was more pronounced for networks with a newly formed collaboration compared to pre-established collaborations. Thereafter, quality of care and network collaboration stabilized.
Key conclusions: The DementiaNet program improved quality of care and network collaboration and these effects sustained after the two-year program ended. These results show that this transition towards network-based care is a time consuming but worthwhile process.

O-044

Prevalence of apathy and its association with cognitive decline, functional status and mortality in older patients with advanced chronic kidney disease

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Introduction: The prevalence and consequences of apathy symptoms in chronic kidney disease (CKD) patients are unknown. We investigated prevalence of apathy in older advanced CKD patients, and its association with cognitive and functional decline and mortality.
Methods: The prospective multicenter COPE cohort included patients aged $\geq$ 65 years with eGFR $\leq$ 20 mL/min/1.73m2. Apathy was defined as a score $\geq$ 2 on the 3-item subscale of the 15-item Geriatric Depression Scale (GDS). Frailty was defined using the Fried Frailty Index and assessed annually, as were domains of cognitive and physical function. Mortality was assessed during four years of follow-up.
Results: Out of 180 patients, with a median age of 75.5 years (IQR 71.0–80.9) and mean eGFR of 16.5 mL/min/1.73m2 (SD 4.6), 36% (n = 64) had apathy of whom 50% (n = 32) had isolated apathy without symptoms of depression (GDS12D $\geq$ 2). At baseline, presence of apathy was associated with primary vascular kidney disease, depression, frailty, decreased physical dependency and -capacity, and reduced psychomotor speed. During follow-up, patients with apathy showed more decline in executive functioning and had a 2.4 times higher mortality risk (95% CI 1.4- 4.3) after adjustment for age and sex.
Key conclusions: Apathy symptoms were highly prevalent in this cohort of older advanced CKD patients, and often unrelated to depressive symptoms. The association of apathy with outcomes might be of value for shared decision making on kidney replacement therapy. Future investigations should focus on the cause of apathy and its predictive value for cognitive decline in CKD patients.

O-045

Reducing mortality of at-risk elders: first results of a customized HELP program in the surgical division of a large Israeli tertiary hospital

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Introduction: HELP (Hospital Elder Life Program) is a well-established program aimed at coordinating the care of elderly patients admitted to an acute hospital. It was proven beneficial at reducing length of stay, delirium and falls and promoting preservation of cognitive and functional outcomes [1].
Methods: Our program is designed, based on HELP, to identify at-risk elderly patients (over seventy years old) and provide them with tailored, multi-disciplinary care. Patient inclusion is based on a computerized report that includes documented risk factors. The basis of the intervention is a screening for geriatric syndromes by a certified nurse or elder-life specialist. Patients who screen positive for geriatric syndromes then receive a more comprehensive evaluation by a geriatrician. Four protocols are implemented by trained volunteers: daily visits and reorientation, cognitive stimulation, promoting hydration, nutrition, and mobility.
Results: From 11/2017 to 10/2021, 49% of 12,279 patients received interventions. We conducted a retrospective analysis comparing the outcomes of eligible patients that received an intervention to those who did not. The intervention group had a higher prevalence of prior evidence of delirium and dementia (3.1 versus 0.5% and 12.4 versus 7.2%, respectively, both with $p < 0.001$). In-hospital mortality was 1.4% in the intervention group and 2.3% in the control group ($p < 0.001$). One-month post-discharge mortality was 1.6% in the intervention group and 2.4% in the control group ($p < 0.001$).
Conclusion: These results demonstrate a positive impact on both in-hospital and one-month post-discharge mortality in the intervention group, despite its higher baseline complexity. Our presentation will further detail those results.
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O-046

Geriatrician led CGA in ED—cost effective and patient centred

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Background: Many older people present to the Emergency Department (ED) who do not require acute hospital admission but there are risks to these patients if this occurs. The Frailty Intervention Team (FIT) are an interdisciplinary team based in the ED including physiotherapy, occupational therapy, speech and language therapy, dietetics, pharmacy, advanced nurse practitioners, and a geriatric registrar and consultant. We aimed to investigate the impact of FIT on patient care.

Methods: Routinely collected data from May 2021 to April 2022 was reviewed retrospectively. An anonymous patient questionnaire was posted to 40 random patients.
Results: 2025 Comprehensive Geriatric Assessments (CGA) were completed. 38% percent of patients were discharged home. 104 patients were transferred directly to an offsite bed, mostly rehabilitation. We estimate we avoided 51 admissions to the acute hospital per month, almost half of these were patients admitted to the hospital and, who we discharged to alternative care pathways or home. The average length of stay in April 2022 was 22 days—by avoiding 615 admissions between May 2021 and April 2022 we have saved 13,530 bed days at an estimated cost saving of almost €11 million.15 completed questionnaires were returned. 73% were very satisfied with their experience. 87% felt the FIT team helped facilitate their discharge from ED. The main themes identified from open ended questions included thorough assessment, patient centred care and satisfaction with early intervention and discharge.
Conclusion: This is a cost effective and patient centred way of avoiding unnecessary admissions for older people presenting to the ED.

O-047

Proactive, community-based, IT-assisted comprehensive geriatric assessment (i-CGA) reduces unplanned hospitalisation and mortality rates for older people living with frailty in residential homes

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Introduction: We wanted to improve advance care planning (ACP) and unplanned hospitalisation rates for older people living with frailty in residential care homes (CH).
Methods: As a quality improvement project, all CH residents were clinically assessed for frailty by their general practitioner. Primary care-led proactive IT-assisted comprehensive geriatric assessments (i-CGAs) were completed, and care plans made accessible to Out-Of-Hours services. At one year we compared ACP, unplanned hospitalisation and mortality rates: i-CGA group: 1-year post i-CGA completion. Control group: no i-CGA yet completed (usual care).
Results: i-CGA group, 196 residents (16 with mild/69 moderate/111 severe frailty), 100 in control group (13 with mild/31 moderate/56 severe frailty). No significant baseline differences between i-CGA/control groups. At one year: Advance care planning: 100% completion rate in i-CGA group versus 71% in controls, $p < 0.0001$. Hospitalisation: Compared to the preceding year, overall unplanned hospitalisations/person years alive increased from 0.85 to 1.86 in the control group; remained similar in the i-CGA group (0.83,0.87), overall treatment difference $p = 0.15$. For those with severe frailty, admissions increased in control group (0.87,2.05); fell in i-CGA group (0.86,0.68), treatment difference $p = 0.22$. Mortality: 94/196(48%) of the i-CGA group died, compared to 57/100(57%) controls, $p = 0.1$. Of those with severe frailty, 62/111(55%) in the i-CGA group died compared to 43/56(77%) controls, $p = 0.0013$.
Conclusions: Proactive, community-based i-CGA in older people living in residential care was associated with significantly improved rates of advanced care planning, a trend to relative reduction in unplanned hospitalisation rates, and significantly reduced mortality rates—particularly for residents with severe frailty.

O-048

Is older age associated with poorer quality of triage? A descriptive analysis of a national out-of-hours telephone triage service in Belgium

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Background: As part of the TRANS-SENIOR international training and research network, we aimed to describe and compare the quality of triage decisions for younger and older segments of the population seeking non-urgent unplanned care using a national out-of-hours (OOH) telephone triage service in a part of the Flemish region of Belgium.
Methods: A descriptive study was conducted using anonymized registry data obtained from the 1733 OOH telephone triage service in the Flemish region of Belgium linked with General Practice medical patient records made available via the Mediris platform (more info: www.1733.be; www.mediris.be). All calls received between May 24, 2019 and December 31, 2020 were analyzed. Quality of triage was assessed by comparing the level of urgency estimated by the tele phone triage operator during the call versus the general practitioner during follow-up physical triage of the patient (considered as the gold standard).
Results: N = 8,664 calls were included for analysis. In total, 69.1% of calls involved children or younger adults while 30.9% involved older adults (65 years and over). The total percentage of appropriately triaged calls were distributed as 98.5% in children and younger adults compared with an average of 74.6% in older adults. The percentage of under-triage in older adults was distributed as 1.5% (65–74 years), 3.9% (75–84 years) and 3.0% ($\geq$ 85 years) while over-triage in older adults was distributed as 16.2% (65–74 years), 22.0% (75–84 years) and 29.6% ($\geq$ 85 years).
Conclusion: Our findings suggest that calls involving older adults seeking non-urgent unplanned care using the 1733 OOH service is associated with poorer quality of triage compared to calls involving younger segments of the population. Further research aiming to better understand reasons for under- and especially over-triage in older adults is therefore warranted.

O-049

Frailty screening in the emergency department: an international Delphi consensus study examining the fundamental components

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Introduction: Frailty is associated with increased risk among older patients attending emergency departments (ED). While multiple screening instruments are available, they were not designed specifically for use in this setting. Further, little is known about which variables are most important to incorporate and how best to facilitate accurate yet prompt screening in ED. To understand the core components required, we conducted a modified electronic two-round Delphi consensus study.
Methods: Before this eDelphi, a systematic review was conducted to identify current frailty screening tools used in ED and reflexive thematic analysis was used to produce a list of 56 statements for Round 1 (August–September 2021). The four main themes identified were [1]the principles of frailty screening, [2]practicalities and logistics, [3]frailty domains and [4]important components/variables of frailty screens.
Results: Of the 39 participants invited, 37 from 10 countries completed Round 1. Of the 56 statements available, 13 (23%) were accepted. Detailed feedback contributed to creation of 22 new statements, resulting in 35 being re-circulated in Round 2 (October 2021), of which 19 (54%) were accepted. It was agreed that ideal frailty screens should be short (< 5 min), multi-dimensional and well-calibrated across the spectrum of frailty, reflecting baseline status 2–4 weeks before presentation. Screening should be routine, prompt (< 4 h of attendance), and completed at first contact. Functional ability, mobility, cognition, medication use and social factors were identified as the most important variables.
Conclusions: Although a clear consensus was reached on the core elements, more research is required to operationalise frailty screening in ED.

O-050

Effectiveness of acute geriatric unit care on functional decline, clinical and process outcomes among hospitalised older adults with acute medical complaints: a systematic review and meta-analysis

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Background: The aim of this systematic review and meta-analysis was to update and synthesise the totality of research evidence on the effectiveness of acute geriatric unit (AGU) care for older adults admitted to hospital with acute medical complaints.
Methods: MEDLINE, CINAHL, CENTRAL and Embase databases were systematically searched from 2008 to February 2022. Screening, data extraction and quality grading were undertaken by two reviewers. Only trials with a randomised design comparing AGU care and conventional care units were included. Meta-analyses were performed in Review Manager 5.4 and the Grading of Recommendations, Assessment, Development and Evaluations framework was used to assess the certainty of evidence. The primary outcome was incidence of functional decline between baseline two-week prehospital admission status and discharge and at follow-up.
Results: 11 trials recruiting 7,496 participants across three countries were included. AGU care resulted in a reduction in functional decline at six-month follow-up (risk ratio (RR) 0.79, 95% confidence interval (CI) 0.66–0.93; moderate certainty evidence) and an increased probability of living at home at three-month follow-up (RR 1.06, 95% CI 0.99–1.13; high certainty evidence). AGU care resulted in little or no difference in functional decline at hospital discharge or at three-month follow-up, length of hospital stay, costs, the probability of living at home at discharge, mortality, hospital readmission, cognitive function or patient satisfaction.
Conclusions: AGU care improves clinical and process outcomes for hospitalised older adults with acute medical complaints. Future research should focus on greater inclusion of clinical and patient reported outcome measures.

O-051

Assessment service (OPAS): delivering comprehensive geriatric assessment (CGA) in the Emergency Department (ED)

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Introduction: Innovative models of service delivery are required to provide Comprehensive Geriatric Assessment (CGA), for older patients, presenting to Emergency Department (ED) with frailty syndromes. In 2020–21 139,636 attendances to Morriston ED, 3906 were falls, 41.64% converting to admission. A Front-Door, Geriatrician-led service, could reduce readmission and improve patient outcomes. Intervention Phase 1 (April-August 2018). Older Persons Assessment Service (OPAS) piloted a ED liaison service with Physiotherapist, Clinical Nurse Specialist (CNS), Advanced Nurse Practitioner (ANP) plus consultant Geriatrician. Phase 2 (June 2020-January 2022.) A dedicated unit within ED accepted patients directly from ED-triage or ambulances, 8am-4 pm on weekdays. Expanded with Occupational Therapist, ANP. Phase 3 (February 2022—Present day). Increased opening 7am-7 pm on weekdays. Recruited 2 ANPs, Emergency Nurse Practitioner (ENP), 2 CNS.

Results: Phase 1—437 patients, 333 (76%) discharged utilising community services, rapid-access outpatient and re-ablement, avoiding 50–80 admissions a month (17- 23 beds a year). Phase 2—1396 patients, 992 fallers (71.06%). 1167 patients (83.7%) were discharged, 69 (4.96%) admitted to other services. Average age 83 years with CFS > 5. Readmission rate at 14 days was 4.5% (64). Phase 3—OPAS see double the patients, averaging 40 per week (19 previously) with 37 being discharged (17 previously).
Conclusion: This service demonstrates the ability of consultant-led with a specialist MDT service that provide CGA in ED to avoid admissions and readmissions. This study has been able to demonstrate a greater measurable impact than previously published. We are hoping to further expand to provide weekend cover.

O-052

A physiotherapy-led transition to home intervention for older adults following Emergency Department discharge: a pilot feasibility randomised controlled trial

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Introduction: Older adults frequently attend the emergency department (ED) and experience high rates of adverse outcomes following ED presentation including functional decline, ED re-presentation and unplanned hospital admission. Our aim was to evaluate the feasibility of a physiotherapy-led integrated care intervention for older adults discharged from the ED (ED-PLUS).
Methods: Older adults presenting to the ED with undifferentiated medical complaints and discharged within 72 h were computer randomised in a ratio of 1:1:1 to deliver usual care, Comprehensive Geriatric Assessment (CGA) in the ED, or ED-PLUS (Trial registration: NCT04983602). ED-PLUS is an evidence-based and stakeholder-informed intervention to bridge the care transition between the ED and community by initiating a CGA in the ED and implementing a six-week, multi-component, self-management programme in the patient's own home. Feasibility (recruitment and retention rates) and acceptability of the programme were assessed quantitatively and qualitatively. Functional decline was examined post-intervention using the Barthel Index. All outcomes were assessed by a research nurse blinded to group allocation.
Results: 29 participants were recruited, indicating 97% of our recruitment target. 90% of participants completed the ED-PLUS intervention. All participants expressed positive feedback about the intervention. The incidence of functional decline at 6 weeks was 10% in the ED-PLUS group versus 70–89% in the usual care and CGA-only groups.
Key conclusions: High adherence and retention rates were observed among participants and preliminary findings indicate a lower incidence of functional decline in the ED-PLUS group. Recruitment challenges existed in the context of COVID-19. Data collection is ongoing for six-month outcomes.

O-053

The variable indicative of placement in acute hospital outpatient clinics identifies older adults who benefit from specialist geriatric assessment

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Background: Opportunistic screening of older adults results in early detection of frailty. The Variable Indicative of Placement (VIP) is validated to identify those being admitted to hospital who may benefit from specialist geriatric assessment. VIP screening was gradually introduced throughout hospital-based outpatient clinics in April 2021. The aim of this study was to quantify patient benefit following VIP screening.
Methods: A positive VIP triggered referral for Comprehensive Geriatric Assessment (CGA). Exclusion criteria included prior CGA within a year, nursing home resident or patient declined assessment. Data was prospectively entered onto Excel by a trained administrator. Demographics, Clinical Frailty Score (CFS), modified Barthel Index (mBI) and patient interventions post CGA, between July 2021 and April 2022, were analysed using descriptive statistics.
Results: Of 168 referrals received, 52 were excluded, 53 completed and 63 await review. Thirty five of those excluded had a prior CGA. Mean (SD) age of patients receiving CGA was 79 (7.6) years. Male:female ratio was 1:1.4. Median (SD) CFS was 6 (0.8) and median (SD) mBI was 16(3.9). There was a mean (SD) of 2.8 (1.6) targeted interventions per patient. Eighty three percent (n = 43) required medication changes, 47% (n = 25) bone health management, 28% (n = 15) dietician, 26% (n = 14) occupational therapy, 17% (n = 9) public health nursing, 17% (n = 9) speech and language therapy, 17% (n = 9) memory assessment and 15% (n = 8) physiotherapy.
Discussion: Outpatient clinic VIP screening resulted in identification of frail older adults who benefited from CGA. The VIP should be validated in various outpatient settings.

O-054

Changing engagement in advance care planning (ACP) among adults aged ≥ 57 years in The Netherlands

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Introduction: We studied individual changes in engagement in ACP among older adults from the general population in The Netherlands within a 1.5 year time period.
Methods: Observational prospective cohort study among adults aged $\geq$ 57 years from the general population in The Netherlands, within the ongoing Longitudinal Aging Study Amsterdam (LASA). Data were collected in 2015–2016 (T1) and 1.5 years later (T2) among the same participants. Engagement in ACP was defined as self-reported number of pre-defined ACP topics (n = 9) that participants discuss with loved-ones, discuss with their physician, or put something in writing about.
Results: At T1, participants (n = 1341; median age: 69.0 years; interquartile range: 64.1–75.4) discussed median 4 (IQR: 1–7) ACP topics with loved-ones, discussed median 0 (IQR: 0–1) ACP topics with their physician, and put something in writing about median 0 (IQR: 0–0) ACP topics. At T2, there was a mean small increase in engagement in ACP, with mean differences + 0.40 for topics discussed with loved-ones, + 0.13 for topics discussed with a physician, and + 0.16 for topics about which participants had put something in writing. Although most participants had similar or more engagement in ACP at T2 compared with T1, a substantial number of participants showed a decrease (30.3%, 18.2%, and 10.5% respectively).
Key conclusions: Engagement in ACP does not necessarily increase within a small time frame, but may rather fluctuate. This work was supported by the Netherlands Organisation for Health Research and Development, grant 839,120,002.

O-055

Updating the British Geriatrics Society recommended undergraduate curriculum in geriatric medicine: a curriculum mapping and nominal group technique study

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Background: The ageing population necessitates that doctors are equipped with the knowledge and skills required to care for older people with complex health and social care needs. Undergraduate teaching in geriatric medicine has a critical role to play in preparing doctors of the future. The British Geriatrics Society (BGS) recommended undergraduate curriculum was last revised in 2013 and there have been numerous advances in the field in the interim. The purpose of this update is to ensure that the recommendations meet the standards required by the General Medical Council in Outcomes for Graduates and the Medical Licensing Assessment (MLA), and to bring UK guidance in-line with the European recommended undergraduate curriculum.
Methods: A multi-stage consensus method involving key stakeholders was used to update this curriculum. The current BGS recommended curriculum was mapped to the European curriculum and MLA content map to identify gaps and inform discussions in a virtual Nominal Group Technique.
Results: In this update, the recommended curriculum is restructured around 7 core areas of geriatric medicine, with clearly defined learning objectives that encourage active participation of students in the clinical environment. Consensus agreement was that these reflect the minimum level of knowledge, skills, and attitudes required for the optimal care of older people, which medical students must be able to demonstrate by graduation.
Conclusion: This updated curriculum presents a model for teaching and learning in Geriatric Medicine, which is timely as UK medical schools are preparing their curricula for the MLA.

O-056

The implementation of an interprofessional, academic and transmural living lab in care for older people for health care students

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Introduction: To provide integrated care to the increasing number older people living at home with complex care needs there is a need for: [1]integrated interprofessional, academic and transmural education for vocational and higher education students during their internships in daily practice; [2]close collaboration between all healthcare professionals involved (such as nurses, occupational therapists and physical therapists) and professionals from the social domain.
Methods: We set up an interprofessional, academic and transmural living lab in care for older people where health and social care students and their teachers and supervisors meet during the internships of the students. Three proven learning concepts are integrated in these internships; 1) masterclasses, 2) whole system in the room and 3) follow the patient.
Results: Students from various higher education and vocational education work and learn together during their internship in the community and in the Acute Geriatric Community Clinic. Students, teachers and supervisors appreciate that they learn with and meet other professionals in this learning-network. Most last-year students decided to continue their career in this interprofessional, academic and transmural living lab.
Conclusions: The interprofessional, academic and transmural living lab in care for older people has proven to be successful in meeting and learning with and from other health care professionals. This living lab is now continued structurally, however continues effort is needed for long term implementation. This living is an example of the integration of practice, education and research in an interprofessional context.

O-057

Master's programme Vitality and Ageing: the real-life V&A research cycle to train students in performing research in co-creation with older people

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Introduction: Participation of older people is an important topic in geriatric research. Therefore, the Master's programme Vitality and Ageing (V&A) actively trains students in designing and performing research in co-creation with older people by the 'real-life V&A research cycle'. In co-creation with older people, students formulate research questions and develop a flashpoll. To further experience data-collection, students participate in qualitative research by

interviewing older people. In individual internships, students analyse these data, or do additional surveys to explore the topic quantitatively. Students present the research findings of this research to the Older Person Advisory Board. This gives input for the research topics in the next year academic programme.

Methods: Here, we explore the research cycle outcomes by describing the educational activities and output for students (i.e. number of theses, presentations, publications), and the collaboration with older people. Additionally, student's motivation for research, self-efficacy, perceptions of research and curiosity will be measured over time [1].

Results: Since 2020, around 70 V&A students followed the educational programme. All students participated in developing flashpolls with older people and qualitative data-collection. The V&A research cycle specifically resulted in 1 scientific international publication [2], 4 presentations on (international) scientific congresses, 5 manuscripts in preparation, 8 master-theses and 3 flash-polls. These products are all discussed with the Older Person Advisory Board. Data about the student's motivation will be available in August 2022.

Conclusion: By doing real-life research together with older people during academic training, students are trained to perform research activities in co-creation with older people. This could contribute to improving geriatric research and societal research engagement of students.

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O-058

Improving confidence and understanding in advance care planning through a multidisciplinary simulation programme

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Introduction: Advance care planning (ACP) is an individualised process by which healthcare professionals understand a person's wishes and preferences for their future healthcare [1]. The European Association of Palliative Care recommends involving non-physician colleagues in supporting such conversations [1]. Patients value ACP being broached by a trusted healthcare professional, regardless of background [2]. ACP conversations require skill and confidence to navigate the intricacies of prognostic uncertainty in the frail population [3]. However, training is limited for non-physicians; and simulation training often focuses on emergency medicine [4].

Methods: In small groups, we trained 266 doctors, nurses and therapists working in primary and secondary care. Professional actors are used to simulate scenarios that can be adaptable to job role and experience. Learning was facilitated by a trained, multidisciplinary faculty. Impact was assessed through participant surveys.

Results: While 89% of candidates felt that ACP is everybody's responsibility, only 10% of nurses and therapists had received prior training. Following the course, understanding had improved in all groups. Confidence was scored on a Likert scale of 1–5; with therapists improving from a median score of 2–4. In all other groups confidence improved from 3 to 4. Across the multidisciplinary team, the improvement in confidence was sustained at three months.

Conclusions: This multidisciplinary simulation training programme empowers colleagues who have not had access to prior training to develop the confidence and skills in ACP, ultimately ensuring we can respect the wishes of our elderly population at the end of life. [1] Rietjens, JAC., Sudmore, RL., Connolly, M., et al. 2017. Definition and recommendations for advance care planning: an international consensus supported by the European Association for Palliative Care. The Lancet Oncology. 18[9]. E543–551. [2] Sævareid TJL, Førde R, Thoresen L et al. Significance of advance care planning in nursing homes: views from patients with cognitive impairment, their next of kin, health personnel, and managers. Clin Interv Aging 2019;14:997–1005.[3] Brighton LJ, Bristowe K. Communication in palliative care: talking about the end of life, before the end of life. Postgraduate Medical Journal 2016;92:466–70. [4] Shah A, Carter T, Kuwani T, Sharpe R. Simulation to develop tomorrow's medical registrar. Clin Teach 2013;10:42–6.

O-059

End of life virtual reality training: medical student increased empathic ability

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Introduction: It is unclear if medical student empathy declines by third year of clinical rotation trainings. Desensitization throughout the first two years may lead to decreases in empathy as a coping mechanism to avoid burnout in the clinical years. This study determined if self-assessed empathy increased after conducting an Embodied Labs, Inc. end of life virtual reality (VR) experience.

Methods: Mixed methods, quantitative/qualitative, research were applied for University of New England (UNE) College of Osteopathic Medicine (COM) 2nd year medical students (N = 174). They completed the 3-part 30 min Clay Lab VR experience. UNE IRB approved pre/post-tests focused on empathy. Data were collected using RedCap. Closed questions were analyzed applying frequency analysis and paired-sample t-test through excel. Open-ended questions were analyzed through N-VIVO 12 + .

Results: The data included pre/post-tests from 146 students volunteers. Results indicated statistical significance (P = 0.01) in all closed questions except for question 7 (What is your view of conducting a full code on a patient with a DNR? (P = 0.14). The greatest difference seen between pre (23.97% agree or strongly agree) and post-test (64.38% agree or strongly agree) data was for question 3 (I gained knowledge about what hospice is by embodying Clay in this virtual reality lab); P = 0.00. Three qualitative themes included: Impact, Empathy, EOL Knowledge.

Conclusion: This VR Lab experience increased self-assessed empathy at the time of Clay Lab completion; however, enduring empathy

and learning about hospice/EOL has not been measured. Further research is suggested to determine the longitudinal impact of virtual reality education.

O-060

Becoming a doctor for older patients; professional identity formation of medical students in the nursing home. A qualitative study

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Introduction: Becoming a doctor is the interplay of building competencies and professional identity formation (PIF), i.e. the process of internalizing the values and norms of the medical profession.[1] To prepare medical students for the growing population of older patients, an appropriate PIF is required. Little is known about the PIF of medical students and the care for older patients. To gain more insight we explored the influence of a nursing home clerkship on medical students' PIF.
Methods: A qualitative study was conducted at the Leiden University Medical Center, the Netherlands. Thirteen fifth-year medical students were interviewed before and after a six-week nursing home clerkship. They were asked to share what is important to them by answering the question 'who do I want to become as a doctor' using a drawing as a prompt. Thematic analysis was used to structure and interpret the data.
Results: Caring for older patients over a longer period of time was meaningful for becoming a doctor in five ways: [1]tailoring the care to the patient's life; [2]being close to the patient; [3]being in dialogue with the patient; [4]avoiding unnecessary curative treatment; and [5]working together in a team.
Conclusions: Our findings suggest that being patient-centered and approachable, giving holistic and personal care, and being able to work together are important aspects of becoming a doctor for older patients. Furthermore the nursing home can provide a suitable context to develop an appropriate professional identity for the care for older patients. [1] Jarvis-Selinger S, Pratt DD, Regehr G. Competency is not enough: integrating identity formation into the medical education discourse. Acad Med. Sep 2012;87(9):1185–90.

O-061

Cultural communication and care a way to a more compassionate approach to the older patient—a two year clinical descriptive study

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Background: The encounter between health professionals and older patients with complex needs and with different cultural backgrounds are increasingly challenged due to lack of time, lack of staff, and lack of competencies. Culture in this study includes language, customs, and beliefs about roles and relationships, and is not only focused on religion and ethnicity.
Objectives: The aim was to increase health professionals' cultural sensitivity, compassion and communication competencies in the encounter with the older patient. **Results:** This project was conducted using theories of practice research. Both, nurses, doctors, physiotherapists, and secretaries participated in the program. A facilitator ran the supervision and presented the cultural subjects. After the first three sessions, it became evident that continuous meetings were needed. Participants shared their cultural beliefs and prejudices at team meetings, morning sessions, and seminars after work. Field notes were written down after every session. Staff expressed that it provided them with a mutual language and mutual values in the department, but also a safe space to speak openly about worries and stressors. Patients seemed more satisfied and fewer complaints from relatives were experienced. The challenge was to involve all members of the staff groups.
Conclusion: The supervision and teaching in cultural communication are now offered to all staff twice a month for two hours a time. In geriatric settings with a lack of staff and patients with complex caring needs, it becomes significant to provide and support the staff in focusing on cultural and compassionate ways of caring for the patients.

O-062

Incidence trends of recorded osteoporosis, osteopenia and fragility fracture in older people: analysis Of UK primary care data

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Introduction: Osteoporosis, leading to fragility fractures, is associated with increased mortality, disability, and costs. There is lack of data on the incidence of osteoporosis from population-based studies. We aimed to estimate the incidence of recorded diagnosis of osteoporosis, osteopenia, and fragility fracture in older people, explore time trends in diagnosis, and differences by age, sex, and social deprivation.
Methods: We used de-identified patient data provided as part of routine primary care (IQVIA Medical Research Database). All patients aged 50–99 years registered with participating general practices (GP) between 1/1/2000–31/12/2018 were included. Crude incidence rates (IR) were estimated per 10,000 person-years (PY). We used Poisson regression to calculate Incidence Rate Ratios (IRR) adjusted by sex, age, calendar year, social deprivation, and GP practice.
Results: The incidence of osteoporosis showed a peak in 2009 in women, followed by a second peak in 2014–2015 in both men and women. Fragility fractures peaked in 2012–2014. These could be associated with the **Introduction:** of fracture risk assessment tools. In the adjusted models, men in the most deprived areas had a higher risk of being diagnosed with osteoporosis [IRR 1.45 (95% CI 1.38–1.53)], osteopenia [IRR 1.17 (95% CI 1.09–1.26)], and fragility fracture [IRR 1.49 (95% CI 1.43–1.55)] compared to those living in the least deprived areas, but smaller differences were seen in women.
Key conclusions: Community bone health interventions might be targeted at populations at higher risk of fragility fractures, including older men living in socially deprived areas.

O-063

Does dizziness predict falls in older adults? A longitudinal study using data from the English Longitudinal Study OF Ageing (ELSA)

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Introduction: Falls represent a significant social and economic problem, and 1/3 of people over 65-years old fall every year. Dizziness affects approximately 1/3 of older adults and is linked with increased falls risk. However, previous studies have not considered other known falls risk factors, particularly history of previous falls, when making these assertations. The current study aimed to ascertain if dizziness is an independent risk factor for falling.
Method: Data was analysed from ELSA over a 10-year period (2004/5–2014/5) to determine if the severity of dizziness reported by participants was associated with increased falls risk over this period. Participants were asked at baseline "how often do you experience dizziness when walking on a level surface?". They were followed up biennially to ascertain falls reported. Falls were classified as any fall, recurrent fall (> 1 fall in 2 years), injurious fall (requiring medical assistance) or new fall (fall following no previous reports of falling).
Results: A logistic regression model showed that, when accounting for known risk factors for falling (Participant's age, gender, medical history, frailty level (using the Fried phenotype), physical activity level and previous falls history), those reporting dizziness were significantly more likely to report recurrent falls in the following 2 (OR 1.398, $p = 0.014$), 4 (OR 9.734, $p = 0.009$) and 6 years (OR 9.486, $p = 0.024$) than those never reporting dizziness. However, no association was observed at any stage with other categories of falls: new falls, injurious falls, or all falls.
Conclusion: Dizziness is independently predictive of recurrent falls over a 6-year period. Recurrent falls are more likely to result in significant morbidity and mortality and associated personal and economic consequences. Clinicians should routinely ask older adults how often they experience dizziness to enable earlier intervention of falls prevention measures.

O-064

Does a more involved model of orthogeriatric care influence outcomes for neck of femur patients

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Introduction: Managing orthogeriatric patients is complex. The orthogeriatric specialist is a unique role who can understand geriatric medical issues in the orthopaedic context. Orthogeriatric review is currently a standard of care around the country. Commonly hospitals have orthogeriatric patients under the care of orthopaedic surgeons, with orthogeriatric medical review within 72 h (review model). An English hospital switched from the review model to orthogeriatritians having primary responsibility with orthopaedic input as appropriate (ownership model). An audit reviewed neck of femur (NOF) outcome measures.
Methods: Records were reviewed between 2019–2021. Model change was implemented in August 2020. Outcome measures are length of stay, time to surgery, mortality, discharge location and readmission. Patients $\geq$ 60 years of age suffering a NOF fracture were included. Months during SARS-COV2 pandemic waves were excluded due to hospital staff restructuring.
Results: Seven months were audited for each model, providing 402 patients included in the results (review = 187, ownership = 215). Patient demographics were equivocal. Compared to review, the ownership model demonstrated reduced length of stay (22.5 vs 18.5 days), time to surgery (32.7 vs 30.9 h), readmission rate (2.8% vs 4.8%) and increased first discharge to a care home (13.3% 13.9%) and 30-day mortality (6.4% vs 7.4%). No results reached statistical significance.
Conclusions: This audit demonstrates an alternative model of orthogeriatric care. This may improve patient recovery and benefit healthcare provider efficiency. Mortality remains within national averages and may have been compounded in this sample by the SARS-COV2 pandemic. This hospital will continue to implement the new model of care.

O-065

Effects of dual-task functional power-based training on falls risk and functional performance in older people at falls risk living in retirement communities: a 12-month cluster randomized controlled trial

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Introduction: Many falls in older people result from an inability to produce a rapid explosive movement when balance is lost often whilst concurrently performing other attention-demanding tasks. This 12-month cluster RCT examined whether dual-task (DT) functional power-based training (DT-FPT) could reduce falls and improve functional and DT performance.
Methods: 22 independent living retirement villages involving 300 residents aged > 65y at increased falls risk were randomized to 12-months of DT-FPT [6-months supervised training (phase 1) + 6-months maintenance program (phase 2)] involving high-velocity functional exercises (45–60 min, 2/week) performed simultaneously with cognitive and/or motor tasks, or a usual care control (CON) group. Falls were monitored monthly by diaries. Secondary outcomes included knee extensor and ankle dorsiflexion muscle strength, leg muscle power, gait speed and mobility under single and DT conditions.
Results: DT-FPT significantly improved muscle power (5 times sit-to-stand, $P < 0.001$), mobility (four-square-step-test time, $P < 0.05$) and choice stepping reaction time under single ($P < 0.01$) and DT ($P < 0.05$) conditions compared to CON. After phase 1, the relative risk (RR) for multiple falls ($\geq$ 2) was significantly lower in DT-FPT [RR 0.30 (95% CI: 0.09, 0.97)], but there were no significant differences between DT-FPT and CON for fall rates [IRR: 0.70 (0.42, 1.17)], falls risk [RR 0.90 (0.50, 1.60)] or injurious falls [RR 0.93 (0.51, 1.69)]. During phase 2, there were no significant group differences in any fall-related outcomes.
Conclusions: Supervised DT-FPT reduced the risk of multiple falls and improved leg muscle power, mobility and dual-task stepping performance in the elderly at increased falls risk.

O-066

Diagnostic power of sit-to-stand muscle power, grip strength and gait speed for identifying recurrent falls and fractures in older adults: implications for sarcopenia diagnosis

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Introduction: To examine the diagnostic power of sit-to-stand muscle power, grip strength and gait speed for identifying recurrent falls and fractures in older adults.
Methods: Data from an outpatient falls and fractures clinic included anthropometry (height/weight), bone density (dual-energy x-ray absorptiometry), 5-times sit-to-stand time (stopwatch/standardised chair), grip strength (hydraulic dynamometer) and gait speed (4 m). Sit-to-stand muscle power was calculated using a validated equation. Fall (past 1 year) and fracture (past 5 years) history were self-reported and cross-validated against medical records. Binary logistic regressions considering potential confounders (age, sex, body mass index, comorbidities, bone density) and receiver operating characteristic (ROC) curves were conducted.
Results: 552 community-dwelling adults (median age: 78 years; IQR: 72–83, 75.2% women) were included. In the fully-adjusted model, sit-to-stand muscle power (odds ratio (OR): 3.90; 95% CI: 2.25–6.73; $p < 0.001$), grip strength (OR: 2.47; 95% CI: 1.37–4.46; $p < 0.001$) and gait speed (OR: 1.89; 95% CI: 1.09–3.27; $p = 0.02$) were inversely associated with recurrent (≥ 2) falls, but only muscle power and grip strength were inversely associated with recurrent fractures ($p < 0.05$). Area under the ROC curves showed acceptable diagnostic power of muscle power (AUC: 0.62; 95% CI: 0.58–0.67; $p < 0.001$), grip strength (AUC: 0.57; 95% CI: 0.52–0.62; $p = 0.009$) and gait speed (AUC: 0.59; 95% CI: 0.54–0.64; $p = 0.009$) for identifying recurrent falls. Muscle power (AUC: 0.61; 95% CI: 0.55–0.67; $p = 0.001$) and grip strength (AUC: 0.58; 95% CI: 0.52–0.64; $p = 0.019$) were acceptable in identifying recurrent fractures.
Conclusion: Sit-to-stand muscle power offers the highest diagnostic power for identifying recurrent falls and fractures in older adults, which may influence the diagnosis of sarcopenia.

O-067

Clinical usefulness of a prognostic model for 1-year risk of falling in community-dwelling older adults: a development study with decision curve analysis

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Introduction: Prediction models identifying future fallers to guide fall-preventive interventions are important. However, the clinical usefulness of these models is rarely evaluated. We developed a prognostic model predicting falls and subsequently evaluated its clinical usefulness for referring older adults to fall risk factor assessments.
Methods: Prospective cohort study with 241 community-dwelling older adults aged 75 + years recruited from 2018–2019 and followed for one year evaluating falls. Candidate predictors were physical and cognitive tests together with self-report questionnaires collected at baseline in participants' own homes. We developed a linear model using pseudo-observations and fitted it using least absolute shrinkage and selection operator penalization, and bootstrap resampling with 1,000 iterations. Clinical usefulness of the model was investigated using decision curve analysis.
Results: Eighty-seven out of 241 (36%) participants fell during the follow-up. Predictors included in the final model were alcohol consumption, educational level, falls history, self-perceived fall risk, dizziness, urinary incontinence, frailty, depressive symptoms, and handgrip strength. Area under the curve (95% CI) was 0.61 (0.50–0.71), calibration slope (95% CI) 0.57 (-0.06—1.83), and calibration-in-the-large (95% CI) 0.16 (-0.50—0.88). Decision curve analyses found the model superior to referring either all or none for further falls risk assessments in the 20–70% probability threshold range.
Conclusion: The final model contained self-reported data and handgrip strength. It discriminated with 61% certainty between future fallers and non-faller and was more clinically useful than default referral strategies. Future models should be evaluated for clinical usefulness in addition to predictive performance. Registration: Clinicaltrials.gov (NCT03608709).

O-068

The effectiveness of rehabilitation interventions including outdoor mobility on older adults' physical activity, endurance, outdoor mobility, and falls-related self-efficacy: systematic review and meta-analysis

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Introduction: To determine the effectiveness of community-based rehabilitation interventions which incorporate outdoor mobility on physical activity, endurance, outdoor mobility, and falls-related self-efficacy in older adults.
Methods: MEDLINE, Embase, CINAHL, PEDro, and OpenGrey were searched systematically from inception to June 2021 for randomized controlled trials (RCTs) of community-based rehabilitation incorporating outdoor mobility on physical activity, endurance, outdoor mobility and/or falls-related self-efficacy in older adults. Duplicate screening, selection, extraction, and appraisal was completed. Results were reported descriptively and with random-effects meta-analyses stratified by population (proactive [community-dwelling], reactive [illness/injury]).

Results: 29 RCTs with 7,076 participants were identified (66% high bias for at least one domain). The outdoor mobility component was predominantly a walking programme with behaviour change. Rehabilitation for reactive populations increased physical activity (7 RCTs, 587 participants. Hedge's g 1.32, 95% CI: 0.31, 2.32), endurance (4 RCTs, 392 participants. Hedges g 0.24; 95% CI: 0.04, 0.44), and outdoor mobility (2 RCTs with 663 participants. Go out as much as wanted, likelihood of a journey) at intervention end versus usual care. Where reported, effects were preserved at follow-up. One RCT indicated a benefit of rehabilitation for proactive populations on moderate-to-vigorous activity and outdoor mobility. No effect was noted for falls-related self-efficacy, or other outcomes following rehabilitation for proactive populations.
Conclusion: Reactive rehabilitation for older adults may include walking programmes with behaviour change techniques. Future research should address the potential benefit of a walking programme for proactive populations and address mobility-related anxiety as a barrier to outdoor mobility for both proactive and reactive populations.

O-069

A Systematic review and meta-analysis of the psychometric properties of four variants of the Falls Efficacy Scale-International (FES-I)

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Introduction: The 16-item Falls Efficacy Scale International (FES-I) is a widely used tool to assess fear of falling. Variants of the tool include the 7-item Short FES-I, the 30-item Iconographical Falls Efficacy Scale (Icon FES), and 10-item short Icon FES. Psychometric properties of these tools have been widely investigated, however, no comprehensive systematic review of their properties has been conducted.
Methods: MEDLINE, Embase, CINAHL Plus, PsycINFO, and Web of Science databases were searched. The methodological quality of each study and the quality of the psychometric properties of each tool were assessed using COSMIN guidelines. Where possible, meta-analysis of extracted data was conducted, otherwise, narrative synthesis was performed. Overall quality of the evidence was rated using GRADE.
Results: The review included 59 studies. There was high quality evidence to support the internal consistency, reliability, and construct validity of all instruments. Moderate to high quality evidence suggests a one factor structure of the FES-I with two underlying dimensions, a one factor structure of the Short FES-I, and a two-factor structure of the Icon FES. High quality evidence supports the responsiveness of the FES-I.
Key conclusions: Overall there is evidence for sufficient measurement properties of all four FES-I instruments. We recommend the use of these tools with healthy older people and those at greater risk of a fall due to conditions affecting balance.

O-070

The DANTON study: discontinuation of antihypertensive treatment in OLder people with dementia living in a nursing home—results of a randomized controlled trial

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Introduction: Neuropsychiatric symptoms (NPS), such as apathy and agitation, are highly prevalent in nursing home (NH) residents with dementia. Literature suggests an association of both cerebral hypoperfusion and antihypertensive treatment (AHT) with NPS in patients with dementia. Therefore, we investigated whether discontinuation of AHT in NH residents with dementia reduces NPS and improves quality of life (QoL).
Methods: Randomized, single-blinded trial conducted in 26 Dutch NH organisations. Residents with moderate-severe dementia and a systolic blood pressure $\leq$ 160 mmHg during AHT were randomized in an intervention (semi-protocolized discontinuation) and control (continuation) group during an 8-month period. Exclusion criteria were heart failure NYHA-class-III/IV, angina pectoris, recent cardiovascular event/procedure, or life-expectancy $<$ 4 months. Co-primary endpoints were NPS (Neuropsychiatric Inventory-NH) and QoL (Qualidem) at 4 months. Secondary endpoints included psychotropic medication use, care dependency and falls.
Results: Between December 2018 and May 2021, 205 NH residents (mean age 84.7 years-79.5% women) were randomized. On advice of the Data Safety Monitoring Board, the study was preliminary finished due to futility on the co-primary endpoints. While no differences between randomization groups were found on the NPI-NH (adjusted mean difference 1.6 [-2.3 to 5.6]; $p = 0.417$) and the Qualidem (adjusted mean difference -1.4 [-3.2 to 0.5]; $p = 0.154$) at 4 months, serious adverse events occurred more frequently in the intervention group (HR 1.65 [0.98–2.78]).
Key conclusions: based on preliminary study results, the benefits of deprescribing AHT in NH residents with dementia for reduction of NPS and improvement of QoL, are unclear and may not be without any potential risk.

O-071

Disentangling the varying associations between systolic blood pressure and health outcomes in the very old: an individual patient data meta-analysis

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Introduction: While randomized controlled trials have proven the benefits of blood pressure (BP) lowering in participating octogenarians, population-based observational studies suggest an association between low systolic blood pressure (SBP) and faster overall decline. This study investigates the effects of BP-lowering treatment, a history of cardiovascular diseases (CVD), and cognitive and physical fitness on associations between SBP and health outcomes in the very old.
Methods: Five cohorts from the Towards Understanding Longitudinal International older People Studies (TULIPS)-consortium were included in a two-step individual participant data meta-analysis (IPDMA). We pooled hazard ratios (HR) from Cox proportional-hazards models for five-year mortality and estimates of linear mixed models for change in cognitive and functional decline. Models were stratified by BP-lowering treatment, history of CVD, Mini-Mental State examination-scores (MMSE), grip strength (GS) and body mass index (BMI).
Results: Of all 2480 participants (59.9% females, median 85 years), median baseline SBP was 149 mmHg, 64.3% used BP-lowering drugs and 47.3% had a history of CVD. Overall, higher SBP was associated with lower all-cause mortality (pooled HR 0.91 [95% CI 0.88–0.95] per 10 mmHg). Associations remained irrespective of BP-lowering treatment, CVD history and BMI, but were absent in octogenarians with above-median MMSE and GS. In pooled cohorts, SBP was not associated with cognitive and functional decline.
Key conclusions: While in the very old with low cognitive or physical fitness, a higher SBP was associated with a lower all-cause mortality, this association was not evident in fit octogenarians. SBP was not consistently associated with cognitive and functional decline.

O-072

Nocturnal hypoglycemia in older patients with insluin-treated diabetes

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Background: Hypoglycemia including nocturnal hypoglycemia is a severe in diabetes patients. Nocturnal hypoglycemia frequency is unknown in older patients with type 2 diabetes (T2DM). AimTo determine the risk factors associated with nocturnal hypoglycemia detected by continuous glucose monitoring (CGM) in T2DM older patients.
Methods: This prospective multicenter study included insulin-treated T2DM patients aged 75 and older. After consent, patients underwent a geriatric assessment in addition to a medical diabetes evaluation. All patients were asked to perform 2–3 pre-meal usual monitoring of blood glucose and went through ambulatory CGM for 28 consecutive days (FreeStyle Libre Pro Sensor).
Results: The mean age of the 146 included patients was 81.5 (± 5.3) years and 54,8% were male. The mean baseline HbA1c was 7.9% (± 1.1). After geriatric assessment, 107 (73.3%) were described as complex and 39 (26.7%) as healthy patients. Between midnight and 6.00 am, at least one episode of nocturnal hypoglycemia was detected with CGM in 122 patients (83.6%) and 86 patients (58.9%) had a time below 54 mg/l longer than 60 min, without difference between complex and healthy patients. In multivariable analysis, one hypoglycemia during day time (OR:4,38 [1,54–12,45]), cognitive impairment (OR:6,99 [2,03–24,03]), heart failure (OR:3,56 [1,06–11,98]) were associated with prolonged nocturnal hypoglycemia.
Conclusion: Our study reports a high prevalence of nocturnal hypoglycemia in older patients with insulin-treated T2DM, while HbA1c at baseline was in the recommendation range and independently of geriatric status and frailty. New tools in addition to HbA1c are required for this population in order to reduce hypoglycemic events.

O-073

Cardiovascular abnormalities and falls among older adults: a systematic review for the task force on global guidelines for falls in older adults

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Introduction: Among older adults, falls are the most common cause of injury, hospitalisation, functional decline, and residential care admission. Cardiovascular abnormalities are recognised as risk factors for falls. The purpose of this review was to search and analyse cardiovascular abnormalities associated with falls (both syncopal and non-syncopal), and the efficacy of cardiovascular based interventions to reduce falls among older adults.
Methods: Systematic searches were conducted on MEDLINE and EMBASE, encompassing all literature published prior to 11/02/2022. Included studies had a minimum age $\geq$ 50 years, assessed the association between cardiovascular abnormalities and falls or the efficacy of a cardiovascular based intervention to reduce falls. Two reviewers independently extracted data and assessed study quality (Newcastle–Ottawa scale for observational studies and the Revised Cochrane risk of bias tool for randomised trials). A systematic narrative analysis of all outcomes was performed.
Results: 156 studies were included in final analyses (151 observational and five interventional studies). Fifteen cardiovascular abnormalities were found to be associated with falls including hypertension, orthostatic hypotension, arrhythmia, carotid sinus hypersensitivity, and vasovagal syncope. Orthostatic hypotension was consistently found to be associated with falls when assessed by beat-to-beat as opposed to sphygnomanometry.
Key conclusions: Through identifying evidence-based cardiovascular risk factors for falls, these results may provide options for improving

fall-related care. This review will inform cardiovascular recommendations in the upcoming Global Guidelines for Falls in Older adults. Interventional trials are needed to identify ways of reducing cardiovascular risks of falls in older adults. Prospero registration: CRD42021272245.

O-074

Improving recognition of polypharmacy and addressing inappropriate prescribing on a care of the elderly ward

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Introduction: Polypharmacy is an increasing concern which will lead to prescribing errors, serious drug interactions and potentially inappropriate prescribing.
Aim: To improve recognition of 'Polypharmacy', routine medication reviews, awareness for General Practitioners (GP).
Methods: This audit consisted of two cycles both performed over 6 weeks. Inclusion criteria: patients aged 65 < and on 6 < medications, admitted to Elderly Care ward at Chelsea and Westminster hospital. Interventions included education such as clear documentation in medical record and GP summary, **Introduction:** of medication reviews during ward round, collaborative work with pharmacists. Potentially Inappropriate Medications (PIMS) were assessed using STOPP/START criteria suggested by NICE guideline.
Results: First cycle30 patients were recruited with an average age of 79.2 (13 males and 17 females). An average number of PIMS at the time of admission was 1.3 and 0.5 on discharge. Only 1/30 (3.3%) has 'Polypharmacy' documented and medication reviewed; Medications Reconciliation was 29/30 (96.7%). None of the patient has documentation for Polypharmacy. Second cycle29 patients were recruited with and average age of 80.1. (7 males and 22 females). PIMs on admission was 1.4 and 0.3 on discharge. 25/29 (86.2%) patients had 'Polypharmacy being documented and Medication review for 29/29(100%). Medication Reconciliation was 29/29(100%). Most Common PIMS across both cycles were statins, antihypertensive and Proton Pump Inhibitor.
Conclusion: The interventions has results in significant increment in number of medication review of 96.7 and 82.9% on documentation for 'Polypharmacy', and 20% reductions in PIMS on discharge.

O-076

Chronic disease patterns and depression risk in late life: insights from a population-based study

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Introduction: Although co-occurring chronic diseases (i.e., multimorbidity) are linked to higher risk of late-life depression, the contribution of both the number and combination of diseases is still poorly understood. In this study, we aim to explore the relationship between the number and patterns of multimorbidity and depression incidence.
Methods: We analyzed longitudinal data from 2155 depression- and dementia-free individuals (60 +) from the population-based Swedish Study on Aging and Care in Kungsholmen. Diagnoses of major and minor depression were ascertained following DSM-IV-TR over a 15-year follow-up. Information on chronic somatic diseases was gathered from clinical examination, medication review, and national healthcare registers, and operationalized as follows: (i) disease count; (ii) disease patterns estimated through latent class analysis on the multimorbid subpopulation (2 + diseases; n = 1801). Cox regression was used to investigate the longitudinal association between disease count and patterns with depression incidence, accounting for sociodemographic, lifestyle, and clinical factors.
Results: In multi-adjusted models, the somatic disease count was associated with the occurrence of depression in a dose–response manner (HR 1.12, 95% CI: 1.05,1.20). Compared to those without multimorbidity, individuals in the sensory (HR 2.02, 95% CI: 1.10,3.68), thyroid/musculoskeletal (HR 1.89, 95% CI: 1.04,3.40), and complex cardiovascular (HR 3.12, 95% CI: 1.50,6.50) patterns presented higher depression hazard. In the subsample of multimorbid individuals, only those with a complex cardiovascular pattern were associated with higher depression hazard compared to the unspecific pattern (HR 2.08, 95% CI: 1.16,3.71).
Conclusions: Both the number and multimorbidity composition provide relevant insight on depression risk, which may translate into better prevention and treatment strategies in clinically complex older adults.

O-077

Potential effects on cardiometabolic risk factors and body composition by short message service (SMS)-guided training after recent minor stroke or transient ischaemic attack: post hoc analyses of the STROKEWALK randomised controlled trial

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Objectives: To evaluate effects of mobile phone text-messaging exercise instructions on body composition, cardiometabolic risk markers and self-reported health at 3 months after stroke.
Design: Randomized controlled trial at University hospital, Sweden. Interventions: The intervention group (n = 40) received beyond standard care, daily mobile phone instructional text messages to perform regular outdoor walking and functional leg exercises. The control group (n = 39) received standard care. Main outcome measures: Fat mass and fat-free mass were estimated by bioelectric impedance analysis. Cardiometabolic risk factors like blood lipids, glycated haemoglobin and blood glucose were analysed at baseline and after 3 months.
Results: Both groups changed favourably in fat-free mass (1.83 kg, 95% CI 0.77–2.89; p = 0.01, effect size (ES) = 0.63 vs 1.22 kg, 95% CI 0.39–2.0; p = 0.05, ES = 0.54) and fat mass (− 1.30 kg, 95% CI − 2.45 to − 0.14; p = 0.029, ES = 0.41 vs − 0.76 kg, 95% CI − 1.74–0.22; p = 0.123, ES = 0.28). Also, many cholesterol related biomarkers improved; for example, total cholesterol − 0.65 mmol/L, 95% CI − 1.10 to − 0.2; p = 0.06, ES: 0.5 vs − 1.1 mmol/L, 95% CI − 1.47 to − 0.56; p > 0.001, ES = 0.8. However, there were no between-group differences. At 3 months, 94

and 86%, respectively, reported very good/fairly good health in the text messaging and control groups.
Conclusions: No clear effect of 3 months daily mobile phone delivered training instructions was detected on body composition, cardiovascular biochemical risk factors or self-perceived health. Trial Registration number: NCT02902367.

O-078

Orthostatic hypotension and dementia: the role of cardiovascular diseases

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Introduction: Orthostatic hypotension (OH), a common condition in older adults, is associated with increased dementia risk [1]. However, the mechanisms underlying the OH-dementia relationship remain poorly understood. We explored the role of three cardiovascular diseases (CVD: ischemic heart diseases, heart failure, and cerebrovascular diseases) in the OH-dementia relationship among older adults.
Methods: This 15-year population-based cohort study included 2219 participants without dementia and CVDs at baseline from the Swedish National Study on Aging and Care in Kungsholmen. OH was defined as systolic/diastolic blood pressure decreases $\geq$ 20/10 mmHg when standing up from a supine position. Incident CVDs were ascertained through the Swedish National Patient Register. Dementia was diagnosed following the DSM-IV criteria. We used semi-Markov multistate models to test the associations of OH with incident CVDs prior to dementia, incident dementia without prior CVDs, and dementia after incident CVDs.
Results: Of the 2219 participants, 486 (21.9%) had OH at baseline. During the follow-up period, 677 (30.5%) developed CVDs and 401 (18.1%) developed dementia. OH was associated with a multivariate-adjusted hazard ratio (HR) of 1.23 (1.03–1.48) for overall CVDs, 1.31 (0.97–1.76) for ischemic heart diseases, and 1.30 (1.02–1.67) for cerebrovascular diseases, but not associated with incident heart failure. OH was also related to a higher risk of dementia (HR: 1.38 (1.06–1.79)), independently of CVDs. However, the OH-dementia relationship was stronger among people who developed ischemic heart disease (HR: 2.47 (1.21–5.05)).
Conclusions: OH may increase dementia risk both via increasing the risk of CVDs and independently of CVDs.
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O-079

Interdisciplinary and multiscale UK Ageing Networks to promote ageing biology and clinical translation

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Research into the biology of ageing has undergone a dramatic transformation over the past decade, leading to identification of key hallmarks of ageing together with demonstration that age-related multimorbidities are underpinned by a small number of tractable biological ageing processes. In particular, removal of senescent cells using drugs known as senolytics leads to improved health across multiple organs and systems. These drugs and other therapeutic modalities that address underlying ageing mechanisms have shown significant promise in preclinical models, with a growing number of early stage and Phase 2 clinical trials taking place, for example in idiopathic pulmonary fibrosis and diabetic retinopathy. While this geroscience revolution is remarkable in both speed and scope, there is still little awareness of the progress and its potential outside the field of ageing biology. Historically, research efforts have often been focused on individual disease areas, isolating researchers and hindering cooperation and innovation. Emphasising the importance of "Better together: Multidisciplinary team working", here we highlight an exciting research initiative funded by the UK government, through its funding body UKRI (United Kingdom Research and Innovation) to establish 11 new research networks covering areas ranging from socio-economic determinants of health, cell metabolism, diet and nutrient sensing, exercise and muscle resilience, cognitive frailty, immune ageing, ageing mechanisms, and biomarkers through to clinical trials. These networks are recruiting researchers and clinicians from across the UK, holding subject-specific workshops and other research activities, as well as providing public-facing activities and clinical training materials. Moreover, the individual networks are brought together under the umbrella of the UK Ageing Networks, UKANet.org.uk, to facilitate collaboration and to expedite adoption of research findings into policy and clinical practice. This is a new model for national cooperation in an important and growing field, and we welcome interaction with others both within the UK and with international partners.

O-080

ASTCOQ02, a natural telomerase activator, lengthens telomeres in humans in a middle-aged population. A randomized, double-blind, placebo-controlled study

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Telomeres are ribonucleoprotein structures that form a protective buffer at the ends of chromosomes and thus maintain genomic

integrity during the cell cycle. Replicative telomere erosion can be compensated by a telomerase. Average telomeres size decreases with age and associated with aging-related diseases such as cancer and cardio-vascular disease. We previously reported that ASTCOQ02 (an Astragalus extract that contains astragaloside IV and cycloastragenol), a telomerase activator showed benefit in an open prospective study on telomere size and cardiovascular impact in healthy volunteers. Here we performed a randomized, double-blind, controlled trial over 6 months comparing the effect of ASTCOQ02 versus placebo on telomere length (TL) in 40 healthy volunteers (mean age 56.1 ± 6.0 years). Twenty subjects received ASTCOQ02 and 20 received placebo capsules. All 40 subjects completed the study with no adverse side effects reported at 6 months. Subjects taking ASTCOQ02 had significantly longer median ($P = 0.01$) and short TL ($P = 0.004$) and a lower percentage of short telomeres over the 6 months period whereas placebo group TL remained unchanged. This randomized, double-blind, placebo-controlled trial confirmed that ASTCOQ02 significantly lengthens both median and short telomeres by increasing telomerase activity, and reduces the percentage of short telomere (< 3 Kbp) in a statistically and possibly clinically significant manner. The results of this study also converge with the previous open prospective trial that found zero toxicity associated with intake of ASTCOQ02. ASTCOQ02 warrants further human studies on health, longer life expectancy and healthy aging.

Keywords: ASTCOQ02, telomerase activator, telomere length, Astragalus, anti-aging, senescence, longevity, physiology, placeb-controlled trial, randomized.

O-081

Compromised NAD + -mitophagy axis in ageing and Alzheimer's disease and AI-based drug development

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Abstract: Accumulation of damaged mitochondria is a hallmark of aging and age-related neurodegeneration, including Alzheimer's disease (AD). However, the molecular mechanisms of impaired mitochondrial homeostasis and their relationship to AD are still elusive. Mitophagy is the cellular self-clearing process of damaged and superfluous mitochondria, and therefore plays a fundamental role in maintaining neuronal function and survival1. We hypothesize that age-susceptible defective mitophagy causes accumulation of damaged mitochondria, which in combination with the two AD-defining pathologies, Aβ plaques and tau tangles, further exacerbates AD progression. Restoration of mitophagy through upregulation of cellular NAD + , a primary molecule in human health and life, and genetic approaches, forestalls pathology and cognitive decline in animal models of AD and improves mitochondrial function in the AD iPSC neurons2, 3. We are now involved in more than 5 clinical trials on the use of NAD + precursors to treat AD, PD, ALS, and premature ageing diseases, etc4. Additionally, we have successfully identified two new mitophagy inducers, via artificial intelligence (AI) and wet lab validation, as anti-AD drug candidates5.

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O-082

Soluble Urokinase Plasminogen Activator Receptor (suPAR) as promising biomarker for identifying vulnerable older adults

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Introduction: A person age 65 and older at increased risk of functional decline or death may be considered vulnerable. The underlying cause of the problem may be, inter alia, multimorbidity, malnutrition, or chronic inflammation. Quick identification of these patients and providing a comprehensive geriatric assessment and special medical care are crucial. Proper screening and diagnosis of vulnerable older patients remain a challenge.

Methods: A group of 261 community-dwelling people, aged 81 ± 3.5 (74 males and 187 females) participated in the study. The Vulnerable Elders Survey-13 (VES-13) was used to identify patients with an increased risk of death or functional decline with a cutoff point ≥ 3. Inflammation was assessed using C-reactive protein (CRP), neutrophil to lymphocyte ratio (NLR), Interleukin-18 (IL-18), and Soluble Urokinase Plasminogen Activator Receptor (suPAR).

Results: One-hundred sixty-three subjects (37 males and 126 females) were identified as vulnerable V(+). The NLR and IL-18 did not differ between the V(+) and V(-) groups, while the medians for CRP: 1.83 (0.99–3.5) mg/L for V(+) vs 1.14 (0.78–2.23) mg/L for V(-); $p = 0.001$, and for suPAR: 4.1 (3.6–4.76) ng/mL for V(+) vs 3.59 (3.18–4.4) ng/mL for V(-); $p = 0.00002$, were different. Optimal cutoff value assessed with ROC curve for supPAR was 3.41 ng/mL, AUC 0.66 (confidence interval [CI] 95%:0.59–0.73), while for CRP was 1.7 mg/L, AUC 0.62 (confidence interval [CI] 95%: 0.55–0.69).

Key conclusion: ssuPAR is associated with vulnerability in advanced age, at least as strongly as CRP. Cutoff of 3.4 ng/mL, with a sensitivity of about 89% and specificity of 40%, corresponds to the proposed in the literature risk stratification level (3.5 ng/mL).

O-083

Repurposing digoxin as a novel senolytic and autophagy-promoter for healthy ageing

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Introduction: The "geroscience hypothesis" proposes targeting hallmarks of ageing can prevent and treat age-related diseases earlier before onset of multimorbidity [1, 2]. Senolytics, drugs that clear senescent cells, and autophagy-promoters demonstrate increased health and lifespan in mice and a few in-human studies [3, 4]. Several of these drugs are chemotherapy or immunosuppressant agents with toxic side-effects limiting use in older adults. Discovery of safer drugs that could be repurposed to target hallmarks of ageing is of interest. Recently digoxin, the cardenolide cardiac glycoside (CdCG), was

found to promote senolysis [5, 6] and autophagy [7] in mice. Geriatricians are familiar with digoxin to treat atrial fibrillation and heart failure, and digoxin is safe within a narrow therapeutic range [8, 9]. Our review explores mechanisms of CdCG, focussing on digoxin, to target hallmarks of ageing.
Methods: Literature review—PubMed and bibliographical searches.
Results: Digoxin targets senescence, proteostasis, and nutrient sensing by promoting apoptosis [6, 10] and inhibiting mammalian Target of Rapamycin [11, 12]—mechanisms shared with researched therapeutics to increase health-/life-span (dasatinib [3], metformin[13], rapamycin[14]). Digoxin demonstrates promising results in mice including improved grip strength [6] and ameliorated metabolic syndrome [7]. Ouabain, a CdCG similar to digoxin, reduced tau in Alzheimer's disease models [15]. CdCG can paradoxically induce senescence and suppress autophagy [16–18].
Key conclusions: Digoxin has potential to be repurposed as a senolytic/autophagy-promoter. Clinical trials are needed to determine the therapeutic dose for senolysis/autophagy and acceptability to older adults of repurposing old drugs for healthy ageing. Word count = 247
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O-084

The heritability of telomeric signatures

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Introduction: Mean telomere length (TL) in human leukocyte DNA samples is broadly used in epidemiology and associated with age-related diseases. We showed previously in a small cohort of adults that leukocyte TL distribution (LTLD) is characteristic of each individual and introduced the concept of telomeric signature. The objective of this study was to confirm the telomeric signature in a larger cohort with adults and children and to analyze the heritability of this signature in a family designed study.
Methods: LTLD and its changes over time were analyzed in leukocyte samples donated on two occasions (13.2 years apart) by 546 participants (including 269 children) in the STANISLAS study. TL was measured by Southern blot and differences between LTLD were characterized by the Kolmogorov distance (KD) and statistically analyzed using permutation tests.
Results: Inter-individual KDs were much larger than intra-individual KDs between baseline and follow-up samples ($p < 0.001$). KDs between pairs of individuals from the same family were lower than KDs between pairs of unrelated individuals ($p < 0.01$). KDs were lower between siblings than KDs between unrelated children ($p < 0.01$). There was no difference in KDs between parents of the same family, i.e. pair of spouses, and KDs between unrelated parents ($p = 0.83$). KDs between siblings were lower than those between pairs of parent/offspring ($p < 0.05$).
Key conclusions: We confirmed the telomeric signature in a much larger cohort spanning over 7 decades of age. Individuals from the same family showed higher similarities in their LTLD than unrelated individuals, especially for those sharing genetic material, but not for spouses that shared only common environment. These results indicate that the telomeric signature is at least partially inheritable.

O-085

Biomarkers of the ageing immune system and their association with Frailty—a systematic review

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Introduction: Immunosenescence has been postulated as a mechanism contributing to the etiology of frailty, therefore understanding the immunological determinants for frailty may help to develop and deliver more personalized care to older people. This systematic review aims to study the association between immune biomarkers and frailty.
Methods: The search strategy was performed in PubMed and Embase, using the keywords "immunosenescence", "inflammation" and "frailty". We included studies that investigated immunosenescence and frailty cross-sectionally in 60 years old and older adults without diseases potentially affecting immune parameters (e.g., leukemia). Three independent researchers selected the studies and performed data extraction. Study quality was assessed using Newcastle–Ottawa scale adapted for cross-sectional studies.
Results: A total of 51 studies, with a median number of 257 participants, were included. Most studies had a moderate quality. The most frequently studied biomarkers were IL-6, CRP and TNF-α. IL-6 was positively associated with frailty in 19 studies of 29 and CRP in 17 studies of 26. TNF-α was positively associated in 6 studies of 13 studies. Different types of T-lymphocyte subpopulations were studied but each subset was studied once and the sample sizes were low.
Conclusion: Immune biomarkers were correlated with frailty, with IL-6 and CRP as the most strongly associated biomarkers. T-lymphocyte subpopulations were investigated but too infrequently to draw conclusions. Further longitudinal studies are needed to investigate the association between immune candidate biomarkers and frailty before they can be used in clinical practice, especially those that have been associated previously with ageing in general.

O-086

Introducing the ART (Ageing Research Translation) of Healthy Ageing Network: an exciting new opportunity to catalyse translational ageing research

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Background: Improving healthspan across the life course requires effective translation of advances in ageing biology and epidemiology into interventions for human testing. To accelerate progress in this area, there is a need to combine expertise, resources and infrastructure to support human translational ageing research.
Methods: The ART (Ageing Research Translation) of Healthy Ageing Network will catalyse closer working relationships across three key areas of research activity: a) large population-based and routine data cohorts, b) deep-phenotyped life course ageing cohorts with human tissue samples, and c) centres of excellence in the biology of ageing. The Network has been awarded £200,000 by UK Research and Innovation to bring together a broad range of researchers from the UK and beyond, alongside stakeholders representing the public, policy and industry.
Results: Initial activities have included development of a comprehensive communications strategy, a social media presence and launch events at three core UK centres (in Newcastle, Manchester, Liverpool). The network will allocate pump-priming funding to members that catalyse collaborations within the UK and across Europe and provide interdisciplinary training for early-career researchers. Working groups will map and curate existing cohorts, biobanks, techniques and facilities, and create a roadmap to develop processes to underpin a Translational Platform for Healthy Ageing to test interventions targeting improvements in healthspan.
Conclusions: The ART of Healthy Ageing Network provides an exciting opportunity to accelerate translational ageing research in the UK and internationally with the ultimate goal of improving healthspan for all.

O-087

Sarcopenia and cognitive performance in a cohort of middle-aged and older european men: data from the European Male Ageing Study (EMAS)

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Introduction: Previous research suggests that sarcopenia is associated with cognition. However, data on the longitudinal relationship between cognition and sarcopenia, according to the criteria of the European Working Group on Sarcopenia in Older People(EWGSOP2), are scarce.
Methods: EMAS is a multicenter cohort study of men aged 40–79 years(y) recruited from population registers. Fluid cognition (Rey-Osterrieth Complex Figure(ROCF), Camden Topographical Recognition Memory(CTRM), Digit Symbol Substitution Test(DSST) and sarcopenia-outcomes (gait speed(GS), chair stand test(CST), appendicular lean mass(aLM) and handgrip strength(HGS)) were assessed at baseline and after follow-up of 4.3y. Cross-sectional associations between cognition, sarcopenia-outcomes, prevalent and incident sarcopenia(EWGSOP2) were analyzed. Longitudinally, the predictive value of baseline cognition on decline in sarcopenia-defining parameters and vice-versa was examined. Linear and logistic regression were used and adjusted for putative confounders.
Results: In the whole cohort($n = 3233$), GS was associated with ROCF-copy ($\beta = 0.016; p < 0.05$), ROCF-recall ($\beta = 0.010; p < 0.05$), CTRM ($\beta = 0.015; p < 0.05$), DSST score ($\beta = 0.032; p < 0.05$) and fluid cognition ($\beta = 0.036; p < 0.05$). In the Leuven + Manchester cohort($n = 456$), HGS was associated with ROCF-copy ($\beta = 1.008; p < 0.05$), ROCF-recall ($\beta = 0.908; p < 0.05$) and fluid cognition ($\beta = 1.482; p < 0.05$). aLM

was associated with ROCF-copy ($\beta = 0.394$;$p < 0.05$), ROCF-recall ($\beta = 0.316$;$p < 0.05$), DSST ($\beta = 0.393$;$p < 0.05$) and fluid cognition ($\beta = 0.765$;$p < 0.05$). No associations were found between cognition and prevalent nor incident sarcopenia. Longitudinally, low ROCF-copy score was associated with an increase in CST in men $\geq$ 70y ($\beta = -0.599$;$p < 0.05$), change in GS was associated with change in ROCF-recall and change in CST was associated with change in DSST ($\beta = 0.155$;$p < 0.0001$, $\beta = -0.595$;$p < 0.001$ respectively).

Key conclusions: Components of sarcopenia, but not sarcopenia were associated with cognition in this population. In addition, baseline and change in cognitive performance predict change in muscle function.

O-088

Sarcopenia screening in elderly patients admitted to the hospital of Guadalajara (Spain) for periprosthetic and peri-implant fractures: SARC-PIPPAS study

Carla Gamez Asuncion[1], Adrian Muñoz Vicente[1], Ignacio Vargas-Zuñiga Pastor[1], Beatriz Rubio Bravo[1], Cristina Rodríguez Algarabel[1], Teresa Pareja Sierra[1], Juan Rodríguez Solis[1], María Gebauer Campos[1]

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Introduction: The term osteosarcopenia describes the close relationship between loss of muscle function and osteoporotic fracture, widely described in the literature. This study aims to characterize elderly patients who suffer periprosthetic or peri-implant and to evaluate the presence of sarcopenia.

Purpose: To describe the characteristics, medical complications and prevalence of sarcopenia in patients hospitalized for periprosthetic and peri-implant fractures in the Orthogeriatric Unit of the University Hospital of Guadalajara.

Methods: Prospective cohort study. Included 45 patients from the Spanish multicenter study "PIPPAS" between January 2021 and March 2022. Demographic, cognitive (Pfeiffer), functional (Barthel, FAC), and nutritional (MNA) variables were collected. Screening with hand grip strength (dynamometer) and scales for sarcopenia (SARC-F) and frailty (FRAIL). Categorical variables described as percentage and quantitative as median (25th percentile-75th percentile). Statistical analysis SPSS v23.

Results: 45 patients (100% analyzed). Periprosthetic fracture 75. Age 87 (82–90). 77.8% women. 73.3% community. Barthel 70 (30–90). Pfeiffer 4(1–7). Charlson 1 (0–2). MNA 21.5 (17.5–25.5). SARC-F positive 73.3%. Strength hand grip 11.5 (6–16), positive grip strength for sarcopenia 87.5%. Admitted 89%. Medical complications 2 (0.5–3). Delirium 62.5%. Death 8.9%. Stay 13 days (8–18). Convalescence 27.5%. A statistically significant association was found between the number of medical complications and age [$b = 0.081$; $p = 0.026$] and Charlson index [$b = 0.306$; $p = 0.022$] adjusted by Barthel in one analysis multivariate. In multivariate analysis, a significant relationship was observed between perioperative medical complications and need for institutionalization at discharge. Each medical complication multiplies the risk of institutionalization for convalescence 2.97 times [95% CI: 1.3–7.0; $p = 0.013$]. For each complication, the average stay is increased by 4.5 days [CI (2–7); $p = 0.001$].

Conclusion: 1. A large part of the sample presents criteria compatible with probable sarcopenia measured by hand grip strength. This suggests a relationship between sarcopenia and periprosthetic fracture, as occurs with osteoporotic fractures. This diagnosis requires optimizing the osteoporotic treatment after a fracture.2. The bilateral relationship between medical complications and hospital stay makes multidisciplinary intervention essential to prevent and detect them early.

O-089

Cross-sectional associations between glycaemic measures and skeletal muscle strength: findings from UK Biobank

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Background: Skeletal muscle weakness indicated by low grip strength (GS) is a key element of the age-associated conditions sarcopenia and frailty. Understanding determinants of these conditions is essential for their treatment and prevention. Epidemiological evidence shows weaker GS in individuals with diabetes mellitus (DM). Less is known about the role of glycaemic measures (e.g., glycated haemoglobin [HbA1c], random glucose) in muscle strength for those without a DM diagnosis. We aimed to explore gender- and age-stratified associations between glycaemic measures and GS in UK Biobank participants without DM.

Methods: We included 173,048 men and 209,060 women aged 38–73 years without DM (based on self-report and medication) and with complete data for GS, HbA1c, and glucose at baseline. We examined gender- and age-stratified (< 50, 50–59, 60–64, $\geq$ 65 years) associations between each glycaemic measure and GS and probable sarcopenia (i.e., low GS: < 27 kg (men), < 16 kg (women)), using linear and logistic regression, respectively.

Results: In men, higher concentrations of HbA1c (mmol/mol) and glucose (mmol/l) were associated with weaker GS (B [SE] = -0.08 [0.01]kg, and -0.19 [0.03]kg, $p < 0.001$, respectively), and increased odds of probable sarcopenia (OR [95% CI]: 1.02 [1.01–1.02], $p < 0.001$). These associations held across all age groups. In women, HbA1c but not glucose was associated with weaker GS (B [SE] = -0.03 [0.003]kg, $p < 0.001$), and raised odds of probable sarcopenia (OR [95% CI]: 1.01 [1.003–1.01], $p < 0.001$).

Conclusion: Higher HbA1c in both genders, and also random glucose in men, were associated with weaker grip strength in middle-aged and older adults without DM.

O-090

A 5-year follow-up study on parameters of sarcopenia and glucose metabolism among the women after delivery

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Introduction: Women experience a variety of changes in body weight and composition. Weight change in both directions can cause sarcopenia. Sarcopenia is associated with impaired metabolism. We investigated the 5-year change in parameters of sarcopenia and glucose metabolism after delivery.

Methods: Postpartum women (3–16 months after delivery) in the prospective observational study enrolled between 2011 and 2015 in LMU Klinikum were assessed for body composition estimated by bioelectrical impedance analysis, physical fitness represented by

maximal oxygen uptake (VO2max) and glucose metabolism measured by 75 g oral glucose tolerance test. We collected the same information again after 5 years.
Results: At the follow-up, 165 women demonstrated a wide change in weight (mean + 1.0 kg, from -19.8 kg to + 19.4 kg) and in appendicular skeletal muscle mass (ASM) (mean + 0.1 kg, from -1.7 kg to + 4.7 kg). ASM decreased among 70/165 (42.4%) women, and 2/165 (1.2%) women met one of the criteria for sarcopenia by low ASM or height squared-adjusted ASM. Compared to each increase or decrease in ASM, 90/165 (54.5%) women had a greater increase or lower decrease in fat mass. On logistic regression, such fat mass dominance over ASM in each change showed a higher odds ratio (OR 1.15, 95% CI 1.03–1.27) for impaired glucose metabolism at the follow-up and also a lower VO2max over time on linear regression ($\beta = -0.47$, 95% CI -0.75 to -0.18).
Conclusions: In 5 years, weight change of postpartum women was diverse. Fat mass-dominant change over ASM was significantly associated with a pathologic prognosis in glucose metabolism and in VO2max.

O-091

Combinations of long-term conditions associated with increased risk of sarcopenia: a classification tree analysis in UK Biobank

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Introduction: People living with two or more long-term conditions (LTC), also known as multimorbidity, are recognised to be at increased risk of sarcopenia. Using data from UK Biobank, we aimed to investigate if specific combinations of LTC present a greater risk of developing sarcopenia than others.
Methods: We included 165,442 participants (56% women) with two or more LTC, but without specific muscle disorders. Individuals at risk of developing sarcopenia were identified by applying cut-points for muscle weakness (grip strength T-scores of < -2SD [< 32 kg for men; < 19 kg for women] [1]). We conducted sex-stratified analyses using 1000 bootstrap samples to train a classification and regression tree (CART) with 43 LTC groupings. We examined the resulting trees to identify combinations of LTC groupings consistently associated with increased muscle weakness, expressed as odds ratios (ORs) from logistic regression models (with all other combinations as the reference).
Results: The highest risk combinations for muscle weakness for men were connective tissue disorders + diabetes (OR:3.64, CI:2.86–4.63), and connective tissue disorders + coronary heart disease (OR:3.52, CI:2.83–4.35). For women the highest risk combinations were multiple sclerosis + osteoporosis (OR:3.54, CI:2.03–6.19) and connective tissue disorders + hypertension (OR:3.00, CI:2.76–3.26).
Key conclusions: We have identified combinations of LTC associated with increased risk of sarcopenia. Given that sarcopenia is not yet widely assessed in clinical practice, these findings have the potential to aid in the identification of individuals who stand to benefit most from assessment of muscle strength.[1] Dodds et al. PLOS One 2014. https://doi.org/10.1371/journal.pone.0113637

O-092

Association between SPPB domains and fear of falling

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Introduction: The sum score of the Short Physical Performance Battery (SPPB) has recently been identified as a predictor for the development of Fear of Falling (FoF). However, it is unclear which domain (static balance, habitual gait speed, lower limb strength) is responsible for this connection.
Methods: The analysis is based on a sub-study of the German centre of the SPRINTT trial. Community-dwelling persons aged 70 years or older exhibiting a SPPB score of 3–9 and low appendicular lean mass but no mobility disability were randomised to either a multicomponent intervention or a group receiving health education. At baseline, the Falls Efficacy Scale–International (FES-I), Center for Epidemiologic Studies Depression Scale (CES-D) and self-reported rating of current health (SRH) were measured. After at least 2 years of follow-up, FES-I was collected again. Linear regression models further stratified for age, sex and intervention group were used for predicting the FES-I score (16–64) cross-sectionally as well as longitudinally.
Results: 120 participants were enrolled in the sub-study of whom 92 were followed-up for a median of 29 months (IQR: 25–33). FES-I at baseline and at the end of the trial was predicted by CES-D and SRH but not by age or group allocation. At baseline, only gait speed (β: -0.23, $p < 0.01$) and at follow-up only the chair stand test (β: -0.20, $p < 0.05$) were linked to FES-I.
Conclusions: Gait speed only explains current levels of FoF while lower limb muscle strength is predictive for persistent or newly developing FoF.

O-093

SARC-F predicts 30 days post-discharge mortality in acutely decompensated oldest-old patients

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Background: In patients with Chronic Heart Failure (CHF), the risk for death or readmission is highest within 30 days post-discharge. Specifically, CHF patients with sarcopenia are more prone to develop physical frailty and cardiogenic cachexia. However, few studies have attempted to evaluate the short-term prognostic significance of this clinical dyad. This study aims to determine the prognostic role of sarcopenia assessed by SARC-F questionnaire.

Methods: We consecutively enrolled patients aged 75 or older hospitalized with acutely decompensated HF in the Geriatric Unit of a tertiary care hospital. All the patients underwent physical examination, complete blood tests, focus cardiac ultrasound, and a comprehensive geriatric assessment (CGA), including functional capabilities and physical performance through SARC-F and HGS. The thirty-day post-discharge mortality rate was assessed by phone interview.
Results: Out of 128 patients hospitalized with acutely decompensated heart failure enrolled in the study (mean [SD], 88 [5.9] years), 32 died within 30 days after discharge. No differences were found between deceased and survived patients in terms of gender prevalence, mean age, or the number of comorbidities. Patients with SARC-F ≥ 4 had 2.3-fold higher mortality rate compared to those with SARC-F < 4 (33.3% vs. 14.7%, $p = 0.02$). By multivariate logistic analysis, SARC-F emerged independently associated with mortality after adjustment for age, sex, number of comorbidities, left ventricular ejection fraction and NT-pro-BNP at admission (adjusted OR = 1.19 CI95%: 1.019—1.391, $p = 0.028$).
Conclusion: SARC-F independently predicts 30-days post-discharge mortality in oldest-old CHF patients hospitalized for acute HF.

O-094

Revealing chair-sit-to-stand test cut off point to determine low muscle strength and probable sarcopenia: a real life data

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Background/Aim: EWGSOP2 recommends assessment of chair-sit-to-stand test (CSST) as a proxy marker for muscle strength when assessment of handgrip strength (HGS) is not convenient. The recommended CSST cut-off is 15 s and is arbitrary. We aimed to determine the CSST cut-offs that can be used as a proxy marker of low HGS. In addition, we aimed to determine CSST cut-offs that are associated with better functionality, physical performance, and fitness.
Participants and methods: This retrospective cross-sectional study included community-dwelling adults over 60 years of age who presented as outpatients to a university hospital between November 2016 and December 2021. All were evaluated for, handgrip strength (Jamar hand dynamometer), usual gait speed, short physical performance battery, and functionality [activities of daily living (ADL), instrumental activities of daily living (IADL)]. Low muscle Strength (probable sarcopenia) was evaluated by the FRAIL scale and handgrip strength evaluation according to EWGSOP2. The cutoff thresholds of CSST that were associated with better functionality, performance, and fitness were calculated from ROC analyses determining the corresponding sensitivity, specificity, and AUC.
Results: Included in the study were 543 older adults (69% were women; mean age: 74.1 ± 6.4 years). The CSST cut-off that best predicted the presence of low muscle strength was 11.9 s (sensivity 79%, specifity 63.6%, AUC 0.76). Corresponding CSST cut-offs for low UGS, impaired SPPB and ADL were 13.6 sn (respectively sensivity 71.7%, specifity 83.8%, AUC 0.84, sensivity 89.4%, specifity 87.2%, AUC 0.94 and sensivity 51.6%, specifity 77.8%, AUC 0.68); for frailty, it was 13.5 sn (sensivity 68.4%, specifity 78.7%, AUC 0.78); for impaired IADL, 12.2 sn (sensivity 71.2%, specifity 71.8%, AUC 0.55). As rounded figures to ease use, CSST cut-offs were 12 sn for low HGS and impaired IADL and 14 sn for impaired UGS,SPPB and frailty.
Conclusion: To our knowledge, our study reported the CSST cut-offs based on real-life data rather than arbitrary considerations. These cut-offs have the potential to be used while diagnosing probable sarcopenia and deciding the optimal CSST levels in practice.

O-096

Comorbidity patterns in older adults with atrial fibrillation: a Danish nationwide cohort study

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Introduction: Patients with atrial fibrillation (AF) often suffer from multiple comorbidities that impact their health trajectories and challenge the clinical management. We aimed to characterize the comorbidity patterns in older adults with AF.
Methods: We used cross-sectional data derived from the Danish National Patient Register (period 2012–2017) and identified patients > 60 years old with AF diagnosis by 1 January 2017. Chronic conditions coded by the International Classification of Diseases 10th revision were grouped into 60 clinically relevant disease categories. We performed latent class analysis (LCA) to identify homogeneous groups of AF patients with similar underlying disease patterns. We applied two measures, i.e., disease exclusivity > 25% and the observed/expected ratio > 2, to identify the overexpressed diseases in each class and to name the disease patterns.
Results: A total of 96,117 AF patients (median age 72 years old; 45% women) were included in the analysis. A six-class patient classification was determined as the optimal output of LCA with six comorbidity patterns, i.e., cardio-metabolic diseases pattern (13.1%), neuropsychiatric, metabolic and colitis-related disease pattern (15.1%), unspecific pattern (40.3%), complex disease pattern (11.4%), cardiovascular disease pattern (11.2%) and musculoskeletal and peripheral neuropathy disease pattern (8.9%). Sociodemographic and clinical characteristics were differently distributed across patterns.
Conclusions: The identification and characterization of comorbidity patterns may help to better approach the clinical complexity of

multimorbid older adults with AF thus enhancing personalized approaches.

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O-097

Identification of multimorbidity patterns in older adults receiving long-term care in Canada, Italy, Finland and New Zealand: results from the ICARE4OLD project

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Introduction: . Older adults receiving home care (HC) services and living in long-term care homes (LTC) experience high levels of multimorbidity. We aimed to identify and compare subgroups of care dependent individuals sharing the same patterns of chronic diseases.
Methods: We studied 102,000 individuals 60 + years receiving HC services or living in LTC homes in Canada, Italy, Finland and New Zealand who had their first assessment between 2014 and 2018 through the comprehensive geriatric assessments tools interRAI HC and LTCF. Latent Class Analysis (LCA) was used to classify individuals according to their underlying diseases patterns starting from a list of 19 conditions.
Results: Mean age of the sample was 80 years (65% females). After assessing several fit parameters, a 5-class solution was chosen as the best model for both HC and LTC. The following 5 disease patterns were identified in all countries: [1]Alzheimer/dementia; [2]psychiatric diseases; [3]cardio-pulmonary diseases; [4]stroke/hemiplegia; [5]other dementias. The distribution of sociodemographic, clinical and functional characteristics varied across the different multimorbidity patterns, with the cardio-pulmonary disease and the stroke/hemiplegia patterns showing the highest complexity and impairment.
Key conclusions: Our results show that, by using a common assessment tool, it is possible to identify homogeneous morbidity patterns in older patients receiving long-term care. These may be useful to compare health status in care-dependent individuals across different settings and countries, as well as to predict health trajectories and care needs. Acknowledgements. The I-CARE4OLD project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement number 965341 and from the New Frontiers Research Fund, grant number NFRFG-2020-00500.

O-098

Physical activity profiles of older people living with frailty, multiple long-term conditions and a recent deterioration in health: findings from the LiLL-OPM study

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Introduction: Describing physical activity (PA) profiles of older people is important because of the relationship between PA and health status. Traditional methods to describe PA focus on time spent in specific categories such as moderate or vigorous activity. This risks marked floor effects in older people living with frailty, multiple long-term conditions and a recent deterioration in health, who often record little activity using these cut-points. Our aim was to use two novel data-driven metrics to describe the PA profiles of this group of older people.
Methods: As part of the LiLL-OPM (Lifestyle in Later Life: Older People's Medicine) study, twenty-four participants (18 female) aged 68–92 years were recruited from a Day Unit in Newcastle, UK. Participants wore a wrist-worn triaxial accelerometer (GENEActiv) for 7 days. PA was quantified using AccelAV, indicative of the volume of activity performed and IntensityGRAD, indicative of the intensity distribution of activity. Data were processed and analysed using the R-package GGIR.
Results: Mean AccelAV was 16.8 $\pm$ 5.6 mg which is consistent with low levels of PA and lower than that seen in other adult samples. Mean IntensityGRAD was -2.95 $\pm$ 0.26 indicating that participants were generally accumulating more time in low-to-mid range intensities with little time at higher intensity. AccelAV and IntensityGRAD were moderately correlated ($r = 0.69$).
Key conclusions: AccelAV and IntensityGRAD provide complementary information about PA in this group. Further work should examine [1]relationships between these metrics and health outcomes and [2]their potential utility as outcomes in intervention studies.

O-099

Insomnia and mortality in geriatric patients: SLEEP-AGER study

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Introduction: Insomnia is one of the most common sleep disorders. Several studies and meta-analyses on insomnia and mortality have shown inconsistent results, and very few have studied geriatric patients with detailed health status. One of the current challenges is to distinguish the role of insomnia from the comorbidities that usually accompany it. We hypothesise that insomnia may increase mortality in the elderly.
Methods: The SLEEP-AGER study, a prospective single-center cohort study carried out to evaluate sleep disorders in older patients (> 75 years-old) admitted to the acute geriatric unit between 2015 and 2018. Detailed comorbidities and sleep questionnaire to assess

sleep habits and insomnia (Isnomnia Severity Index) were collected. Taking into account the median of follow up, we decided to censor the data at 12 months of hospitalization. The study was approved by the ethical committee.
Results: A total of 407 inpatients aged $\geq$ 75 years (mean age 86.2 $\pm$ 5.4 years old) were included. During a mean follow-up of 21.5 $\pm$ 14.0 months, 120 inpatients deceased (29.5%). Patients who died had a more severe weighted Charlson Comorbidity Index (8.0 $\pm$ 3.1 versus 7.0 $\pm$ 2.4; $p = 0.012$), were more polymedicated, having more than 3 psychotropic drugs (7.6% vs 1.8%; $p = 0.007$), but were no more frail than patients who survived. They were more insomniac (ISI 8.7 $\pm$ 7.5 vs 11.2 $\pm$ 6.9; $p = 0.026$). Backward analysis showed that having more than 3 psychotropic drugs, delirum, acute renal failure and insomnia predicted significantly the mortality.
Conclusion: In geriatric patients, insomnia evaluated using ISI was one of the factors predicting mortality at 12 months.

O-100

Patterns of multimorbidity in community dwelling people with Alzheimer's disease

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Introduction: Multimorbidity is highly prevalent in people with Alzheimer's disease (AD). This study aims to classify groups of diagnoses prior to AD diagnosis and compare them to a matched cohort of people without AD.
Methods: Register-based Medication use and Alzheimer's disease study (MEDALZ) includes 70,718 community-dwelling persons with incident AD diagnosed during 2005–2011 in Finland and a matched comparison group. Latent Dirichlet Allocation (LDA) was used to classify cohorts with respect to ICD-10 codes, and group together the diagnoses in persons with and without AD. Multidimensional scaling was used to provide a visualization and estimate similarity of the groups.
Results: Altogether 62,605 people with AD and 57,798 people without AD (CTRL) with more than one ICD-10 diagnosis during the 5 years prior to AD diagnosis (matching date) were included. Although the number of groups and model hyperparameters were chosen by trial and error, 19 out of 20 most frequent diagnoses were the same in both cohorts. Similar patterns were observed in both cohorts. Cardiovascular/metabolic group had the largest grouping. Distance between groups differed between the AD and CTRL cohorts, with more overlapping and variation in group size seen in the AD cohort. Early signs and symptoms of AD were more commonly grouped together in the AD cohort than in the CTRL cohort.
Key conclusions: Although the same comorbidities were common in both groups, co-occurrence of conditions differed so that early signs and symptoms of AD were grouped together.

O-101

The validity of the Spatial Orientation Screening questionnaire

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Introduction: Impairments in spatial orientation can be an early symptom of dementia, and there is a need for brief assessment tools to identify these symptoms. The aim of this study was to evaluate the validity of the newly developed Spatial Orientation Screening (SOS) Questionnaire.
Methods: We included 130 patients with subjective cognitive impairment (SCI, $n = 16$), mild cognitive impairment (MCI, $n = 32$) or dementia ($n = 82$) from the Memory clinic at Oslo University Hospital, and a group of cognitively unimpaired older adults ($n = 108$). The patients and their next-of-kin answered the self- and proxy-rated versions of the 4-item SOS (0–8 points) and the 10-item Questionnaire of Everyday Navigational Ability (QuENA, 0–30 points). The patients also performed the Floor Maze Test (FMT) for performance-based spatial abilities.
Results: Mean age (SD) of the patient and control group were 68.6 (7.6) years and 73.7 (6.7) years, respectively. Convergent validity between self-rated versions of the SOS and QuENA was satisfactory with $rs = 0.69$ ($p < 0.001$), between the proxy-rated versions $rs = 0.63$ ($p < 0.001$), and between proxy-reported SOS and FMT $rs = 0.51$ ($p < 0.001$). Known-groups validity was also satisfactory with significantly higher median (min–max) SOS scores in patients 1.0 (0–8) compared to control group 0 (0–3) points, ($p < 0.001$). The next-of-kins reported more severe impairments in spatial navigation compared to the patients' self-reports on both SOS (2.0 (0–8) points) and QuENA (both $p < 0.001$). There were no missing values on the SOS in either group.
Key Conclusion: The SOS was found to be a valid screening instrument for spatial orientation.

O-102

Predicting dependency of care in older adults with multimorbidity: an analysis of the Mexican Health and Aging Study

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Introduction: An increased prevalence of chronic diseases impacts negatively on health and functional status of older adults [1,2].
Objective: To determine the risk factors for dependency in activities of daily living for older adults with multimorbidity.
Methods: Multimorbidity is defined as the presence of $\geq$ 2 chronic conditions [1]. We conducted a secondary analysis of the Mexican Health and Aging Study (MHAS), a national panel study in five waves designed to obtain a representative sample of the Mexican population aged $\geq$ 50 years; we analyzed data collected in 2012 and the follow up in 2018. We found 2,752 subjects who met the inclusion criteria for multimorbidity and functional independence at baseline. Univariate and multivariate Cox regression models were performed to determine the association between risk factors and the development of dependency in at least one activity of daily living at 6 years of follow-up.
Results: The median age was 65 years (59–71); 1,904 (69.2%) subjects were female and 848 (30.8%) were male. The risk factors for dependency that we found on the multivariate analysis were: age >

65 years (OR 1.64), the Cross-Cultural Cognitive Examination (CCCE) < 40 (OR 1.39), history of falls (OR 1.35), presence of pain (OR 1.36), and frailty (OR 1.87).

Conclusions: The risk factors for dependency in subjects with multimorbidity didn´t differ from those described for the population without multimorbidity. These findings highlight the relevance of developing interventions to prevent and treat the modifiable risk factors to delay dependency.

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O-103

How does duration of lookback in Electronic Health Records affect diagnosis capture for patients with COPD and multiple long-term conditions? Findings from the ADMISSION collaborative

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Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of emergency hospital admission and is commonly accompanied by multiple other long-term conditions. Using data from routinely-collected electronic hospital records facilitates research and care measurement but it is not currently clear how far back in time records should extend to capture a full range of diagnoses.

Methods: We analysed routinely collected clinical data from University Hospitals Birmingham (UK) held by the PIONEER acute care data hub. We included data from the first recorded admission in 2018 with a coded diagnosis of COPD exacerbation and at least 10 years of lookback data. For each lookback period from 1 to 10 years prior to the index admission, we compared the number of patients with each ICD-10 coded diagnosis in the lookback period with the number of patients coded over the full 10-year lookback period.

Results: We included 560 patients with a full 10 years of lookback data. The mean age was 71 years (SD 11); 296 (52.3%) were female. Patients had a median of 3 (IQR 1–5) diagnoses coded in addition to COPD. 8 of the top 10 commonest diagnoses reached > 95% completeness by six years of lookback; all of the top 10 reached > 90% completeness by seven years of lookback. Atrial fibrillation was > 95% coded after two years lookback, and diabetes mellitus was > 95% coded after four years lookback.

Conclusions: A six or seven year lookback is sufficient to capture the majority of common diagnoses for patients admitted with COPD.

O-104

Dietitian led, early identification of malnutrition risk in the emergency department improves intervention rates

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Background: Frailty at the front door (FATFD) teams are ideally positioned to facilitate screening for risk of malnutrition in the frail older person.

Aim: The aim of this quality improvement initiative is to improve malnutrition risk identification and first point of contact intervention, in a frail older Emergency Department (ED) population.

Methods: Dietetic Assessment was initially triggered using a non-standardised screen in a Comprehensive Geriatric Assessment (CGA). Referral to dietetics was triggered if there was a 'yes' response to—have you lost weight and/or do you have a poor appetite? Patient demographics were prospectively entered onto Excel. A shorter CGA which included a validated MST screen was developed. All patients at risk of malnutrition were referred for dietetic intervention. Patent demographics, MST and Clinical Frailty Score (CFS) score of referred patients were prospectively entered onto Excel. Results were analysed using descriptive statistics.

Results: Pre standardised screen, an average of 7 patients per week received an intervention. The mean(SD) age was 83.8(6.9) years. The male to female ratio was 1:1.5. No information was available on malnutrition risk or CFS. Post standardised screen, The mean(SD) age was 84[7]years. The male to female ratio was 1:1.2. Mean(SD) CFS was 5 (1.5). An average of 10.3 patients received an intervention per week.

Conclusion: Prioritisation of malnutrition risk screening was successful within a shortened CGA. A 47% increase in dietetic intervention was achieved. This has created an opportunity to further develop specialist pathways for example Tube Feeding and Oral Nutritional Supplements.

O-105

Absorption rate of subcutaneously infused fluid in ill multimorbid older patients

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Background: Subcutaneous (SC) hydration is a valuable method for preventing and treating dehydration that is particularly relevant in the old, multimorbid patient with impending or mild dehydration. However, no previous study has examined the absorption rate and the availability in the circulation of the SC infused fluid in this patient group.

Methods: We performed a study on frail, ill octogenarians with comorbidities who over 60 min received an SC infusion of 235 mL isotonic saline containing a technetium-99 m pertechnetate radioactive tracer. We assessed the absorption rate from the SC space using a gamma detector situated over the infusion site for 160 min. We initially measured the activity every 5 min, with intervals gradually increasing to 15 min. To assess the availability of the infused fluid in the circulation, we drew blood samples at appropriate intervals for the measurement of activity in the blood.
Results: We included six patients from our local geriatric ward. The mean age was 81 years (SD 2.1), the number of comorbidities was 4.6 (SD 1.3), and the Tilburg frailty scale was 3.8 (SD 2.4). When the infusion was completed after 60 min, 53% of the infused fluid was absorbed, with 88% absorbed one hour later. The absorption rate from the SC space right after the completion of the infusion was 127 ml/h. The activity measured in the blood samples corroborated the transfer from SC space to circulation.
Conclusion: Most of the subcutaneously infused fluid was absorbed within one hour after the completion of the infusion. This first study of absorption of SC infused fluid in multimorbid octogenarians demonstrates that subcutaneous hydration is an effective method for delivering parenteral fluid in old frail patients with impending or mild dehydration.

O-106

Individually tailored nutritional guidance improved dietary intake of older family caregivers: a RCT

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Introduction: Older family caregivers (FCs) are vulnerable to insufficient dietary intake and risk of malnutrition. The aim of this study was to assess the impact of individually tailored nutritional guidance on the dietary intake and nutritional status of older FCs.
Methods: This study was a randomized controlled 6-month nutrition intervention in Eastern Finland. The inclusion criteria were having a home-living care recipient (CR) aged 65 or above and a valid care allowance. The exclusion criterion was CR receiving end-of-life care. Participants were randomly assigned to an intervention ($n = 63$) and a control ($n = 50$) group. Individually tailored nutritional guidance targeted to FCs was given to an intervention group by a clinical nutritionist. The main outcomes were dietary intake (3-day food record), and nutritional status assessed as Mini Nutritional Assessment (MNA), P-Alb, P-Prealb, B-Hb, mid-arm circumference (MAC) and calf circumference (CC). Differences between and within the groups were analyzed by generalized estimating equations (GEE).
Results: The intakes of protein, riboflavin, calcium, potassium, phosphorus, and iodine differed significantly ($p < 0.05$) between the groups during the 6-month intervention. Additionally, the intake of vitamin D supplementation improved in the intervention group ($p < 0.001$). There were differences between the groups in MAC and CC ($p < 0.05$), when there were minor negative changes. No changes in MNA scores, P-Alb, P-Prealb, and B-Hb were found.
Conclusion: Individually tailored nutrition guidance in FCs improves their intake of crucial nutrients, such as the intake of protein, vitamin D, and calcium. Further studies are warranted to optimize the methods to improve the nutrition of FCs.

O-108

Risk of malnutrition and health results: FRADEA study

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Purpose of the study: To determine the association between the risk of malnutrition and adverse health events, mortality and density of hospitalizations, after 12 years of follow-up in the FRADEA cohort.
Methods used: Prospective analysis in 843 participants of the FRADEA study with valid follow-up data up to 12 years. The risk of malnutrition was determined using the MNA-SF at the entry of the participant in the FRADEA study (2007–2009). Hospitalizations were obtained from the registry of the University Hospital of Albacete, providing the date of admission, until December 31, 2018. The number of total hospitalizations during follow-up, the number of hospitalizations per year, the total days of admission were determined. and number of admission days per year. The date of death was determined when it occurred, to calculate survival period, until December 31, 2019. Clinical and socio-demographic control variables were used.
Results: Age 78.6 (SD 6.0). 497 women (59%). Institutionalized 126 (14.9%). Barthel 89 (DE 19). Lawton 5.5 (SD 2.6). Frail 161 (19.1%), pre-frail 457 (54.2%) and robust 207 (24.6%). GDS Yesavage 3.7 (SD 3.2). Charlson 1.2 (SD 1.4). Number of chronic diseases 4.9 (SD 2.6). Number of drugs 5.8 (SD 3.5). Gijón Scale 5.2 (SD 2.1). MNA-SF 12.1 (SD 2.2). At risk of malnutrition (MNA-SF < 12) 262 (31.1%). BMI 29.1 kg/m2 (SD 4.8). The mean follow-up time for hospitalizations was 7.6 years (2777 days; SD 1214; range 41–4365). The mean follow-up time for survival was 8.1 years (2958 days; SD 1365; range 41–4761). During follow-up, 479 participants died (56.8%). The number of patients who presented some hospitalization was 579 (68.7%), cero hospitalization in 241 participants (28.6%), one in 197 participants (23.4%), two in 161 (19.1%), three in 81 (9.6%), and more than three in 140 (16, 6%), 23 without data (2.7%). The number of total hospitalizations was 2.0 per participant (SD 2.4). Figure 1 shows the density of hospitalizations for MNA-SF (at risk of malnutrition in the blue area and without risk in the pink area) in men (top) and women (bottom), observing that those at nutritional risk have a peak in hospitalizations in the 3 years, while those not at risk have a flatter curve until the end of follow-up. Figure 2 shows the theoretical predictions of survival according to age and sex with their confidence interval for participants at risk of malnutrition (blue line) or without risk (red line). Figure 1 Fig. 2
Conclusions: Those over 70 years of age at risk of malnutrition have a lower survival during the 12 years of follow-up and a higher density of hospitalizations, mainly in the first 3 years.

O-109

Effect of chin tuck against resistance exercise in citizens with oropharyngeal dysphagia—a randomized controlled study

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Background: Oropharyngeal dysphagia (OD) may impact safety and efficacy of swallowing function. Tongue pressure and the suprahyoid muscle plays an important role for swallowing. The primary purpose was to uncover what effect chin tuck against resistance (CTAR) exercise compared to standard care had in relation to the swallowing function in citizens with OD.
Method: Ninety citizens (46% male, median age 78 years (IQR 71, 84)) and with OD confirmed by the Volume-Viscosity Swallow Test and Minimal Eating Observation Form version II were randomized to usual-care or standard care with addition of CTAR daily in six weeks. The participants were included from seven Danish municipalities from March 2019 to October 2020.
Results: A clear trend towards positive effect on dysphagia of CTAR and standard care versus standard care was documented, although it did not reach statistical significance in intention to treat analysis (OR 0.32, 95% CI 0.07–1.17, P = 0.08). A significant effect compared to baseline was observed in all participants (p = 0.03) after 12 weeks. Participants in both groups had a significant reduction in problems to manipulate food in the mouth (p = 0.007), swallow (p = 0.03), chew (p = 0.02), as well as how they reported their appetite (p = 0.009). There was an effect according to protein intake in both groups, whereas the effect to BMI was limited. The reported QoL scored with DHI-DK was significant improved in both groups.
Conclusions: Both CTAR combined with standard care and standard care has a significant effect of the swallowing function in citizens with OD. There is a trend towards best effect of CTAR combined with standard care. Standard care e.g. combined with CTAR should be offered to citizens with dysphagia.

O-110

Body mass index changes across the trajectory of parkinsonism: results from the PRIME-UK cross-sectional study

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Background: Body mass index (BMI) trajectory prior to and after diagnosis of Parkinson's disease (PD) is uncertain with conflicting findings between studies. BMI may be used as an early biomarker,and change prior to diagnosis suggests a metabolic aetiology or reverse causation.
Methods: Weight and height were collected retrospectively from primary and secondary care electronic records for patients with parkinsonism based in a single centre and enrolled in the PRIME-UK cross-sectional study. BMI was derived for both the period before and after the year of parkinsonism diagnosis either from participants' self-report or clinical records. Questionnaire assessment included the SCREEN-I4 screening tool for nutritional risk. Change in BMI was explored using multilevel linear regression models. Associations between BMI and SCREEN-14 score were evaluated using linear regression.
Results: 256 patients had one or more recorded weights (3378 BMI readings in total) and 172 had a diagnosis BMI, defined as ± 1 year from diagnosis. In the period following parkinsonism diagnosis, BMI decreased by 0.31 kg/m2 per year (P < 0.0001), with no significant change in BMI found during the period before diagnosis (P = 0.93). When modelled as a non-linear relationship, there was evidence for a non-clinically significant reduction in BMI pre-diagnosis (P = 0.04). BMI was not associated with self-reported nutritional risk score.
Conclusions: BMI was shown to decrease following diagnosis with only a weak pre-diagnosis decline, more suggestive that BMI change may be due to reverse causation. Nutritional screening should not depend solely on BMI. Future cohort studies with repeat BMI measures and detailed confounders should be undertaken.

O-111

Determining the ideal body mass index in older geriatric outpatients

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Introduction: We aimed to study determine the ideal body mass index (BMI) range for optimal strength, functionality, physical performance, nutrition and quality of life.
Methods: We designed a retrospective cross-sectional study and included older outpatients admitted between November 2012-December 2021. We noted the patients' demographic characteristics, number of comorbid diseases, number of drugs, falls and BMI. Functional status was evaluated with Lawton-instrumental-activities-of-daily-living (IADL). Nutritional assessment was performed by Mini-Nutritional-Assessment (MNA) test. Timed Up and Go test (TUG),gait speed test(UGS), EuroQol-5 Dimensio (EQ-5D) and handgrip strength (HGS) measurement were extracted from patient records. We performed ROC analyses to determine the optimal body index for the study parameters.
Results: We included 1789 participants. The mean age of the cases was 74.8 ± 7.1, and 68.3% of the cases were women. Optimum BMI was between 28–29 kg/m2 for the sake of preserved muscle strength, physical performance, functionality, normal nutrition and better quality of life (HGS: 28.4 kg/m2 [AUC(95%): 0.66, p: 0.00 senstivity (Se) (%): 60.8, specificity (Sp) (%): 60.4], UGS: 29.2 kg/m2 [AUC(95%): 0.60, p:0.00 Se (%): 51.0, Sp(%): 48.4], TUG: 29.9 kg/m2 [AUC(95%): 0.36, p: 0.00 Se (%): 52.5, Sp(%): 48.6], IADL: 29.0 kg/m2 [AUC(95%): 0.60, p:0.00 Se (%): 56.3, Sp(%): 53.7], MNA: 28.3 kg/m2 [AUC(95%): 0.65, p:0.00 Se (%): 64.6, Sp(%): 64.6], EQ-5D: 29.0 kg/m2 [AUC(95%): 0.57, p:0.01 Se (%): 58.5, Sp(%): 56.6]).
Key conclusions: The optimal BMI in older outpatients has been detected as 28–29 kg/m2. Further longitudinal studies will have the potential to establish the possible cause-effect relationship.
Keywords: Body mass index, ideal, optimal, strength, function, performance, nutrition, QoL.

O-112

Frailty, walking ability and self-rated health in predicting institutionalization: an 18-year follow-up study among Finnish Community-dwelling older people

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Introduction: . In clinical practice, there is a need for an instrument to screen older people at risk of institutionalization.
Methods: In this prospective study of 1106 participants with 10- and 18-year follow-ups, frailty was assessed using FRAIL Scale (FS), Frailty Index (FI) and PRISMA-7. Walking ability was assessed as self-reported ability to walk 400 m. Self-rated health (SRH) was assessed by a question of general self-rated health. Cox regression model was used to analyze the association of the explanatory variables with institutionalization.
Results: Prevalence of institutionalization was 40.8%. In unadjusted models, frailty was associated with a higher risk of institutionalization by FS in 10-year follow-up, and FI in both follow-ups. Associations by FI persisted after age- and gender-adjustments in both follow-ups. By PRISMA-7, frailty predicted a higher risk of institutionalization in both follow-ups. In unadjusted models, inability to walk 400 m predicted a higher risk of institutionalization in both follow-ups and after adjustments in 10-year follow-up. Poor SRH predicted a higher risk of institutionalization in unadjusted models in both follow-ups and after adjustments in 10-year follow-up.
Key conclusions: Frailty tools, self-reported walking ability and SRH predicted institutionalization in 10-year follow-up. In busy clinical practice, quickly assessed items of self-reported walking ability and SRH could be used to identify those at higher risk of institutionalization.

O-113

Lee Silverman Voice Treatment versus standard NHS speech and language therapy versus control in Parkinson's disease: the PD COMM randomised controlled trial

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Introduction: People with Parkinson's disease (PD) frequently experience speech problems that reduce their quality of life. We evaluated the clinical effectiveness of two speech and language therapy (SLT) approaches compared to no SLT (control) for people PD and compared Lee Silverman Voice Treatment (LSVT) versus standard NHS SLT.
Methods: This was a pragmatic, multicentre, parallel group, superiority trial conducted in the UK in outpatient and home settings. People with PD and speech problems were randomised to LSVT, NHS SLT, or no SLT in a 1:1:1 ratio with concealed allocation. LSVT consisted of 4 × 60-min sessions per week for 4 weeks. Standard NHS SLT consisted of local non-LSVT practices, typically 1 × 60-min session per week for 6 weeks. Interventions were provided by speech and language therapists or assistants. The primary outcome was participant-completed Voice Handicap Index (VHI) total score at 3 months after randomisation. Analysis was by intention to treat.
Results: 388 participants were randomised: 130 participants to LSVT, 129 to NHS SLT and 129 to no SLT (control). VHI was lower (better) after LSVT compared with no SLT -8.0 (-13.3, -2.6; $p = 0.0001$), but not for NHS SLT compared to no SLT + 1.7 (-3.8, 7.1; $p = 0.4$). LSVT was better than NHS SLT (-9.6; -14.9, -4.4; $p < 0.0001$). No serious adverse events were reported.
Key conclusions: LSVT was effective compared to control and to standard NHS SLT, but NHS SLT was not effective compared to control. LSVT should be the treatment of choice for people with PD experiencing speech problems.

O-114

Transitional care interventions aiming to improve the transition from home to a nursing home: a scoping review

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Introduction: the transition from home to a nursing home is a common but often fragmented care pathway. This can lead to adverse outcomes for older persons (e.g. mortality), informal caregivers (e.g. feelings of guilt) and the healthcare system (e.g. costs). To improve this care process, tailored, comprehensive interventions are necessary. This study summarizes existing interventions aiming to improve the transition process by identifying their key components and effectiveness.
Methods: A scoping review was conducted, within the European TRANS-SENIOR consortium, adhering to the steps of Arksey and O'Malley [1]. The databases PubMed, EMBASE, PsycINFO, Medline, and CINAHL were searched until May 2020.
Results: 17 studies were included describing 13 distinct interventions. Almost all studies solely concentrated their intervention on one part of the transition. Moreover, most studies focused their intervention on either older persons or informal caregivers rather than including all stakeholders. There were 5 single-component and 8 multi-component interventions. The multi-component interventions identified seven intervention components which were: education, improving relationships/communication, improving emotional well-being, personalized care, continuity of care, support provision, and ad hoc counselling. The study outcomes were heterogeneous, making them difficult to compare. Additionally, studies often reported non-significant changes in the main outcomes.
Key conclusion: Existing transitional care interventions are still narrowly focused, possibly leading to fragmented care. This indicates a mismatch between the theory on optimal care and current transitional care interventions. [1]Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. International Journal of Social Research Methodology, 8[1], 19–32. doi: https://doi.org/10.1080/1364557032000119616.

O-115

The effect of a multifaceted antibiotic stewardship intervention to improve antibiotic prescribing for urinary tract infections in frail older adults (ImpresU): results of a cluster randomized controlled trial in four European countries

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Introduction: Inappropriate antibiotic use for urinary tract infections (UTIs) in older adults is an important driver of antibiotic resistance. We aimed to evaluate whether antibiotic prescribing for UTIs in frail older adults can be reduced through a multifaceted antibiotic stewardship intervention (ASI).
Methods: We conducted a pragmatic cluster randomized controlled trial (registered: NCT03970356) in older adult care organizations and general practices in Poland, the Netherlands, Norway and Sweden. The intervention group received an ASI consisting of a decision tool for restrictive antibiotic use, implemented using a modified participatory-action-research approach. The control group received usual care. Data was collected during a 5-month baseline period and a 7-month follow-up period (September 2019–July 2021). In between, the intervention was implemented and the trial was paused for 6 months due to COVID-19. The primary outcome was the number of antibiotic prescriptions for suspected UTIs during the follow-up period.
Results: We included 38 clusters with 1041 frail older adults in the analysis. The primary outcome was 54 antibiotic prescriptions in 202 patient-years in the intervention group and 121 in 209 patient-years in the usual care group, resulting in an adjusted rate ratio of 0.42 (95% CI 0.26–0.68, $p < 0.001$) to receive an antibiotic prescription for a suspected UTI. Incidence of complications and hospitalizations within 3 weeks after suspected UTIs and all-cause mortality did not differ between groups.
Key conclusions: Implementation of a multifaceted antibiotic stewardship intervention in older adult care organizations safely reduces antibiotic prescription rates for suspected UTIs in frail older adults.

O-116

Frailty predicts one-year mortality in very old patients operated on for colorectal cancer surgery

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Introduction: Colorectal cancer (CRC) is one of the most frequent tumors in older patients. There are few studies that analyze the influence of frailty on clinical evolution and which factors are associated with mortality in patients operated on for CRC.
Methods: Patients aged > 80 years with CRC and proposed for surgery were included from October 2018 to March 2020. Comprehensive geriatric assessments (CGA) in preoperative period were performed. During hospital admission the patients were followed up by a geriatric team. Mortality was recorded one-year after surgery.
Results: Sixty-three patients were included. Mean age was 83.8 ± 4.2 years and 37 (58.7%) were men. At one year 15 (23.8%) had died. Factors that were associated with one-year mortality were: serum protein ≤ 6 g/dl (54.5 vs 15.8%, $p = 0.008$. OR 5.7 95% CI 1.4–27.9), advanced oncologic stage (≥ stage III) (43.5 vs 10.8%, $p = 0.004$. OR 6.3 95% CI 1.6–23.8) and Short Physical Performance Battery (SPPB) ≤ 7 (43.8 vs 17.4%, $p = 0.034$. OR 3.6 95% CI 1.1–12.9). Also associated with one-year mortality were the need for surgical reintervention during admission (75 vs 20.3%, $p = 0.013$. OR 11.7 95% CI 1.1–123.2) and heart failure (50 vs 18.9%, $p = 0.034$. OR 3.6 95% CI 1.1–12.9) during admission. Age, comorbidity, polypharmacy, anesthetic risk, hand grip strength and Clinical Frailty Scale were not associated with mortality.
Conclusion: Very old patients undergoing surgery for colorectal cancer have low mortality rates. Malnutrition, advanced oncologic stage and physical frailty measured by SPPB were associated with one-year mortality after surgery.

O-117

Deprescribing practices, habits and attitudes of geriatricians and geriatricians-in-training across europe, a large web-based survey

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Introduction: Literature suggests that deprescribing potentially inappropriate medications is not routinely performed in everyday clinical practice, and that geriatricians' deprescribing practices vary considerably within and between countries across Europe. Understanding geriatricians' deprescribing attitudes, the barriers they face, and the differences between countries is paramount in identifying the key areas which, when addressed, could result in improved deprescribing practices.

Methods: An online survey was disseminated among European geriatricians and geriatricians-in-training. The survey comprised Likert scale and multiple-choice questions on deprescribing approaches and practices, deprescribing education and knowledge, and facilitators/barriers of deprescribing. Participant characteristics and (regional) differences were quantified.
Results: Of the 964 respondents (median age 42 years old; 64% female; 21% geriatricians-in-training), 98% were willing to deprescribe. The most commonly reported reasons for deprescribing were functional impairment and occurrence of adverse drug reactions. Perceived risk of adverse drug reactions was highest for psychotropic drugs, nonsteroidal anti-inflammatory drugs, cardiovascular drugs, and opioid analgesics. One in four respondents thinks education in medical school sufficiently prepared them for deprescribing in clinical practice. They believed that their future deprescribing activities would probably increase with improved information sharing between various prescribers, deprescribing recommendations in guidelines, and increased education and training. Approximately 90% think that a paradigm shift is needed for prescribers and patients, increasing focus on the possible benefits of deprescribing (potentially) inappropriate medications.
Key conclusion: There is a need for improved transitions of care inter-professional communication, better education and evidence-based recommendations to improve future person-centered prescribing and resultant deprescribing practices.

O-118

Frailty as predictor of death among Nursing Home residents

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Introduction: Frailty is a geriatric syndrome known to be associated to several adverse outcomes in Nursing Homes (NHs) residents. Aim of the study is to evaluate the impact of frailty as predictor of death in 1-year follow-up among NHs residents.
Methods: Longitudinal multicenter cohort study based on data from the Services and Health for Elderly in Long TERm care (SHELTER) study including 4023 participants from 50 NHs in Europe and 7 in Israel. Participants were assessed through the interRAI long-term care facility instrument, which allows comprehensive, standardized evaluation of persons living in NH. Frailty was defined according to the FRAIL-NH scale. Polypharmacy and hyperpolypharmacy were defined as the concurrent use of ≥ 5 and ≥ 10 different medications. Cognitive function was assessed through the Cognitive Performance Scale (CPS). Factors associated with death during 1-year follow-up were evaluated through Cox's proportional hazard model (adjusted for demographics and facilities) before and after stratification with frailty status.
Results: A total of 1187 (29.5%) NHs residents died during 1-year follow-up. Death was associated with age (aHR 1.04, 95% CI 1.02–1.05), female sex (aHR 0.65, 95% CI 0.56–0.7), frailty (aHR 1.54, 95% CI 1.23–1.94), but not with multimorbidity, polypharmacy/hyperpolyharmacy and cognitive status. After stratification for frailty, only non-frail patients on hyperpolypharmacy regimen showed an increased risk of death (aHR 1.29, 95% CI 1.01–1.84).
Key conclusions: In the present study, frailty is the single most important factor associated to death during 1-year follow-up among NHs residents, and could be an effect-modifiers on other factors associated with death among NHs residents.

O-119

Differences in pathways of care with age, deprivation and multimorbidity during hospital admission for patients with COPD—findings from the ADMISSION collaborative

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Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of emergency hospital admission. Understanding factors that influence patient pathways including length of stay and ward moves during hospitalisation is key to improving hospital care.
Methods: We analysed routinely collected clinical data from University Hospitals Birmingham (UK) held by the PIONEER acute care data hub. We included all admissions with a coded diagnosis of COPD exacerbation during 2018. We extracted patient demographics including deprivation quintile, all ward moves, and all coded hospital diagnoses (Elixhauser list) within ten years prior to the index admission. We generated descriptive statistics and graphical maps of patient pathways.
Results: We analysed 846 admissions from 592 patients. 333 patients (56.3%) were aged $> = 70$; 327 (55.2%) were female and 362 (61.1%) were in the most deprived quintile. 370 (62.5%) of patients had 4 or more comorbidities; only 32 (5.4%) had no comorbidities. Median length of stay was four days (IQR 2–8) and median moves per admission was 3 (IQR 2–4). Median length of stay was longer for older patients (5 vs 4 days for > 70 vs ≤ 70 years), shorter for patients in the most deprived quintile (4 vs 5 days for Q1 vs Q2–5) and longer for those with more comorbidity (5 vs 4 days for $4 +$ vs 0–3 comorbidities). The median number of ward moves did not vary with age, sex, deprivation or comorbidity.
Conclusions: Length of stay but not number of ward moves varied with age, deprivation and comorbidity for patients admitted with COPD exacerbation.

O-120

Evaluation of a gerontopreventive teleconsultation program on the reduction of unscheduled hospitalizations of residents in nursing home: results of the GERONTACCESS randomized study

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Introduction: Telemedicine appears as a helpful tool to avoid care pathway break and unequal access to care for residents in nursing homes (NH). GERONTACCESS evaluates the effectiveness of a gerontopreventive teleconsultation program (GTLM-prog) to reduce unscheduled hospitalizations in residents living in NH located in areas with low medical density.
Method: GERONTACCESS is a prospective, multicenter, cluster-randomized study conducted in 9 NHs in Haute-Vienne (France). Participants aged over 60 years with at least 2 chronic pathologies were included. The geriatric mobile geriatric team of the CHU of Limoges performed a comprehensive geriatric assessment (CGA) for each participant at inclusion and at the end of the study visits in the NH. Only for participants in the intervention group, geriatric teleconsultations were planned every 3 months to assess gerontological issues. The primary objective is to evaluate at 12 months the effectiveness of the GTLM-prog on the incidence of unscheduled hospitalizations.
Results: 426 participants were randomized (mean [CE] age, 87.2 [7.6] years; 311 [73.0%] women) and followed for 12 months. The proportion of residents who had unscheduled hospitalizations was 23.4% in the intervention group vs. 32.5% in the control group (OR 0.73 95 CI (0.43–0.97); $p = 0.034$) in favour of the intervention group. Residents in the intervention group had lower costs for all health expenditure items except for medical consultation.
Conclusion: GERONTACCESS study shows that the GTLM-prog significantly reduces unscheduled hospitalizations in the intervention group. This program could be an innovative health preventive care delivery model to limit disease progression and support healthy lifestyles in NHs.

O-121

Virtual assessment for falling frail Canadian seniors: an equitable option during a pandemic

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Introduction: In response to COVID-19, the Fall Prevention Program (FPP) at Sunnybrook Health Sciences Centre was modified to be delivered virtually. We compared patient populations assessed for the FPP virtually versus in-person and explored how virtual delivery of care impacted accessibility.
Methods: A retrospective chart review was performed. All patients assessed virtually from the beginning of the COVID-19 pandemic until the end of abstraction (April 25, 2022) were compared to a historic sample of patients assessed in-person beginning in January 2019. Demographics, measures of frailty, co-morbidity, and cognition were abstracted. Wilcoxon Rank Sum tests and Chi-squared tests were used for continuous and categorical variables, respectively.
Results: Thirty patients were assessed virtually and compared to 30 in-person historic controls. Median age was 80 years (IQR 75–85), 82% were female, 70% were University educated, the median Clinical Frailty Score was 5/9, and 87% used > 5 medications. The normalized frailty score showed no difference between cohorts ($p = 0.531$). The virtual cohort showed significantly higher use of outdoor walking aids ($p = 0.016$), reduced accuracy with clock drawing—increased 1/3 scores ($p = 0.001$), and non-significant trends towards using > 10 medications, requiring assistance with > 3 IADLs, and higher treatment attendance. No significant differences were seen for time between assessment and treatment ($p = 0.423$).
Key conclusions: Patients assessed virtually were similarly frail as the in-person controls but had increased use of walking aids, medications, IADL assistance, and cognitive impairment. In a Canadian context, frail and high socioeconomic status older adults continued to access treatment through virtual FPP assessments during the COVID-19 pandemic.

Late-Breaking Oral Communications EuGMS Congress

LBO-01

History of past COVID-19, but not IgG(S) level, is a major determinant for SARS-CoV-2 infection in vaccinated old Nursing Home residents

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Mass vaccination of Nursing Home (NH) residents has resulted in an impressive decrease in COVID-19-related morbidity and mortality. The duration of post-vaccination protection is a critical issue especially in high-risk patients. The question here is whether a higher IgG(S) level as well as history of prior COVID-19 offers additional protection against SARS-CoV-2 infection.
Methods: We assessed the risk of SARS-CoV-2 infection in 234 NH residents all vaccinated with three doses of the BNT162b2 vaccine (mean age $= 87 \pm 9$ years; 76% women), with IgG(S) quantification after the 3rd dose. Among them, 71 developed an RT-PCR-confirmed SARS-CoV-2 infection between November 5, 2021 and Avril 24, 2022. All these infections occurred after the IgG(S) quantification (October 28 to November 29, 2021). History of COVID-19 before the 3rd dose ($n = 54$ NH residents) occurred between April 10, 2020 and April 1, 2021.
Results: Among residents with no history of COVID-19, 38% (68/180) were recently infected by SARS-CoV-2, while among those with a history of COVID-19 only 6% (3/54) were recently infected ($p < 0.0001$). Logistic regression analysis showed that the risk for

SARS-CoV-2 infection after the 3rd vaccination was tenfold higher in the absence of prior COVID-19 infection ($p = 0.0002$). Age was the only other significant determinant with a 50% increase in SARS-CoV-2 infection for an increase in 10 years of age ($p = 0.03$). Interestingly, 51 out of 54 NH residents with history of COVID-19 were not re-infected at the time of the study, i.e., after a mean of 588 days (409 to 765 days), In conclusion, in very old NH residents with three doses of the BNT162b2 vaccine, history of previous COVID-19 provides rbust protection against a second SARS-CoV-2 infection for more the 1.5 years.

LBO-02

Identifying Potentially Inappropriate Prescribing and Reducing Medication Costs in Frail Older People Presenting to the Emergency Department using STOPPFrail Criteria

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Introduction: STOPPFrail identifies potentially inappropriate medications (PIMs) in older adults with poor predicted one year survival. We aimed to determine the proportion of older adults in which STOPPFrail criteria apply; measure the prevalence of STOPPFrail PIMs and identify medication cost savings.
Methods: Prospective review of patients who received Comprehensive Geriatric Assessment following attendance at the Emergency Department (ED). We applied STOPPFrail in suitable patients after a geriatrician led multidisciplinary assessment. Medication costs were identified with Medoptimise medication review software.
Results: 279 patients were prospectively assessed over 12 weeks June-August 2022. 47 patients met STOPPFrail eligibility criteria (16.8%) (mean age 87.7, IQR 82–93; 34% male; CFS 7.2; Charlson Comorbidity Index 6.7). Those STOPPFrail eligible were prescribed 397 medications (mean 8 IQR 6–10.5) 104 were PIMs.At least one PIM was identified in 42 eligible patients (89.3%). The mean number of PIMs per person was 2.2. Common PIMS were Antihypertensives (23 patients;22% of identified PIMs), statins 21 patients (20% of PIMs) and Calcium and Vitamin D supplementation 11 (10.5%) and 15 (14.4%) PIMs respectively. £12,589.39 of cost savings were identified by the use of the STOPPFrail criteria.
Conclusion: 16.8% of screened patients were STOPPFrail eligible; with PIMS identified in 89.3%. This study has shown the efficacy of STOPPFrail criteria to identify potentially inappropriate prescriptions and cost savings. The ability of the criteria to prevent adverse events for patients is unknown. STOPPFrail has been incorporated into the routine structured medication review process within our local service.

LBO-03

An Integrated Response to Emergency Ambulance Calls from Nursing Homes improves Timely Access to Comprehensive Geriatric Assessment (CGA)

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Introduction: Frail adults should be offered comprehensive geriatric assessment. Falls are the most common reason for conveyance to hospital for Nursing Home (NH) residents, associated with mortality, morbidity and significant burden on Welsh Ambulance Service (WAST) and Emergency Department. Older people are subject to long waits and offload delays. By using a collaborative approach, we aim to reduce hospital conveyance rates and adverse patient outcomes.
Methods: Phase 1—WAST calls analysed January 2020–February 2022 from NH concerning Falls/Potential Falls where an Emergency vehicle attended. Education provided about post-fall management in Swansea NH's in March 2022. Phase 2-Development of a referral pathway with Acute-GP unit (AGPU) and Advanced Practice Paramedic (APP) colleagues who review WAST "live stack" allowing calls to be diverted to Older Person's Assessment Service (OPAS) who offer same-day assessment directly.
Results: March-July 2022, 980 calls from NH, 195 falls (19.9%), additional 228 potential falls (22.67%). There was significant change in conveyance ($p < 0.05$) with no change in call nature/frequency ($p > 0.05$). Per month, the mean conveyance reduction was 20 patients. In addition, OPAS review 8 patients from NH directly each month, bypassing WAST.
Conclusions: Falls remain a significant burden, we have shown education plus collaboration shows significant conveyance reduction, ultimately delivering better patient experience and system efficiency. Each call-out has a cost-per-hour of £101.34, with average offload for those > 65 years old being 406 min, saving £25,000 a month on offloads alone. Future directions include expanding post-fall education locally and piloting a rapid-response vehicle.

LBO-04

Loneliness as a predictor for declines in intrinsic capacity: preliminary results from a longitudinal cohort study in Spain

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Background: Lockdown and limited social interactions during the COVID-19 pandemic led to a higher risk to functional loss in older people. Despite the growing body of studies about loneliness, its relationship with intrinsic capacity (IC) remains unclear.
Aim: To explore the association between loneliness and IC.
Methods: Prospective cohort study. Setting: Primary care centers and outpatient clinics from five rural and urban territories in Catalonia (Spain). Participants: 200 community dwelling people aged 70 or more with Barthel ≥ 90, without dementia or advanced chronic conditions.
Outcomes: IC was assessed using ICOPE screening tool. Loneliness was assessed with De Jong-Gierveld scale and dichotomized (not affected vs affected). The association between loneliness and IC was assessed using stepwise logistic regression. Results: 70% of

participants showed decline in at least one of the five domains of IC (mean 2.1). Excluding the sensory domains these figures drop to 52% and 1.8 respectively. Frequency of decreased IC was 54% (sensory), 28% (mobility), 24% (psychological), 11% (vitality) and 31% (cognition). 65/200 participants (32%) showed loneliness (61 moderate, 3 severe, 1 very severe). People affected by loneliness had a greater decline of IC in the psychological (OR:4.52, $p < 0.001$) and mobility domains (OR:3.55, $p < 0.001$).

Conclusions: Baseline data from a longitudinal cohort study shows that loneliness is associated with losses in psychological and mobility domains of IC. Further research is needed to understand casual pathways of this association.

LBO-06

Frailty and anticoagulant treatment in older subjects with atrial fibrillation: findings from the European, Multicentre, Prospective Eurosaf Study

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Background: the literature regarding anticoagulants use in older people affected by atrial fibrillation (AF) is mainly limited to retrospective studies that poorly considered the importance of multidimensional frailty. The main objective of this study is to evaluate in hospitalized older subjects with AF the clinical benefit/risk ratio of the anticoagulant treatments, also considering grade of severity of frailty as determined by the multidimensional prognostic index (MPI).

Methods: Older hospitalized patients (age > 65 years) with non-valvular AF were included across 24 European centers. MPI was calculated using tools derived from comprehensive geriatric assessment (CGA), classifying participants in MPI1 (robust), MPI2 (at risk of frailty) and MPI3 (frail). Anticoagulant treatments and the outcomes of interest (mortality, vascular events, gastrointestinal bleedings, hemorrhagic stroke) during one year of follow-up were recorded using hospital records. The association between anticoagulant treatments and outcomes was analyzed using a fully-adjusted Cox's regression analysis and reported as hazard ratios (HRs) with their 95% confidence intervals (CIs).

Results: 2,022 participants (mean age 82.9 years; females 56.6%) with AF were included. Compared to people not taking anticoagulants (n = 823), people using vitamin K antagonists (n = 450) showed a decreased risk of mortality (HR = 0.74; 95%CI: 0.59 = 0.93), that was more pronounced in patients using direct anticoagulants (DOACs) (n = 749) (HR = 0.46; 95%CI: 0.37–0.57). Only people taking DOACs reported a significantly lower risk of vascular events (HR = 0.55; 95%CI: 0.31–0.97). The efficacy of DOACs was independent from MPI values, whilst VKAs use was not associated with any benefit in terms of mortality. The risk of gastrointestinal bleedings and hemorrhagic stroke did not differ based on the anticoagulant treatments and by MPI values.

Conclusions: Anticoagulant treatment, particularly with DOACs, was associated with reduced mortality and vascular events in older people, independently from their frailty status, without increasing the risk of hemorrhagic events, overall suggesting the importance of treating with anticoagulants older people with AF.

LBO-07

Anticholinergic medication use in midlife is associated with subsequent cognitive decline, despite medication cessation: retrospective analysis from a UK cohort

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Introduction: Anticholinergic medication use is associated with cognitive decline and incident dementia [1, 2]. Our study aims to quantify if repeated exposure is associated with larger declines, and whether exposure in midlife is linked to decline despite medication cessation.

Methods: Data from the MRC National Survey for Health and Development Cohort were analysed retrospectively to determine anticholinergic exposure over sixteen years using the anticholinergic cognitive burden scale (ACBS). Multinomial regression was used to assess associations with the Addenbrooke's Cognitive Examination (ACE-III), adjusting for gender, education, childhood cognition, physical and mental health comorbidities. Longitudinal associations between ACBS and cognitive test results (world learning test WLT, timed letter search task TLST) at three ages were assessed using mixed and fixed effects linear regression panel models.ResultsPreliminary analyses revealed anticholinergic exposure was associated with lower ACE-III scores at age 69, with greatest effects seen for those with high exposure at ages 60–64 (β -2.34 $p < 0.001$). Longitudinally, both moderate and high ACBS scores were linked to lower WLT scores when taken contemporaneously and historically (contemporaneous: β -0.29, -0.90 $p = 0.044$; historic: β -0.79, -1.53 $p < 0.001$). Associations persisted in fixed effects models (contemporaneous β -0.83, -1.78 $p = 0.003$; historic β -1.08, -2.23 $p < 0.001$). There were no adjusted associations between TLST scores and ACBS.

Key Conclusions: Anticholinergic exposure throughout mid and later life was associated with lower cognitive function, with lowest function seen in repeated exposure. Associations persisted even when medications were taken only in midlife, which may suggest enduring biological changes within brain structure and function.

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LBO-08

Quorum Sensing Peptide iAM373: a microbiome originating modulator of sarcopenia

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Introduction: Sarcopenia represents an important challenge with reduced quality of life and increased mortality. Gut microbiota have been suggested to contribute to this age associated muscle wasting but the underlying mechanisms are unclear. In-vitro screening has shown that several bacterial quorum sensing molecules can impact C2C12 murine myoblasts, with iAM373 (SIFTLVA), a quorum sensing peptide produced by E. faecalis, decreasing myoblast metabolic activity.
Methods: A stepwise translational approach was used to evaluate the relevance of iAM373 in sarcopenia. First, metabolic concentration–response experiments in murine and human myoblasts as well as in myotubes were performed. Next, C. elegans experiments (1 μM iAM373) were conducted to evaluate its in-vivo effects. The ability of iAM373 to cross the intestinal barrier was assessed through CaCo2 in-vitro experiments, germ-free mice in-vivo experiments and a human plasma study. Finally, 51 older people (age, 83 ± 6.9 years; female, 55%) were recruited to assess the presence of iAM373 in plasma in association with skeletal muscle mass, grip strength and walking speed.
Results: iAM373 decreased metabolic activity in vitro in both human and murine muscle cells–minimal effective concentrations were between 60 pM and 10 nM. In-vivo administration in C. elegans translated to a sarcopenic phenotype with significant impairment of motility (travel speed -3.4 mm/s; $p < 0.001$). iAM373 was able to cross the intestinal barrier and reach systemic circulation in pico-to nanomolar concentrations. Its presence in plasma of older people was linked to decreased walking speed (-0.16 m/s; $p = 0.003$).
Conclusion: The quorum sensing iAM373 provides a novel mechanistic link between intestinal microbiota and sarcopenia.

LBO-09

Epigenetic age acceleration after COVID-19

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Introduction: Epigenetic ageing clocks, calculated from DNA methylation, correlate with chronological age, predict mortality, but are influenced by environmental factors, potentially including infections. We assessed if COVID-19 infection affected epigenetic ageing.
Methods: TwinsUK participants who could be visited in Spring 2020 and Spring 2021 were included. SARS-CoV-2 infection was confirmed by IgG Spike and Nucleocapsid antibody testing. Using Illumina HumanMethylation EPIC Chips, we calculated epigenetic age acceleration (EAA) using Horvath DNAmAge (EAA-H) and GrimAge (EAA-Grim). EAA compared using mixed-effects linear regression, adjusted for age, sex, BMI, smoking and cell counts.
Results: 134 participants (mean age 51 years (sd 15.9 years), 87% female) had paired samples in Spring 2020 and Spring 2021. 35% had COVID-19 at first sample, 23% between sampling, and 42% never acquired COVID-19. 60% were vaccinated at second sample. In Spring 2020, those with past COVID-19 infection had higher EAA-Grim ($\beta = 0.325$, $p < 0.001$) after covariate adjustment, but not EAA-H ($\beta = 0.449$ $p = 0.37$). However, the association did not persist by Spring 2021, either with ($\beta = -0.330$, $p = 0.84$) or without ($\beta = 0.038$, $p = 1.00$) adjustment for baseline EAA. Those with interval COVID-19 were no more aged by Spring 2021 than those never acquiring infection ($\beta = -0.562$, $p = 0.478$). From Spring 2020 to 2021 EAA-Grim increased in all categories ($P < 0.05$).
Conclusion: Those infected with COVID-19 early in the pandemic were more aged at that time, close to their infection, but not on later sampling, suggesting COVID-19 only has a short-term effect on EAA-Grim. However, the whole cohort increased in EAA-Grim, suggesting a pandemic effect on all participants.

LBO-10

Early implementation results from a person-centred integrated care programme to people with complex chronic conditions (ProPCC project): more time at home and shorter hospital stay

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Introduction: The evaluation of integrated care programmes to high-need high-cost older people (1) is a priority for health systems in Europe (2). Our aim is to share early implementation results (3) of the ProPCC programme (4) in the Northern-Barcelona metropolitan area (Catalonia, Spain).
Methods: We analysed the early implementation of the programme (2018 to 2021, with covid-19 interruption in 2020) by describing the complexity profile of the cohort, and by showing its impact on time spent at home and on resource use: primary care visits, emergency department visits, hospital admissions and hospital stay. We used a 6-month pre-post approach.
Results: Data on 264 cases were included (90% at home; 10% at care homes). Main trigger conditions for admission were: complex multimorbility, complex polypharmacy management, complexity at end-of-life, complexity related to functional dependence. Mortality after being included in the programme was 43.2%. Main characteristics were age 83.6; female 50.4%; complex chronic conditions 44.3%/ advanced chronic illness 55.7%, number of health problems 24.3. Data 6-month pre vs. 6-months post (mean; p value) were: primary care visits 8.2 vs. 11.5 ($p < 0.01$); emergency department visits 1.3 vs. 0.8 ($p < 0.01$); hospital admissions 0.7 vs. 0.5 (p 0.01); hospital stay 12.7 vs. 7.9 days ($p < 0.01$). Time spent at home was 169.2 vs. 174.3 days ($p < 0.01$).
Key conclusions: The ProPCC programme led to an increase in the number of primary care visits, to a reduction in emergency department attendance and hospital stay (up to 30%), and to an increase in time spent at home (up to 5%).
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LBO-11

The development of an acute frailty unit at a large regional centre

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Introduction: An Acute Medical Unit became geriatrician-led in July 2021. From January 2022 the unit received patients on frailty criteria for Comprehensive Geriatric Assessment (CGA). Clinical Nurse Specialists actively manage patients until discharge.
Methodology: Phase 1 (November 2020 -January 2021) was acute physician-led. Phase 2(September–November 2021) and Phase 3 (March-July 2022) were geriatrician-led. Phase 3 evaluates a frailty specific intake. Patient age, LOS (length of stay), number of referrals to other medical specialities and overall hospital LOS for patients admitted through the unit were analysed.
Result: Phase 1 n = 496, Phase 2 n = 566 Phase 3 n = 503Median hospital LOS showed a reduction from 7 to 5 days between phase 1 and phase 2 ($p < 0.01$) and between phase 1 and 3 ($p < 0.05$).Median LOS has reduced from 12 days in phase 1 to 7 days in phase 3 for patients > 80yrs ($p < 0.01$).There was an observed reduction in number of referrals to other specialities per bed between geriatricans (mean 0.41) and acute care physicians (0.57). 50.1% of patients do not meet frailty criteria.
Conclusion: The unit achieves LOS benefit for patients, those > 80 years experience 5-day LOS reduction. Identifying frail patients who benefit from CGA is essential for individuals and system efficiency. Patient selection is difficult to achieve with usual bed management processes. Morriston Hospital has developed a modified screening tool based on the Hospital Frailty Risk Score (HFRS), embedded into the digital patient management system. It is hoped that this can be utilised to improve access to CGA for patients.

LBO-12

Development and implementation of a multimodal preoperative prehabilitation program for older cancer patients: preliminary data from a single-centre experience in Italy

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Introduction: Multimodal Prehabilitation (MP) consisting of preoperative exercise, and nutritional, and emotional optimization can improve functional recovery and reduce complication rates [1]. Implementing an MP service is challenging, as it requires dedicated resources and a multidisciplinary approach. This abstract aims to describe the clinical impact of a recently implemented institutional MP program for high-risk patients scheduled for major cancer surgery.
Methods: Patients were systematically screened with a preoperative questionnaire. Those deemed at high-risk were referred to the MP clinic. The six-minute walk test, the short physical performance battery (SPPB) test, Fried physical frailty criteria, Patient-Generated Subjective Global Assessment (PG-SGA), bioimpedentiometry, and the Hospital Anxiety and Depression Scale were used to assess physical, nutritional, and psychological status. A personalized 4-week MP program was then prescribed, and patients revaluated before and after surgery.
Results: Twenty patients older than 65 yo (mean age 75 years) were evaluated over 2 months. At baseline, 50% were frail, and 30% pre-frail. The SPPB score was 7 and 9, respectively. Compared to fit patients, a significant proportion of frail/pre-frail patients had a six-minute walking distance of less than 400 m (0 vs 75%, respectively). Furthermore, they were more frequently severely malnourished (PG-SGA C) and sarcopenic (77% and 75% vs 0% and 0%, respectively), and experienced more commonly psychologic distress.
Conclusions: The implementation of an MP program identified a significant proportion of older cancer patients with physical frailty, poor functional capacity, sarcopenia, and psychological symptoms, larger than those reported in the literature, and that might benefit from MP.
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LBO-13

A Machine Learning algorithm to predict health clinical situations (fall, risk of denutrition, risk of depression and risk of heart failure) and improv decision-support tools in primary healthcare for older adults living at home

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Introduction: Preventable hospitalizations of elderly people living at home account for 8% to 62% of hospitalizations. Estimating the short-term evolution of clinical symptoms that are precursors to hospitalization, such as falls, depression (is sadder), undernutrition (eats less well), or heart failure (swollen leg), may be an effective way to reduce the rate of hospitalization of older adults.

Methods: his is a multicenter, observational, retrospective study conducted in home care facilities using Presage (a CE-marked medical device that predicts hospitalization in the elderly based on weekly patient functional status reports and AI algorithms) on a daily basis. We have developed models that predict the risk of future clinical symptoms for falls, depression, undernutrition, and heart failure. We developed models for prediction windows of 1 to 6 weeks in advance. The primary outcomes were the sensitivity and specificity of the prediction models. Model characteristics (such as patient characteristics, patient autonomy, geriatric risks, health risks, environment, and quality of life) were analyzed according to prediction windows to develop predictive plans.
Results: 22 home care facilities using Presage collected 501 505 data from 18 973 home visits for 933 patients. Sensitivity and specificity of predictions for falls, depression, undernutrition, and heart failure within one to six weeks ranged from 73.2% to 94.1% and 69.4% to 89.2% respectively.
Key Conclusions: Our models suggest that general practitioners can be supported by a tailored prevention plan for optimizing care based on predictive models.

LBO-14

Real-world implementation of an eHealth system based on an artificial intelligence designed to predict and reduce emergency department visits by older adults: pragmatic trial

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Introduction: This study highlights the feasibility of Artificial Intelligence–Based eHealth System to Predict and Reduce Hospitalization Among Older Adults.
Methods: Uncontrolled multi-center trial conducted in community-dwelling older adults receiving assistance from home aides (HAs). Home aides completed a mobileapp–based questionnaire on patients' functional status. Data processed in real time by a machine learning algorithm identifying patients at risk of emergency department (ED) visits within 14 days. If risk was detected, the eHealth system alerted a coordinating nurse, who informed the patient's caregiver to decide an alert-triggered health intervention (ATHI).
Results: 206 patients (average 85 years old; 78% female) received 4 753 home visits (HV) from 109 HAs during a mean time of 10 months. 2656 HV were monitored by eHealth system which produced 405 alerts. 1.5% of ATHIs led to ED visits, whereas 13.4% of alerts not followed by ATHIs led to ED visits (odds-ratio of 0.10 ($p < 0.0001$). 99.6% (95%CI 99.3–99.9) negative-index tests did not lead to ED visits. 90% of the users reported a positive experience with the eHealth system; The sensitivity is 83% and specificity 86%.
Key Conclusions: The predictive eHealth system could guide personalized health interventions to deliver early appropriate care and improve health outcomes among older adults.

Posters EuGMS Congress

P-001

A quality improvement initiative for the documentation of central venous catheter insertion in the Intensive Care Unit

Abstract Area: Acute hospital care

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Introduction: Proper documentation of central venous catheter (CVC) insertion is the basis for good follow up and quality assurance. We observed deficiencies in the documentation of CVC insertion and introduced a proforma that can be included in patient notes with the purpose of increasing documentation compliance. The aim of this study was to establish the usefulness of this CVC insertion proforma coupled with staff education to improve CVC insertion record keeping.
Methods: A quality improvement study was conducted from August to October 2021 in the intensive care unit (ICU) in University Hospital Limerick (UHL). A convenience sample of consecutive CVC insertions was chosen over a two-week period before and after our intervention, interrupted by 2 weeks to allow for staff education. 19-key documentation markers were evaluated before and after implementing the proforma which was developed from local and international guidelines. ICU staff (medical and nursing) were educated on the documentation deficiencies and the importance of improving our standard of care for patient safety.
Results: In total, 49 CVC-insertions were included. 23 pre-intervention CVC insertions had significant documentation deficiencies. 13% had no recorded documentation and 0 were without any missing data from the 19 pre-defined variables. Of the 26 post-intervention CVC insertions, 15% had no recorded documentation and 58% were without missing data from the 19 pre-defined variables.
Conclusions: The implementation of this CVC insertion proforma was highly effective in increasing the proportion of documented CVC insertions. This measure improved our standards of care and patient safety in the critical care unit. Keywords: central venous catheter, intensive care unitAbbreviations: central venous catheter, CVC, intensive care unit, ICU, University Hospital Limerick, UHL

P-003

Factors associated with transfer from an acute geriatric unit to a post-acute hospital care facility among community-dwelling patients: results from the DAMAGE cohort

Abstract Area: Acute hospital care

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Background: Acute geriatric units (AGUs) require efficient discharge planning tools. Risk factors for discharge from an AGU to post-acute hospital care (PAHC) have not previously been investigated in detail.
Methods: The objective is to identify risk factors for PAHC transfer. The DAMAGE (prospective multicenter cohort) consecutively included more than 3500 subjects aged 75 or older and admitted to an AGU. The patients underwent a comprehensive geriatric assessment (CGA) during their stay in the AGU. Only community-dwelling patients admitted to the AGU from the emergency department were included in the analysis. We recorded the characteristics of the care pathway and identified risk factors for discharge to home or to a PAHC facility.
Results: 1928 patients were included. Loss of functional independence (a decrease in the Katz activities of daily living (ADL) score between 1 month prior to admission and AGU admission), living alone, social isolation, a high Katz ADL score at home, a low Katz ADL on admission, and delirium on admission were risk factors for transfer to PAHC. Obesity, an elevated serum albumin level, and community-acquired infection were associated with discharge to home. Neither sex nor age was a risk factor for home discharge or transfer to PAHC.
Conclusions: The present results might help clinicians and discharge planning teams to identify patients at risk of transfer to PAHC more reliably and promptly in AGUs.

P-004

Relationship between pre-operative serum albumin and American Society of Anesthesiologists (ASA) class in patients 60 years and older with acute hip fracture

Abstract Area: Acute hospital care

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Introduction: The ASA physical status classification is used to assess a patient's pre-anesthesia medical co-morbidities. It is used with other factors to predict perioperative risks. Serum albumin can be considered as a marker of inflammation and a negative acute phase reactant, and hypoalbuminaemia has been shown to be associated with increased mortality in older patients.
Aims/Objectives: 1. To evaluate the relationship between ASA class and pre-operative serum albumin in acute hip fracture patients. 2. To determine the influence of gender on this relationship.
Methods: A cross-sectional retrospective analysis of hip fracture patients admitted to a single trauma centre between January and December 2019. Data was extracted from anonymized electronic health records. Patients 60 years and above were included. Patients with incomplete data were excluded. IBM SPSs 27 was used to carry out statistical analysis. Descriptive statistics was used to analyse baseline characteristics and Pearson's correlation and linear regression analyses were used to determine correlation.
Results: 187 patients were analysed; 56 males and 131 females. Average age was 83 years (SD 8.3). The mean serum albumin in the overall sample, males and females were 37.29 ± 6.56 g/l, 37.12 ± 5.75 g/l and 37.36 ± 6.89 g/l respectively (normal 35–50 g/l). There was statistically significant inverse correlation between serum albumin and ASA class in all groups and in male patients ($r = -.220$; $p = .002$ and $r = -.369$; $p = .005$ respectively). In females there was weak inverse correlation, which was not statistically significant ($r = -.170$; $p = .052$).
Conclusion: Pre-operative serum albumin is inversely correlated with ASA class in male patients 60 years and older with acute hip fractures but not in female patients. These findings need to be explored in larger multicentre studies.

P-005

Elderly-onset adult-onset Still's disease. A case report

Abstract Area: Acute hospital care

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Introduction: Adult-Onset Still's Disease is a rare auto inflammatory disorder of unknown etiology characterized mainly by high spiking fever, arthritis, evanescent rash and lymphadenopathy. It is a form of systemic juvenile rheumatoid arthritis that is encountered in young adults and much rare in the elderly.
Case report: A previously healthy 74-year-old man arrived at the emergency department with complaints of 1 month with intermittent fever, predominantly in evening and associated by nonpruritic rash in chest and extremities. During the last week he presented pain in left knee joint and chest pain that increased with respiratory movements. The physical examination highlighted the presence of painless inguinal lymphadenopathy. Initial blood investigations with leukocytosis and high serum ferritin levels; contrast enhanced computed tomography of chest, abdomen, and pelvis with mild hepatosplenomegaly with multiple lymphadenopathies. A bone marrow aspiration and inguinal biopsy was done with normocellular marrow without any atypical cells and reactive lymphadenitis respectively. A biopsy of the dermatosis shows an acute inflammatory process. He was started on oral prednisolone at 1 mg/kg with significant clinical improvement. Additional investigations were done and after excluding any malignancies, infections, and rheumatic disease he was found to meet all the major and almost all the minor Yamaguchi criteria for Adult-Onset Still's Disease. He was discharged with tapering oral prednisolone and at follow up he is asymptomatic with no episodes of fever, joint pain, or rash.
Conclusions: Adult Onset Still Disease is a diagnosis of exclusion and Yamaguchi criteria can help in diagnosis.
References:
1. Hirooka Yasauki. Case Report: A Rare Case of Elderly-Onset Adult-Onset Still's Disease in a Patient With Systemic Lupus Erythematosus. Front Immunol. 2022; 13: 822169.

P-006

Evaluation of the pneumonia impact on frailty in hospitalized geriatric patients

Abstract Area: Acute hospital care

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Introduction: The frailty role with pneumonia is not well defined, especially in mortality predictive scales. Our purpose was to evaluate the relationship between frailty baseline and pneumonia severity on hospitalized patients in an Acute Geriatric Unit.
Methods: A retrospective cohort was carried out in an acute care unit for 15 months with 120 patients who were 74 years or older admitted with pneumonia. Pneumonia severity (CURB-65 and PSI scales), frailty (Frailty Index VIG -FI-VIG-), functional impairment (Barthel index) was measured. Primary outcome: deaths from hospitalization and 30-day discharge. Secondary outcomes: functional and frailty hospitalization decline, prolonged hospitalization, geriatric-acquired syndromes, discharge destination, 30-day readmission.
Results: average age 89,18 + 4,33 years, women (56,7%), previous moderate frailty (44,2%) and mild functional dependence (50.0%), average CURB-65 2.92 ± 0.95 and PSI 4.30 ± 0.69. Risk of primary outcome for increasing frailty was higher with previous frailty (FI-VIG ≥ 0.36) than without (FI-VIG < 0.36) especially with CURB-65 > 3 points (75,4% vs 49,0%, p = 0,003) and PSI 4 points (42,0% vs 51,0%, p = 0,016). Pneumonia caused moderate frailty and functional loss (13,5%, 61,9% respectively) and increases the frailty and dependency baseline at discharge (FI-VIG 0.06 ± 0.05, BI 24,23 ± 22,2). Baseline frailty, PSI, CURB-65 are independent mortality predictors [OR univariant 1,212 (1,04–1,41), 11,75 (3,34–41,31), 4,07 (2,13–7,79) respectively].
Conclusions: Frail elderly experience high rates of death or functional decline within 30 days of pneumonia hospitalization, regardless of pneumonia severity. These results underscore the importance of frailty assessment in the acute care setting.

P-007

CWTCH in the community—improving education to reduce adverse outcomes for patients who fall in nursing homes (NH)

Abstract Area: Acute hospital care

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Introduction: Falls have significant morbidity and mortality in Nursing Home (NH) residents. By improving education to NH staff we aim to reduce 999 calls and associated adverse outcomes.
Methods: Phase 1—Ambulance calls between 01/01/2020-28/02/2022 from NH in Swansea/Neath concerning Falls/?Falls were analysed and survey was sent out to NH. Phase 2—Education was provided about CWTCH (hug in Welsh) and staff were surveyed ·Can you move them ·Will it harm them?—new neck/back pain, anticoagulation. ·Treat them—analgesia, wound-care ·Cup of Tea—can eat & drink ·Help—when contact 999.
Results: Phase 1—4907 calls, 866 were falls (17.65%) and 1032 ?Falls (21.07%), 60.49% conveyed to hospital. 47% of NH do not have falls guidelines and 100% patients are Nil by Mouth and 88.24% are not moved. Emergency services were contacted 88.24%. Phase 2—Education was delivered to NH in Swansea (122 staff). Feedback showed 100% feel more confident in giving food and drink, moving patients with 90.98% less likely to contact 999 and 75.40% not having previous training with 96.72% more confident in giving analgesia.
Conclusions: Falls remain a significant burden and a rapid service would improve care with conveyance reduction to 53.1% post education (60.55% pre-education). Future directions include offering this education to NH in Neath/Port Talbot. From March 2022, we offer same day assessment for NH residents (and others) via Primary care and ambulances. We are working on providing PRN analgesia e.g. PENTHROX for fallers.

P-008

Associations of nurse overtime work with nurse and patient outcomes: a systematic review of observational studies

Abstract Area: Acute hospital care

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Introduction: To manage nurse shortages, unpredictable absenteeism, and fluctuations in patient requirements for nursing care, nurses frequently work overtime. The prevalence of overtime work among nurses, worldwide, is higher than among all other public sector workers, and markedly increased during the COVID-19 pandemic. However, the effects of nurse overtime work on nurse and patient outcomes have not been systematically examined. This systematic review addressed this knowledge gap.
Methods: A systematic search of the literature was conducted. Studies were included if they: a) were published between 1996 and 2022; b) were based on a quantitative design, and; c) examined the associations between nurse overtime and at least one nurse or patient outcome. Data were independently extracted, analysed, and synthesized by two authors and discrepancies resolved by consensus. Methodological heterogeneity precluded a meta-analysis, but the methodological quality of each study was assessed.
Results: Overall, 628 articles were retrieved, and 27 satisfied the inclusion criteria (22 cross-sectional surveys and 5 prospective cohorts). These studies measured 21 distinct nurse outcomes and 19 different patient outcomes. Nurse outcomes: higher nurse overtime is associated with higher physical and mental fatigue, work-related injuries, overweight/obesity, substance use, absenteeism, intent to leave, and lower job satisfaction. Patient outcomes: higher nurse overtime is associated with higher rates of nosocomial infections, medication errors, falls, decubitus ulcers, mortality, and failure-to-rescue.
Key conclusions: There is evidence to support an association between higher nurse overtime work and worst nurse outcomes. However, more robust studies are required to support such an association with patient outcomes.

P-009

Setting up of a rapid access frailty and falls clinic

Abstract Area: Acute hospital care

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Introduction: People $\geq$ 75 years of age account for 22.2% of hospital admissions. The COVID pandemic provided an opportunity to reflect on our management of frail older adults.
Methodology: A Rapid Access ($\leq$ 72 h of referral) Frailty and Falls clinic accepting referrals from ED, GPs, community teams and early hospital discharges, supported by same day telephone hospital specialist opinion. The delivery of this initiative has been monitored via a Key Performance Indicator (KPI) to reduce bed usage by 31 beds which has been tracked on a monthly basis.
Results: From April 2021, a median reduction in bed usage per month was 39 (range 31–51), a median of 8 (26%) extra beds used saved above the KPI. There was a mean reduction of 1.9 admissions daily.£90 000 (€105483) (£77 000 (€ 90 245) recurrently) saved to be reinvested elsewhere in the serviceAll patients surveyed considered the service very good and 87.5% reported clinical benefit.
Discussion: The frailty clinic and consultant access provides Primary care with an alternative referral pathway to ED attendance. A rapid outpatient referral rather than an ED attendance is preferred by patients. A consequential benefit is a reduction ED demand improving patient experience in the ED department Avoidance with direct access from GPs to clinic, contributing to improved flow and ED performance. Diverting people away from an ED attendance or hospital stay generates financial saving that can be reinvested elsewhere in the service.
Conclusion: The Rapid Access Frailty and Falls clinic has delivered a cost effective and responsive ambulatory service to patients.

P-010

Drug-induced acute renal failure in a 82 year-old woman

Abstract Area: Acute hospital care

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Introduction: An 82 year old female patient is admitted to hospital with an inflammatory syndrome. E. Faecalis endocarditis was identified. Antibiotic therapy for 6 weeks with high dose of Clamoxyl intravenous was started. On the 18th day of antibiotic therapy, a rash appeared on the lower limbs and acute renal failure with a maximum of creatinine of 6.6 mg/dl.. Autoimmune work-up is negative. In the urine, proteinuria, haematuria and leucocyturia but with negative culture. Renal ultrasound is non-specific. A renal biopsy is not performed. The diagnosis of acute interstitial nephritis secondary to Clamoxyl was made. Amoxicilline discontinued, replaced with Linezolid to treat the endocarditis. No corticosteroids or mycophenolate mofetil was started. The complete renal function was been recovery in 1 month.
Methods: We decided to make a review of the literature on interstitial nephritis in the elderly, including drug-related causes. We used scientific research websites (Google scholar and Pubmed).
Results: In the elderly, there are more drug-induced nephritis (87 vs 64%) especially those related to PPIs (18 vs 6%). The two most frequently incriminated drugs: Penicillin and Omeprazole. In the elderly, there is much less nephritis related to systemic diseases (7 vs 27%). In the literature, 86% of the older people showed a partial or complete response within 6 months.
Conclusion: If acute renal failure occurs in Geriatrics ward, it is important to consider a drug-related cause, especially if a drug has been recently introduced. Prompt discontinuation of the offending drug will increase the chances of recovery of renal function.

P-011

Neuroimaging in patients admitted onto medicine for older people wards

Abstract Area: Acute hospital care

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Introduction: Computerised Tomography (CT) head scans are commonly requested in older patients due to their mode of presentation such as with falls and confusion. Increases in CT scan requests were observed at the start of the COVID pandemic which we sought to analyze.
Methods: The notes and CT head reports of all patients admitted to the medicine for older people wards between June to August 2021 were reviewed. The indications of the CT head scans, findings and adherence to NICE guidelines were reviewed as were any subsequent changes to clinical management.
Results: 259 out of 709 patients (36.5%) admitted under medicine for older people had a CT head scan. The most common indication for the scan was falls $\pm$ head injury (50.9%), of which 83% met the NICE guidelines. Overall, 146 CT scans had a significant finding (56.4%), of which 55 were new (21.2% of total). Of these, 18 led to a change in clinical management (6.9% of total).
Conclusion: Most CT head scans in older patients are indicated for trauma related events. The majority met the NICE Guidelines for head injury indicating good practice. Clinical management was changed as a direct result of the scan in only a small proportion of cases. These findings were discussed between our department and Neuroradiology, with the consensus that the current use of CT head scans as a diagnostic investigation was appropriate.

P-012

Development of a predictive model for the discharge of elderly patients hospitalised in acute geriatric units by natural language processing: a monocentric study

Abstract Area: Acute hospital care

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Introduction: The discharge of elderly patients hospitalised from an acute geriatrics unit (AGU) (return home or to a post-acute hospital care) is a daily concern. Optimizing the flow of patients means ensuring "the right care, in the right place and at the right time". We created a model using natural language processing (NLP) to predict the transfer as early as the third day of stay in AGU between a return home or a transfer to a post-acute hospital care.
Methods: This work is a retrospective monocentric cohort study. The main objective is to develop a model by NLP in order to predict the transfer of elderly patients (post-acute hospital care or returning

home), analysing automatically the electronic medical records. We extracted data from electronic medical records for each category of document. Then, we analysed it by NLP using the free software R Core Team (2017).
Results: Our study includes 104 hospital admissions: 71 (69.6%) women, average age 85.6 years old. The average length of stay in AGU was 7.9 (3.5) days. We have developed a model that predicts transfer to post-acute hospital care with an accuracy of 0,738 (0,061) as early as day three in UGA.
Key conclusions: NLP seems to be an effective and rapid tool for the geriatricians to predict the transfer of elderly patients to hospital post-acute care from the beginning of hospital stay in AGU. It could be useful to optimize the flow of the geriatrics population.

P-013

Development of a predictive model of the appropriateness of admissions in acute geriatric unit using natural language processing: monocentric retrospective study

Abstract Area: Acute hospital care

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Introduction: Delayed discharge in acute geriatric units (AGU) is a health and economic issue. There is no model of automatic measuring for the appropriateness of admissions nor hospital days. These are currently studied on a case-by-case basis, not automated and this implies time and human resources. We propose an automatic model using natural language processing (NLP) to evaluate hospital stays'appropriateness, according to the advice of the referring geriatrician of the hospital stays.
Methods: This is a retrospective monocentric cohort study. The main objective is to develop models by NLP to assess the appropriateness of an admission to AGU from the third day of hospital stay from the data extraction of electronic medical records. We take into account the medical opinion of the referring geriatrician of the hospital stays, regarding the appropriateness of the stay for each day of hospitalization (cohort DAMAGE). We extracted data from electronic medical records for each category of document. Then, we analysed it by NLP using the free software R Core Team (2017).
Results: Our study includes 104 hospital admissions: 71 (69.6%) women, average age 85.6 years old. The average length of stay in AGU was 7.9 (3.5) days. The developed models had an accuracy of 0.654 (0.063) for identifying inappropriate stays according to the geriatrician's medical advice, analysing data from medical records.
Key conclusions: NLP seems to be a promising tool to assess appropriate hospital stays.

P-014

decreased muscle strength, type 2 respiratory failure, arrhythmia, with positive anti-mitochondrial antibodies—rare atypical manifestations of inflammatory myopathy

Abstract Area: Acute hospital care

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Case report: In geriatric ward, an 65-years old woman with chronic course of disease presented with progressive lower limb weakness for 8 years, dysphagia for 6 months, dyspnea with lower limb edema for 4 months. Medical history included diabetes and hypertension. Physical examination shows periorbital pigmentation without rashes, distension of jugular vein, thoracic kyphosis and pelvis leaning back when standing. Auxiliary examination suggested decreased amplitude of movement of the right diaphragm, type 2 repiratory failure, heart failure with frequent multifocal ventricular premature beat, normal CK, antinuclear antibodies (1:320),anti-mitochondrial antibody (AMA 1:320),AMA-M2 and Ro-52 antibodies (+) with increased GGT. After multidisciplinary team discussion (Cardiology, Respiratory, Immunology, Neurology, Rehabilitation medicine department), restrictive ventilatory dysfunction caused by siginificantly decreased diaphragm movement was taken as a breakthrough to sort out the etiology step by step. On the basis of heart failure correction, intermittent non-invasive ventilation and rehabilitation training, the functional status of the patient improved compared with admission. We further completed the neuropathology of the quadriceps biopsy with immunohistochemical staining. The final diagnosis of inflammatory myopathy associated with anti-mitochondrial antibodies was established. We added hormone therapy, with intermittent non-invasive ventilation and rehabilitation training. After 3 months follow-up, the patient's functional status improved further (Katz ADL 3 $\rightarrow$ 6). This patient did not have the typical presentation of inflammatory myopathy associated with anti-mitochondrial antibodies. The joint participation of multidisciplinary team to identify causes and solve problems in diagnosis and treatment decision-making reflects the great significance of multidisciplinary collaboration in diagnosis and treatment of rare diseases.

P-015

Aspiration pneumonia in the elderly: is it clinically relevant?

Abstract Area: Acute hospital care

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Background: Community acquired pneumonia (CAP) in the elderly is commonly caused by aspiration. However, as aspiration pneumonia (AP) lacks clear diagnostic criteria, its reported ratio varies greatly. Subsequently, the management of elderly pneumonia remains inconsistent. We investigated how AP and non-AP are differentiated and managed.
Methods: Medical records of patients aged $\geq$ 75 years admitted with CAP in 2021 were reviewed retrospectively. Patients were separated into 2 groups according to the initial diagnosis: AP or non-AP. Patient background, symptoms, management, and outcomes were compared between the groups.
Results: 803 patients were included; 134 APs and 669 non-APs. The AP group had significantly higher rates of being in institution ($p < .001$), underlying neurologic conditions ($p < .001$), dementia ($p < .001$), previous pneumonia ($p < .05$), known dysphagia ($p < .001$), vomiting ($p < .001$), or coughing on food ($p < .001$) and had higher sarcopenia and frailty scores ($p < .001$). In the AP group,

nil by mouth (NBM) orders and speech therapist referrals were significantly more common (both $p < .001$), while blood cultures were rarely performed ($p < .05$).
Conclusions: A presumptive diagnosis of AP is more commonly made where the patient is frail, has multiple complex conditions, or has coughed on food or vomited. Aspiration may be the etiology in most pneumonia; the issue lies in identifying the microorganism and causative condition. A diagnosis of AP often results in many being made NBM unnecessarily. A more clinically relevant approach may be to shift our focus from differentiating AP to assessing the swallow, cough, oral hygiene and nutrition in all elderly pneumonia, and providing optimal care accordingly.

P-016

Challenges in the diagnosis of myxedema coma in the elderly: a case report

Abstract Area: Acute hospital care

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Introduction: Myxedema coma is the most extreme manifestation of hypothyroidism. Diagnosis represents a challenge in the elderly since it occurs in the context of multimorbidity and can mimic geriatric syndromes. [1,2].
Case report: A 79-year-old female with hypothyroidism secondary to goiter resection, treated with Levothyroxine, without follow-up, was brought to ER for altered mental status. A month before presenting to the ER, she presented cough, pharyngeal ulcers, hyporexia and functional decline. One day before admission, she presented decreased alertness and dysarthria, for which she was taken to the ER. Physical exam revealed drowsiness, and fluctuating alertness, bloated facial appearance with palpebral and symmetrical lower limb edema and generalized xerosis. The rest of her exam and vitals were normal. Laboratory analysis showed: Anemia (Hb 8.10 g/dl), elevated serum creatinine (Cr 1.5), moderate hyponatremia (127 mmol/L), creatinine phosphokinase elevation (1453 U/L), and elevated CRP (23.46 mg/L). Head CT was normal. A Clinical Score of Myxedema Coma was made with a result of 85 points which suggested the diagnosis of myxedema coma.[1] A thyroid profile was ordered and it showed a TSH of 334.9 UI/L and free thyroxine of 0.12 ng/dl. Diagnosis of Myxedema coma was confirmed and treatment with a loading dose of 100 mg of IV Hydrocortisone was given, followed by 50 mg IV every 8 h as well as treatment with Levothyroxine and Liothyronine by nasogastric tube.
Discussion & conclusion: Upon suspicion, the use of Popoveniuc's score is useful for the detection of myxedema coma, even in the elderly.[3]
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P-017

Sub Acute care: preliminary experience. Hospital Cuggiono ASST OVEST Milanese-Italy

Abstract Area: Acute hospital care

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As known after the Resolution N°IX/1479 sitting of 30/03/2011 (Italy Lombardy Region Council) Regarding: management determination of regional health services for the year 2011—II° Measure of update in the health sector, approves Annex 1: clinical and organizational indications for the conduct of Sub Acute care activities. This is a taking charge, which takes place in a context of sheltered hospitalization, of patients suffering from the sequelae of an acute event or a clinically uncomplicated decompensation of a chronic disease aimed at achieving specific health objectives. Sub Acute cares require the formulation of a treatment plan for each patient that leads to the achievement of specific goals by qualified professionals. Sub Acute cares should not be confused with social-health activities in favor of dependent patients in rehabilitation departments. Enrollment criteria are necessary in addition to the evaluation of the patient's actual clinical condition. Known exclusion factors. In the year 2021 at the U.O. Cure Sub Acute of the Cuggiono Presidio Ospedaliero were admitted 327 patients, M:158, F:169 Noted AII. Evaluated with Braden Scale, Brass Scale and Conley Scale. Our data indicate: 47% discharged home, 8.5% deceased, 17% transferred to RSA 5,8% transferred to Hospice, 5,8% transferred to Rehabilitation Institute, 8,9% medical relapse and transferred back to medical area, 1,8% surgical relapse and transferred back to surgical area, 4 patients showed COVID 19 infection

P-018

Cardio pulmonary resuscitation (CPR) in the frail and multimorbid; outcomes before and during the COVID pandemic

Abstract Area: Acute hospital care

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Introduction: SARS-COV2 placed greater emphasis on identifying frail or comorbid patients early and limiting treatment where appropriate. Resuscitation guidelines changed as cardiopulmonary resuscitation (CPR) was classified an aerosol generating procedure (AGP). We assessed the impact of these changes in our tertiary centre focussing on frail and/or comorbid patients.
Methods: Retrospective analysis of prospectively collected data from contemporaneous clinical and electronic records for all patients with a recorded cardiac arrest between June 2020 and June 2021. Data collected on features of the cardiac arrest, clinical frailty scale (CFS), Charlson comorbidity index (CCI), survival at discharge, 30 days and 12 months. The comparator was our previously published cohort between April 2017 to March 2018.
Results: 62 patients studied compared to 113 in 2017–18. 20 patients survived to discharge, 30 days and 1 year. This 32.2% survival rate is higher than the 23.8% observed in 2017–18 but not statistically

significant ($p = 0.235$). Rates of ROSC similar in both studies (61.3% v 60.2% $p = 0.960$). Median CFS was significantly lower (3.4 v 4.2, $p = 0.006$) as was median CCI (4.1 v 5.7, $p < 0.001$). More patients received CPR in the cardiology department (64.5% v 38.9% $p = 0.002$).
Discussion: The main factor in the reduction in resuscitation attempts is lower numbers of frail and comorbid patients receiving CPR. A higher proportion of resuscitation attempts in monitored locations and the reduction in CPR in frail and comorbid patients drive the trend towards higher survival.
Conclusion: We have not found evidence of harm from increased advanced care planning or changing resuscitation guidelines.

P-019

Life after in-hospital cardiac arrest—outcomes in frail older survivors

Abstract Area: Acute hospital care

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Introduction: Frailty is associated with poor 30-days survival following in-hospital cardiac arrest (IHCA). However, there is no previous information about how frailty affects long-term survival and other patient-important outcomes. This study aimed to examine how frailty was associated with long-term survival, neurological function, general health, and mental health in older IHCA survivors.
Methods: We included all IHCA survivors aged ≥ 65 years at Karolinska University Hospital from March 2013 to June 2021, who survived until 30 days. A Clinical Frailty Scale (CFS) score was retrospectively assessed for each patient based on review of the clinical records, and categorized into non-frail (CFS 1–4) and frail (CFS ≥ 5). Neurological function was assessed by the Cerebral Performance Category scale. Mental health was assessed by the Hospital Anxiety and Depression scale.
Results: 232 patients survived to 30 days, of which 65 (28%) were frail. Long-term survival was significantly better for non-frail patients. Most frail and non-frail survivors had unchanged neurological function from admittance to discharge from the hospital (87% and 85% respectively). Frail patients reported worse general health (median 50 vs 70 points on a visual analog scale) and more symptoms of depression (52% vs 16%) than non-frail patients.
Key conclusions: Although one in five frail patients survived to three years, frailty was associated with a marked decrease in long-term survival as well as increased symptoms of depression and poorer general health. However, there was no greater risk for neurological deterioration. Frailty is an important aspect to consider when discussing life-sustaining treatments for elderly patients.

P-020

Social work intervention in a frailty at the front door team

Abstract Area: Acute hospital care

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Introduction: MSW assessment is important in reducing delays in transfers of care. A Senior MSW commenced in a frailty at the front door (FATFD) team in 2022. The aim was to determine if patient numbers and time to assessment were affected.
Methodology: ED patients over 75 years referred to MSW between 6/4/2019 to 16/5/2019 and 6/4/2022 and 16/5/2022, had time to referral calculated from IPMS. Age, gender and reason for referral were entered into Excel and analysed using descriptive statistics.
Results: 20191.8% ($n = 16$) of 884 patients over 75 years who presented between 9/4/2019 and 16/5/2019 were referred. Mean (SD) time to assessment was 9(18) days, range 0–75 days. Mean (SD) age was 85(6) years. Male:female ratio was 1:1.7. Reasons for referral were safeguarding ($n = 7$), self-neglect ($n = 2$), financial support ($n = 2$), bereavement/isolation ($n = 0$), complex discharge ($n = 1$) and other ($n = 4$).20223.4% ($n = 35$) of 1033 patients over 75 years who presented between 06/04/2022 and 16/05/2022 were referred. Mean (SD) time to assessment was 8(12) days, range 0–50 days. Mean (SD) age was 82(5) years. Male:female ratio was 2.3:1. Reasons for referral were safeguarding ($n = 7$), self-neglect ($n = 7$), financial support ($n = 3$), bereavement/isolation ($n = 5$), complex discharge ($n = 5$) and other ($n = 8$).
Discussion: Patients experienced a reduction in time to assessment, despite a doubling in assessment rate. Reversal of the male:female ratio may be reflective of a small sample size. Use of a CGA by the FATFD team increased bereavement/isolation referrals. The next step is to develop pathways at the front door for patients who experience the longest time to referral.

P-021

Pharmacist-led medication reconciliation and review for older emergency patients—impact on medication risks

Abstract Area: Acute hospital care

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Introduction: Medication discrepancies and medication-related risks are significant problems in acutely ill older patients. Pharmacists

could help in reducing these risks by medication reconciliation and comprehensive medication review. This prospective observational study aimed to study the prevalence of medication-related risks in older patients at emergency department (ED) and how pharmacists' recommendations were implemented during the hospital stay.
Methods: The study was carried out at the ED of a Finnish university hospital. Pharmacists reconciled and reviewed medications of patients aged ≥ 65 years, and using ≥ 5 regular medications or with fall or bleeding as admission diagnosis. Clinically significant drug-drug interactions (DDI), renal safety, and medication-related risk were analyzed using electronic databases. Pharmacists documented the medication-related risks and proposed changes in the patient information system for physicians.
Results: The study participants (n = 95, mean age 79 years, 67% women) had an average of 4.5 chronic conditions, 13 drugs (including 9 prescription drugs), and 28% (n = 27) had at least moderate renal failure (GFR < 60 mL/min). The rate of DDIs was 11% (n = 10), and 30% of related pharmacists' recommendations were implemented. Of the participants with renal failure, 81% had an inappropriate dose or unsuitable drug. Related recommendations were implemented in 32% of the cases. The most common risk loads involved constipation (45%), risk of bleeding (28%) and orthostatism (20%). Risk loads increased during the hospital stay.
Key conclusions: The medication-related risks were common but pharmacists' recommendations were implemented in only about one-third of the cases. Medications prescribed for the acute illnesses may increase medication-related risk loads.

P-022

A pilot study to benchmark frailty needs in acute older surgical inpatients

Abstract Area: Acute hospital care

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Background: Evidence to support screening for frailty among acute surgical inpatients is limited. Our aim was to identify surgical inpatients on a general/vascular surgery ward with unmet, frailty-associated needs.
Methods: From 01/03/2022 to 12/04/2022, all inpatients under a vascular/general surgery service in a model 4 hospital were screened for frailty using a modified THINKfrail tool. An abbreviated CGA ('little g'), to identify what matters to the patient, mobility and functional impairment, mood and mental state and medication review was performed and actions taken on the **Results**.
Results: 138 patients were admitted under the surgical teams during the study period. 30% (n = 42) were over 70 years. 8% (n = 11) screened positive for frailty, all of whom underwent a 'little g'. The mean (SD) age was 77^4years. 45% (n = 5) were male. Identified needs were included abnormal 4AT in 50% (n = 5), 3 of whom had no prior diagnosis of dementia. 45% had altered ADLs resulting in a reduced ability to dress or mobilise. 80% (N = 9) required optimisation of mobility and/or physical function. 45% (n = 5) had medication changes made.
Discussion: A simple modified THINKfrail tool can be implemented by surgical nurses to screen for patients who may need geriatric input. Most have physio and OT needs and 45–50% have undetected cognitive or medication related issues, detected by employing a 'little g'. Employing a ward based frailty screen, followed by little g assessment is effective. This approach should be prospectively validated.

P-023

A qualitative analysis of the optimal discharge summary: effective communication of medication changes for older patients

Abstract Area: Acute hospital care

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Background: For older patients, the hospital discharge summary (DS) provides essential information on changes in medication regimens made during the hospital stay. The importance of the DS is well recognized but the impact of its format on effective communication is not known. The purpose of this work was to establish a DS format for older patients that ensures effective communication with general practitioners (GPs).
Methods: This study was based on the grounded theory approach to qualitative analysis. A list of ideas about how to ensure effective communication via the DS was collected from GPs during semi-structured interviews. The investigators used these ideas to establish two new versions of the DS. During directive interviews, GPs were asked to choose the most effective version.
Results: Semi-structured interviews were conducted with 12 GPs, with data saturation after 10 interviews. GPs agreed on several ideas including a single-page format and indication of the times medications should be taken alongside the dose. The investigators established two new versions of the DS based on ideas that had or had not reached consensus. Directive interviews with 39 GPs led to a consensus on one DS version providing selected information items such as trends in laboratory results (rising/falling) and information about planned drug withdrawals or specialist consultations.
Conclusion: This work led to a consensus on the most appropriate format for the DS for older patients returning home. Use of this DS format in routine practice is needed to confirm its reception by GPs.

P-024

Improving junior doctor inductions prior work in acute community settings: a quality improvement project

Abstract Area: Acute hospital care

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Background: Hospital at home services can provide acute healthcare to patients in their own home, avoiding admission to an acute hospital bed. Junior doctors are an important part of the hospital at home multidisciplinary team, but few have any previous experience in these services before starting. Here we describe a quality improvement project, aiming to improve inductions for junior doctors starting in hospital at home services. The aim was to improve their confidence in managing acutely unwell patients in the community.
Methods: We surveyed junior doctors (at least 2 years post graduation) working with the Guy's and St Thomas' Hospital @ Home service in November 2021. Based on their responses, we implemented

a practical skills session, allowing participants to practice key skills guided by clinicians with hospital at home experience. Participants were re-surveyed following the intervention.
Results: In the pre-intervention survey, 60% of junior doctors reported feeling 'not so confident' administering intravenous (IV) fluid or medication in patient's own homes, with 30% feeling 'not at all confident' administering IV medication. Following the intervention, 60% of participants felt 'very confident' administering IV fluids, and 40% felt 'very confident' administering IV medication.
Conclusion: Our results suggest junior doctors find practical procedures involved in hospital at home services daunting. This was improved by a practical skills refresher session. We plan to repeat the session for a new group of incoming junior doctors in August 2022. This session will include community-based simulation scenarios, aiming to improve confidence in decision making in the community setting.

P-025

Team-based improvement in acute geriatric care: a 2-year action-based intervention study on sustainable quality of interprofessional collaboration

Abstract Area: Acute hospital care

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Purpose: Realising an enduring improvement focused on quality of interprofessional team meetings in acute geriatric care over a longer time period compared with a control group.
Methodology: During two years, 7 teams of acute geriatric care in hospitals implemented actions optimizing interprofessional collaboration, aimed at improving quality of care. Team-based self-assessments with IPEQS were organized as pretest (T0) in year 1, as posttest (T1) one year later, and as follow-up (T2) again one year later. Team leaders engaged in selecting goals of improvement and installing working methods, adapted to their needs and context. Team leaders were coached by participating in four supportive peer sessions and 4 one-to-one interviews. A control group of 4 teams participated in T0 and T1 test.
Results: The intervention group experienced significant improvement in IPEQS-S. All teams in the intervention group achieved higher index in T2 compared to T0. One team had a backset in T1 but catched up with a higher score in T2. In the control group, results were mixed. Indexes of IPEQS-TP and IPEQS-TR, based on perceptions of the quality of 4 team meetings recently held, were similar to the IPEQS-S index.
Key-conclusion: The study points out that quality of team functioning and quality of team meetings, as measured by perception of team members, can be improved or sustained by focusing on implementing working methods and tools supporting the quality of interprofessional collaboration.

P-026

LACE index predicts one year mortality in elderly patients admitted to the internal medicine ward

Abstract Area: Acute hospital care

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Introduction: LACE index uses length of stay, acute admission, Charlson Comorbidity Index and number of emergency department (ED) visits within 6 months to predict 30-day readmission or death in adult patients admitted to medicine wards.
Methods: Observational, retrospective, longitudinal study of patients 65 or more years old admitted to an internal medicine ward of a central hospital in Portugal in 2019.
Results: In 2019 the internal medicine ward admitted 2133 elderly patients (65 or more years old), of which 1825 were discharged. Discharged patients were mainly women (55.40%), mean age 80.51 $\pm$ 7.69 years old. Mean Charlson Comorbidity Index was 6.00 $\pm$ 1.97 points, mean length of stay was 14.93 $\pm$ 11.70 days, all were acute admissions and median number of ED visits in the last 6 months was 1. In the year following hospitalization, 675 patients (36.99%) were readmitted, and 645 patients (35.34%) died. Mean LACE index was high (12.48 $\pm$ 1.93). LACE index was significantly associated with 1-year mortality (mean 12.18 $\pm$ 1.92 vs. 13.04 $\pm$ 1.82, $p < 0.001$).
Conclusions: More than one third of elderly patients admitted to the internal medicine ward will die in the following year and LACE index seems to predict this event. Knowing which patients are at risk of dying, advance care directives should be discussed, palliative care needs should be assessed, and health care should be planned accordingly.

P-027

Identification of prehospital functional status trajectories and assessment of their prognostic value at 3-month in older patients suffering from infective endocarditis

Abstract Area: Acute hospital care

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Introduction: Infective endocarditis (IE) increasingly involves older patients. The heterogeneity of this population requires an individualized management according to the patient geriatric profile. Elderl-IE cohort study enrolled prospectively inpatients older than 75y with IE. The present ancillary study aimed to determine prehospital functional trajectories and estimate their impact on 3-month mortality.
Methods: Functional trajectories of 119 patients (83.1 ± 5.1yo) were assessed using a latent class model, with ADL 2 months (M-2), 15 days (D-15) prior admission, and during the first week of hospitalization (D0). Their association with 3-month mortality were studied, after controlling for comorbidities (CIRS-G index), ADL value (D0) and Body Mass Index at admission and age.
Results: 3 ADL trajectories were identified: The first one (n = 20, 16.8%) involved patients with severe functional dependency at baseline (ADL M2 1.9 ± 1.9) which decreased until D-15 (0.6 ± 0.7) and stayed stable on D0 (0.6 ± 0.8). The second group (n = 63, 52.9%) presented partial functional dependency at baseline, gradually worsening between M-2 (5.5 ± 0.7), D-15 (4.2 ± 1.6) and D0 (2.7 ± 1.7). The last trajectory (n = 36, 30.3%) enlisted functional independent patients (M-2 6.0 ± 0.0) showing a functional decline between D15 (6.0 ± 0.0) and D0 (5.0 ± 1.2). 3-month mortality was 31% (n = 39). In multivariate analysis, D0 ADL (RR 0,77, IC 95% 0,63–0,93, p = 0,008) and BMI (RR 0,90, IC 95% 0,82–0,99, p = 0,031) were associated with 3-month mortality, whereas belonging to one of the functional trajectories was not.
Conclusion: IE induces severe functional decline in older patients before admission. Our results showed that functional status at admission is a stronger determinant of survival than prehospital functional trajectory.

P-028

Risk factors for mortality and bacterial characteristics of Escherichia coli bloodstream infections in older population

Abstract Area: Acute hospital care

Bérénice Marty[1], Marina Esposito-Farese[2], Guilhem Royer[3], Olivier Clermont[4], Cédric Laouean[5], Agnès Lefort[3], Erick Denamur[3], Victoire de Lastours[3], Claire Roubaud Baudron[6]

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Background: Escherichia coli bloodstream infections (BSIs) are responsible for a high mortality rate especially in the older population. This ancillary study from the French multicenter prospective observational SEPTICOLI cohort aimed to describe host and microbiological risk factors for mortality in the subgroup of older patients and to determine whether E. coli strain profiles (antibiotic resistance and virulence) were different between age groups.
Methods: From SEPTICOLI study that enrolled 545 patients with E. coli BSIs, clinical, microbiological and prognostic data were collected and risk factors for in-hospital mortality were established in the older group. E. coli strains characterized by the presence of genes of virulence factors and antibiotic resistance were compared according to age (≥ 80y).
Results: On a total of 157 older patients (87.2 ± 5.2y), the in-hospital mortality rate was 12.7%. Sepsis (OR 9.4, 95% CI 2.75–32.46, p 0.0004) was the main risk factor for mortality. Functional independence was a protective factor (ADL score ≥ 5: OR 0.33, 95% CI 0.12–0.91, p 0.031). The presence of antibiotic resistance or the empirical adequate antibiotic prescription did not influence survival. Focusing on the 266 strains causing urinary tract infection (UTI) with bacteremia, bacterial characteristics were not significantly different between the younger and the older populations.
Conclusions: The severity of the infectious episode is the main risk factor for mortality. Baseline functional dependence deserves to be assessed because of its impact on survival. While ageing is associated with gut microbiota dysbiosis, E. coli strains responsible for BSI from UTI were not different between age groups.

P-029

Risk factors for mortality and bacterial characteristics of Escherichia coli bloodstream infections in older population

Abstract Area: Acute hospital care

Bérénice Marty[1], Marina Esposito-Farese[2], Guilhem Royer[3], Olivier Clermont[3], Cédric Laouean[3], Agnès Lefort[3], Erick Denamur[3], Victoire de Lastours[3], Claire Roubaud Baudron[4]

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Conclusions: The severity of the infectious episode is the main risk factor for mortality. Baseline functional dependence deserves to be

assessed because of its impact on survival. While ageing is associated with gut microbiota dysbiosis, E. coli strains responsible for BSI from UTI were not different between age groups.

P-030

Effective board rounds; improving interdisciplinary communication in an acute geriatric ward

Abstract Area: Acute hospital care

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Introduction: Board Rounds are essential for handover of patient information and to expedite medical and non-medical issues. Evidence suggests that the multidisciplinary approach improves patient outcomes [1]. Feedback suggested that current board round processes were not robust on the geriatric medicine ward. Challenges included: lack of appropriate information, poor Allied Health Professionals (AHP) contributions and need to defer decisions. With this quality improvement project (QIP), we aimed to improve communication, goal setting, discharge pathways and expected Date of Discharge (EDD).
Methods: Data sampled from a 16-bed acute geriatric medicine ward at Manchester Royal Infirmary. Data collection was completed on a standardized run chart noting input from medical, nursing, therapy teams and EDD. Plan-do-study-act (PDSA) methodology was implemented for changes.
Results: Average input of board round AHP contribution was noted to be 31.2% initially. After the first PDSA there was an average increase to 40.6%. EDD documentation improved from 56.25% to 87.5%. Second intervention with blank stickers, the average input from the teams was noted to be 35.42% with increased input from therapy (56.25%) and nursing teams (31.25%). EDD input improved from 87.5% to 100%.
Key conclusions: A concise documentation of daily board round discussions on the patients files has the potential to improve quality and safety of patient management. Further PDSA Cycles are required.
References:
1. Saqib A, et al. Patient Journey Champions: A project to facilitate delivery of effective board rounds for inpatients, aiding flow through the hospital. Future Healthc J Oct 2020, 7[3]e30-e31; https://doi.org/10.7861/fhj.2020-0021

P-031

Beyond superficial skin lesions

Abstract Area: Acute hospital care

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Introduction: A 100-year-old woman, institutionalized for advanced mixed dementia, with hypertension and dyslipidemia, presented with a 2-cm right costal tumor, with perilesional erythema, whitish discharge and foreign body exteriorization, of one month of evolution. The patient was clinically stable at all times, with no infectious symptoms.
Methods: Analytically there was no elevation of acute phase reactants, foreign body is analyzed confirming biliary lithiasis. Chest computed tomography (CT) confirmed cholecystocutaneous fistula.
Results: Amoxicillin-clavulanic acid was prescribed as treatment, the lithiasis was extracted and a colostomy with drainage bag and second intention closure was chosen due to the patient's fragility.
Key conclusions: Cholecystocutaneous fistula is an infrequent entity, with around 100 cases reported to date. Early diagnosis of biliary pathology decreases its incidence. Most cases occur in elderly women. In general, they occur in the context of cholelithiasis and cholecystitis, although cases secondary to gallbladder neoplasia, post-surgery and anatomical anomalies have also been described. Clinically it usually presents as a cutaneous lesion in the right hypochondrium draining bile, pus or lithiasis. The differential diagnosis should be made with infected epidermal cyst, tuberculoma, pyoderma gangrenosum or costal osteomyelitis. For diagnosis, initial ultrasound is performed but the gold standard is CT. When in doubt, fistulography or magnetic resonance imaging (MRI) is performed. Initial antibiotic treatment is indicated if there are signs of infection and cholecystectomy with resection of the fistulous tract. Up to 20% of cases resolve spontaneously.

P-032

Impact of functional status on mortality in very older patients admitted for traumatic intracranial hemorrhage

Abstract Area: Acute hospital care

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Introduction: Traumatic intracranial hemorrhage (TIH) generates a high burden of morbi-mortality. The objective was to know whether the functional status was related to in-hospital mortality in very older patients with TIH.
Methods: Observational study of patients aged > 80 years admitted to an acute geriatric unit with a TIH from December 1, 2016, to April 30, 2022. Demographic, clinical, neuroimaging and functional variables were included. The factors associated with mortality were analyzed using univariate analysis.
Results: We included 169 patients ($87.6 + 4.4$ years, 61.5% women). The in-hospital mortality was 18.9% (32 patients). Compared to those who survived, patients who died were mostly men (59.4 vs 33.6%, $p = 0.009$, OR 2.891), had more frequently Chronic Kidney Disease (25 vs 10.9%, $p = 0.047$, OR 2.711), used more anticoagulants drugs (53.1 vs 32.8%, $p = 0.042$, OR 2.317), had an intraparenchymal contusion (53.1 vs 31.4, $p = 0.025$, OR 2.478), and neuroradiological worsening in Computed Tomography (73.9 vs 46.7%, $p = 0.023$, OR 3.238). In patients who died, the preadmission

and admission Barthel Index (BI) was 70 and 4, respectively. In patients who survived the preadmission and admission BI was 72.45 and 19.65 respectively. Functional Ambulation Category scale at admission (0.07 vs. 0.54, $p = 0.003$), BI at admission ($p < 0.001$), functional decline (previous—at admission BI) (54.32 vs 49.41, $p = 0.039$) and percentage of functional decline (previous—at admission BI/previous BI) (79.69 vs 69.22%) were worse in patients who died.
Conclusion: Functional decline and worse scores at functional assessment tools at admission were associated with greater in-hospital mortality.

P-033

What seemed to be bad, turned out benign!—A case report

Abstract Area: Acute hospital care

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Introduction: Neck masses in adult patients are, frequently, malignant. A family physician should consider all adult neck masses malignant until proven otherwise; using a detailed medical history and physical examination, followed by targeted investigations.
Methods: Analysis of a clinical case of an adult patient with a suspicious neck mass, which resulted in a benign aetiology.
Results: Female, 80 years old. Nuclear family, Duvall's cycle stage VIII. No relevant medical background. In January 2022, appearance of mild odynophagia for 2 weeks and a painless left submandibular swelling for 3 months. Absence of fever, recent travel, trauma or insect bites. At observation: submandibular nodule with hard consistency and apparently well-defined edges. Ultrasound of the neck revealed: "salivary gland: nodular formation of approximately 28 mm of heterogeneous ecostructure, with calcifications". She was referred to a specialized consultation. After one month: the nodule remained the same size and a sensation of xerostomia appeared. A computed tomography (CT) scanning was done: "several "beaded" stones along Wharton's duct". It was decided on marsupialization of the duct, with success.
Conclusions: In the presence of a neck mass with malignancy risk, it is essential for the physician to explain the diagnosis and recommended tests, in order to a shared decision making. CT scanning is recommended as the initial diagnostic test followed by referral to a specialist if doubts. Because delayed diagnosis contributes to decreased survival in malignant conditions, it is crucial to master the diagnostic work-up of a neck mass; that in this case proved to be benign!

P-034

Monitoring the respiratory rate in older persons to detect early relapse after a pneumonia hospitalization

Abstract Area: Acute hospital care

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Background: Readmission rates after pneumonia hospitalization among older patients are high, yet no monitoring of vital signs to detect early relapse is performed post-discharge. Fast breathing (tachypnea) is an early clinical sign of respiratory failure, septic and cardiac conditions, which are the predominant causes of pneumonia readmission. This study reports the feasibility of an intervention consisting of monitoring the respiratory rate (RR) in older pneumonia patients after discharge to enable early diagnostics and treatment and possibly reduce readmission rates.
Methods: The study included fifty patients (65 + years) discharged after a pneumonia hospitalization. The intervention consisted of three at-home RR measurements on day two, five, and ten after discharge performed by a homecare nurse. If new onset tachypnea was detected, the general practitioner was contacted. The proportion of completed nurse visits and the readmission rate were recorded. The fidelity, feasibility, and acceptability of the study was evaluated by all involved nurses and patients using a 5-point Likert scale.
Results: The mean age was 79 years. Overall, 44% of patients had moderate/severe comorbidity, 60% used ≥ ten prescribed drugs, and 46% were dependent on home care. The nurse visits were completed in 94% of the cases. Two patients were found with new onset tachypnea, and none of these were readmitted within forty-five days of follow-up. In total, sixteen patients (32%) were readmitted within follow-up. The intervention was found acceptable by both nurses and patients.
Conclusions: It is feasible to monitor the RR after discharge, however, the rate of readmission is still high.

P-035

Older nursing home residents attending an Emergency Department: characteristics and outcomes

Abstract Area: Acute hospital care

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BackgroundOlder nursing home (NH) residents often have multiple comorbidities and complex care needs. The Emergency Department (ED) is a common point of access to the acute hospital for NH residents. This study aims to review characteristics and outcomes of older NH residents presenting to ED.
Methods: A prospective cohort study including NH residents aged > / = 50 years attending ED of a university teaching hospital over one year (01/10/2019-30/09/2020) was carried out. Data on demographics, comorbidities, function, frailty and ED attendance was collected.
Results: There were a total of 515 ED attendances by 341 NH residents. Mean age was 76.3 years (50–103 years, SD ± 10.9). 50.9% (n = 262) were female. Mean Charlson Comorbidity Index (CCI) was 5 (0–12, SD ± 2.1). 46.6% (n = 240) had a dementia diagnosis. A mean of 12.6 medications (0–31, SD ± 5.3) were prescribed. Mean Clinical Frailty Score (CFS) was 6.5 (3–9, SD ± 0.9). Mean Barthel Index (BI) was 8.9 (0–20, SD ± 6.0).38.3% (n = 197) of presentations occurred "in-hours". Mean Manchester Triage Score (MTS) was 2.54 (1–5, SD ± 0.7) with 92.0% (n = 474) scoring 1–3. Delirium was documented in 31.8% (n = 164). Mean ED length of stay (LOS) was 13.7 h (0–80 h, SD ± 11.0). 61.2% (n = 315) were admitted to hospital. Mean hospital LOS was 9.7 days (0–191 days),

8.7% (n = 47) of those admitted died in hospital. 12 months after ED presentation, 40.4% (n = 138) had died.
Conclusion: NH residents are a frail group, with high levels of multimorbidity, polypharmacy and care needs. This is reflected in numbers requiring urgent review on attendance, delirium rates, ED LOS and hospital admission rates. Dedicated NH liaison teams may enhance care and improve outcomes.

P-036

Hospital at home is an alternative to hospital readmission among frail older patients

Abstract Area: Acute hospital care

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Introduction: Hospital at home (HaH) may reduce the risk of negative health events, e.g. delirium and loss of physical capacity and provide a safe alternative to hospitalisation. AimTo describe a cohort of frail older medical patients admitted to HaH as an alternative to hospital readmission.
Methods: Retrospective audits of hospital referrals and medical records from 2018-2020 were performed.
Results: Fifty-seven frail patients (75+) were readmitted to HAH within 30 days after hospital discharge. All patients were discharged by a geriatrician and frailty assessed using the Multidimensional Prognostic Index (MPI). Mean age was 87.4 (SD 6.5) and 56% were male. Mean MPI: 0.74 (SD: 0.15). Main characteristics: Nursing home resident (54%); referral by GP (63%), during daytime (77%) and weekdays (88%). Common diagnoses at referral were infection (42%), anaemia (10%), and delirium (10%). Sixty-three percent received antibiotic treatment (intravenous: 78%); 63% rehydration therapy (subcutaneous: 78%); 24% oxygen treatment; and 14% blood transfusion. Medical review resulted in changes of medication for 93%. Twenty-six percent received palliative care, 12% were readmitted to hospital despite HAH interventions. Relatives were often involved (70%).
Conclusions: Patients readmitted to HaH were often severely frail nursing home residents receiving treatment for infection, anaemia and/or delirium. Most treatments were managed at home, though 12% of HaH patients were readmitted to hospital despite initial attempts to handle treatment at home. Further studies are needed concerning 1) the role of HaH in avoiding readmission for frail older patients; 2) inter-sectoral practice of collaboration; 3) patients'/relatives' involvement; 4) clinical guidelines development.

P-037

Mortality in geriatric patients with acute biliary pathology with conservative management

Abstract Area: Acute hospital care

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Introduction: Acute biliary pathology (cholelithiasis, cholecystitis, cholangitis, acute biliary pancreatitis) (PAVB) in geriatric patients is a frequent cause of mortality. Its treatment can be conservative (antibiotic therapy) or invasive; from bile duct drainage [Endoscopic retrograde cholangiography (ERCP) and cholecystostomy] to open or laparoscopic surgery.
Methods: A retrospective study of a series of 223 patients between 60–98 years old (mean age 87.18) who were admitted to Geriatrics, affected by PAVB in the period 2019–2021 was carried out. Epidemiological, clinical and diagnostic data were collected, as well as geriatric assessment scales such as the Barthel Index, the Charlson Scale Score, Delirium and the frailty index. We describe the clinical characteristics and mortality of patients with conservative management.
Results: During the 3-year period, 223 patients (52.91% women) were treated conservatively, with a mean age of 87.18 years, with moderate/advanced frailty in 71.21%, with a functional situation of moderate-severe dependence. in 53.81%, with a medium-high comorbidity burden in 86.5% and with a mean stay of 11.22 days. Hospital Mortality was 11.6% and Mortality after one year of patients treated conservatively amounted to 27.35%.
Conclusions: Mortality in geriatric patients affected by acute biliary disease is high and represents a challenge in routine clinical practice because it is frequently associated with a high burden of comorbidity and frailty.

P-038

Social network and severe lower respiratory tract infections in older adults: findings from a swedish longitudinal population-based study

Abstract Area: Acute hospital care

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Background: Lower respiratory tract infections (LRTIs) are the leading cause of communicable disease burden in the elderly population. Social network is an important modifiable risk factor for health outcomes, especially in old age, but little is known about its role in LRTIs. We aimed to investigate the association between social network and risk and prognosis of severe LRTIs in older adults.
Methods: Data from Swedish hospital records were matched with the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K). Social network was operationalised as social connections and social support, based on different self-reported variables, and categorised as poor, moderate, and rich. The risk of severe LRTI and related outcomes were assessed using Cox, Poisson, and logistic regression where appropriate.
Results: 362 individuals experienced 479 LRTI-related hospitalisations over a 15-year follow-up. Rich social support decreased the hazard of incident LRTI by 29% (HR 0.71 [95% CI 0.52–0.96]), the hospital length of stay by 21% (IRR 0.79 [95% CI 0.65–0.97]), and the risk of 30-day mortality by 92% (OR 0.08 [95% CI 0.01–0.68]) but was a risk factor for 30-day readmission (OR 3.16 [95% CI 1.38–7.24]). High levels of social connections were associated with higher risk of incident LRTI in women and those with dementia and/or slow walking speed (Pinteraction < 0.05).

Conclusion: This study showed a nonlinear relationship between social network and LRTI-related outcomes. High levels of social support, rather than connections, seem to protect against LRTI outcomes, showing that quality trumps quantity when it comes to LRTIs in the elderly.

P-039

Gallstone ileus in a plurypathological nonagenarian female: a case report

Abstract Area: Acute hospital care

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Introduction: Gallstone ileus is a rare complication of gallstone that might cause small bowel obstruction. Its incidence increases with age, and it is more commonly seen in female.
Case report: A 95-year-old female with hypertension, valvular cardiopathy, transcatheter-aortic-valve-implantation, prosthetic valve thrombosis and mild functional impairment, presented to emergency department with a several-month history of mild abdominal pain that had lately increased, thus being treated for constipation. In the last 3 days, she was unable to tolerate any oral intake due to vomiting and had no depositions. At her arrival, vitals were stable but was found oligoanuric. Laboratory studies showed acute renal injury and mild hyponatremia. Hydroelectrolytic support was started. Abdominal X-Ray showed dilatated proximal gut loops. Diagnostic orientation was proximal intestine occlusion. Abdominal computed tomography showed dilatation of the stomach, duodenum and jejunum, proximal to a 3.5 cm endoluminal calcium image. Aerobilia and a cholecystoduodenal fistula were identified. Findings were compatible with gallstone ileus. She was considered electable for emergency laparoscopy and had the stone removed. She had a satisfactory recovery and was discharged on the 6th post-operatory day.
Conclusions: Although rare, gallstone ileus should be considered as a possible cause of small bowel obstruction, especially in elder female patients with previous history of cholecystitis. Our patient had had a cholecystitis episode in 2020 that had been treated conservatively. After enterolithotomy she had a quick recovery. Enterolithotomy might be considered as a safe procedure in elder pluripathological patients.

P-040

A large pericardial effusion without hemodynamic compromise

Abstract Area: Acute hospital care

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Background: Large pericardial effusions may generate tamponade physiology, contributing to muffled heart sounds, hypotension and raised JVP (Beck's triad) along with ECG changes. We describe here a case of a 54-year-old lady with accumulation of almost 3 L of pericardial fluid where none of these features were present.
Case: A 54-year-old woman presented with worsening fatigue and exertional dyspnoea two months after uncomplicated aortic valve replacement for severe aortic stenosis. Physical examination revealed normal heart sounds and bipedal oedema. Despite appropriate patient positioning jugular venous pulse (JVP) was not seen. Chest radiography demonstrated significant enlargement of the cardiac silhouette. ECG was unremarkable. Haemodynamics were maintained with blood pressure 114/71 mmHg. Trans-thoracic echocardiography (TTE) revealed a hyperdynamic "swinging heart" within a very large global pericardial effusion measuring 7 cm maximally along with right sided chamber collapse. The patient successfully underwent urgent pericardiocentesis with drainage of over 2.5 L of straw-coloured fluid in total.
Discussion: Whilst large pericardial effusions may generate tamponade physiology contributing to muffled heart sounds, hypotension and raised JVP that comprise Beck's triad, not one of these features was present in this case. Similarly, ECG hallmarks of cardiac tamponade, including low-voltage QRS complexes and electrical alternans (beat-to-beat alternating QRS amplitudes caused by swinging motion of the heart within pericardial fluid) were absent, despite the substantial volume of fluid present in the pericardium. This case highlights that a high-volume pericardial effusion may accumulate insidiously without associated features of haemodynamic compromise or give rise to any characteristic ECG changes. TTE is of paramount importance as it can facilitate diagnosis and thus guide timely and appropriate therapeutic intervention.

P-041

Outcomes in critically ill very old patients (VOPs)

Abstract Area: Acute hospital care

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Introduction: Ageing is not uniform. Decision-making based on chronological age results in under-treatment. A new topic in geriatrics is how to appropriately use critical care resources to provide the best treatment for very old patients (VOPs), defined by World Health Organization as individuals over 80 years.
Methods: Retrospective observational study of medical admissions to an intensive care unit (ICU) during the first three months of 2019. Outcomes were analyzed and compared with the subgroup of VOPs.
Results: 246 patients were admited (49 VOPs). VOPs had higher hospital mortality (41% Vs 32%). An APACHE II score $\geq$ 20 correlated with higher mortality in VOPs compared with global mortality (68% Vs 30%); the same for SAPS II score $\geq$ 50 (66% Vs 25%). Scales such as "Barthel Index for Activities of Daily Living" or "Holden Functional Ambulation classification" have not shown a correlation with ICU mortality. "Lawton and Brody Instrumental Activities Of Daily Living" proved association with poor outcome (VOPs with severe dependence had 60% mortality); as well as "Clinical frailty scale" (severely frail patients were not admitted to ICU; moderately frail patients had 63% mortality). Previous neurologic and respiratory diseases were the comorbidities most associated with poor prognosis (67% and 54% mortality). VOPs on invasive mechanical ventilation had higher mortality rate (77%); but there was no increase in mortality in those under non-invasive mechanical ventilation. There was no increase in mortality in VOPs that underwent dialysis.

Key conclusions: This retrospective study aims helping physicians to deciding how to use critical care resources appropriately for VOPs in ICU, identifying some predictors of poor outcome.

P-042

Multidisciplinary perspectives of current and optimal acute rehabilitation, a hip fracture example

Abstract Area: Acute hospital care

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Introduction: Despite a protocolised approach to care guided by audited key performance indicators, variation in access to, and delivery of, acute rehabilitation interventions persist across the UK. We aimed to further our understanding of multidisciplinary healthcare professionals' perceptions of current and optimal provision of acute rehabilitation and their implications for recovery using hip fracture as an example population.
Methods: A qualitative semi-structured interview study with 20 members of the acute multidisciplinary healthcare team (occupational therapists, physiotherapists, physicians, nurses) working on orthopaedic wards at 15 different hospitals across the UK. Interviews were conducted via telephone, recorded, transcribed verbatim, anonymised, and then thematically analysed drawing on the Theoretical Domains Framework to aid interpretation of findings.
Results: We identified four themes: conceptualising a model of rehabilitative practice, which reflected the persisting variability of rehabilitation models, along with individual facilitators for optimal rehabilitation and common organisational and patient barriers; competing professional and organisational goals, which highlighted the incompatibility between organisational goals and patient-centred care, particularly for more vulnerable patients; engaging teams in collaborative rehabilitation, and engaging patients and their carers, both highlighting the importance of their involvement to achieve a holistic and collaborative approach to rehabilitation in the acute setting based on supportive management and adequate communication and resources.
Conclusions: Cornerstones of optimal acute rehabilitation are effective communication and collaborative practices amongst the multidisciplinary team, patients and carers. Supportive management and leadership are central to optimise these processes. Organisational constraints are the most commonly perceived barrier, also exacerbating silo working and poor patient engagement.

P-043

Baseline factors associated with delirium in a large series of very older patients admitted for traumatic intracranial hemorrhage

Abstract Area: Acute hospital care

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Introduction: Traumatic intracranial hemorrhage (TIH) generates a high burden of morbi-mortality. The objective was to analyze in-hospital delirium related factors in very older patients with TIH.
Methods: Observational study of patients aged > 80 years admitted to an acute geriatric unit with a TIH between December 1, 2016 and April 30, 2022. Demographic, clinical, functional, cognitive and neuroimaging variables were included. We performed univariate and multivariate analysis.
Results: One-hundred sixty-nine patients were included (mean $87.6 + 4.4$ years, 61.5% women), 91 (53.8%) developed delirium during hospitalization. There were no differences in proportion of female, place of residence, comorbidity (similar proportion of hypertension, chronic kidney disease, diabetes, heart failure, ischemic heart disease or atrial fibrillation), nor previous functional status. Patients who developed delirium were older (88.22 vs 86.77 years), had previous dementia (50 vs 28.2%), took more drugs (9.36 vs 7.88), and more antiplatelet drugs (37.4 vs 23.1%), had worse FAC scale (0.35 vs 0.96), Barthel index (10.93 vs 23.59) and Pfeiffer´s Questionnaire (6.88 vs 3.96) scores at admission and higher percentage of functional decline at admission (83 vs 70%), all with $p < 0.05$. In multivariate analysis, independent predictors of delirium were use of antiplatelet drugs (OR 2.661 95% CI 1.074–6.593), and functional decline (OR 5.568 95% CI 1.112–27.629 $p = 0.035$), all with $p < 0.05$. The area under the ROC curve was 0.780 (95% CI: 0.695–0.866, $p < 0.001$).
Conclusion: More than half of very older patients admitted to an acute geriatric unit with TIH develop delirium. Previous use of antiplatelet drugs and at admission functional decline were associated with delirium.

P-044

Improving hypoglycemia management by using a standard protocol" rule of 15″ at acute geriatric units

Abstract Area: Acute hospital care

AlAnoud AlFehaidi[1]

[1]HMC

Introduction: Rumailah hospital in Qatar has residents with multiple co-morbidities. Approximately a third of residents have Diabetes Mellitus. Complications such as hypoglycemia can infrequently occur amongst them. Sub-standard management may lead to increased glucose variability which in turn increases the risk of mortality. An audit revealed only 12% of the staff followed hypoglycemia management as per a standard protocol. Aim was to increase the percentage of staff at the Acute geriatric unite using a standard protocol from 12 to 100% over 12 months.
Methods: This is a Quality Improvement project which was carried out, A multidisciplinary team was formed who used "Dartmouth Microsystem Quality Improvement Model". Baseline Process map with cause & effect diagram identified likely reasons for not using the standard protocol. Various interventions were carried out including simplifying a previously established protocol (First Intervention), educational training events (Second Intervention) for all the primary front-liners was provided, posters at the nursing stations and presentations at the television units at the nursing stations. Establishing

Clinical Practice Guideline (CPG) on Hypoglycemia in geriatric acute units (Third Intervention).
Results: A run-chart was used to monitor the response following aforementioned interventions. First Intervention showed significant improvement in the use of protocol to 60% within 2 months and subsequently increased to 100%. After establishing the CPG it remained at 100%.
Conclusion: Dedicated multidisciplinary team utilizing a standard model of Quality Improvement produced significant change in the care provided during hypoglycemia management in a in geriatric acute units in HMC.

P-045

Rhabdomyolysis in elderly patients—characteristics and risk factors

Abstract Area: Acute hospital care

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Background: Rhabdomyolysis is a potentially life-threatening syndrome characterised by breakdown of skeletal muscle and leakage of myoglobin and creatine kinase (CK) into the circulation. There is little knowledge regarding this syndrome in elderly populations. Our aim was to study factors associated with rhabdomyolysis in older patients (age $\geq$ 65).
Methods: A retrospective review was conducted of all patients admitted to Diakonhjemmet hospital, Oslo, Norway, between 2020–2021. Rhabdomyolysis was defined as serum CK $\geq$ 5000 U/L and/or serum myoglobin $\geq$ 1000 ng/ml measured during the hospital stay. Gender, comorbidities, length of stay (LOS), statin use, falls and exercise prior to admission was recorded and compared across old rhabdomyolysis-patients (OR), young rhabdomyolysis-patients (YR), and old non-rhabdomyolysis-controls (OC).
Results: 72 rhabdomyolysis-patients were included. The male proportion was 57% in both rhabdomyolysis-groups. LOS was 7.0, 2.0, and 3.4 days in the OR, YR and OC group respectively, and the average number of comorbidities were 5.7, 2.3, and 3.3 respectively. 37% of OR used statins. Renal impairment affected 63%, 12%, and 14%respectively. 87% of OR experienced a fall, whereas 71% of YR conducted vigorous exercise prior to admission.
Conclusions: Our data indicates that rhabdomyolysis more often affects men. For old patients rhabdomyolysis was associated with longer hospital stays and more comorbidities including renal impairment. Falls were a common event prior to rhabdomyolysis in the old, in contrast to exercise in the young, indicating different mechanisms and severity of rhabdomyolysis for young and old patients. More research is needed to increase our understanding of this syndrome in the elderly and identify potentially modifiable risk factors.

P-046

Fluid management (enteral feed & IV fluid): Improving fluid management using "FAM" protocol by involving multidisciplinary team at acute geriatric units

Abstract Area: Acute hospital care

AlAnoud AlFehaidi[1]

[1]HMC

Introduction: Acute geriatric units in Rumailha hospital is a 30 bedded provide care 24 h to patients who have multiple comorbidities and behavioral problems, all are high risk of dehydration. On artificial feeding, IV fluids may need to be given urgently and fluid intake through feeding tube will need to be appropriately amended as per the requirements. If managed improperly then it is associated with increased risk of mortality and morbidity.
Methods: A multidisciplinary team was formed to conduct a quality Improvement project to improve fluid management using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved, and interventions were carried out in three steps. First step was to establish a FAM (Fluid Assessment & Management) protocol which outlined use of a standard fluid deficit calculator and accordingly manage with appropriate fluid and quantity (1st PDSA), Second step was to educate physicians and early involvement of dieticians and monitoring by nurses (2nd PDSA) and Final step was directed towards family who were also involved in feeding (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing, Dieticians) showed compliance with use of a standard protocol from 0 to 35% within 1 month and subsequently increased to 100%,dieticians were involved in all cases started on IV fluid and establishing a guideline on management of fluids.
Conclusion: Multidisciplinary approach using standard tools in calculating fluid deficits and managing it with appropriate quantity of fluid replacement has led to better outcomes with no iatrogenic complications.

P-047

Amino acid and pressure ulcer (PI): improve PI by use amino acid (l-arginine, glutamine and HMB) at acute geriatric units

Abstract Area: Acute hospital care

AlAnoud AlFehaidi[1]

[1]HMC

Introduction: Acute geriatric units in Rumailha hospital is a 30 bedded provide care 24 h to patients who have multiple comorbidities and behavioral problems and behavioral problems, Older adults are more likely to have PI and the effect on quality of life is particularly

profound in this population. Nutrition plays an essential role in PI healing, wound care practices, and nutritional support needs to be considered a fundamental part of wound management.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in four steps. First step was to establish a nutrition management protocol which outlined use of an amino acid (Arginine glutamine and beta-hydroxy-beta-methylbutyrate (1st PDSA), Second step to refer all wound cases to dietitian to assess and prescribe amino acids (2nd PDSA), Third step was to pilot in units of the long-term care facility to analyze the effectiveness of this initiative (3rd PDSA), Fourth step to Calculate percentage of wound healing and reassess by dietitian (4th PDSA).
Results: Following WHO multimodal improvement strategy (build it, teach it, check it, sell it and live it) showed all wound healed 100% in long term by given the resident L-Arginine as supplement to accelerate healing and to reduce the cost.
Conclusion: Treat PI in acute geriatric units is really challenging due to the complexity of the medical conditions. However, this project has shown healed chronic wound is possible if interventions are implemented by Dietitian and multidisciplinary team members.

P-048

Rule of thumb "start low and go slow": prevention and management of refeeding syndrome in acute geriatric

Abstract Area: Acute hospital care

AlAnoud AlFehaidi[1]

[1]HMC

Introduction: Acute geriatric units in Rumailha hospital is a 30 bedded provide care 24 h to patients who have multiple comorbidities and acute illnesses, refeeding syndrome is widely considered to be a common problem among the elderly, it is not well recognized due to lack of a screening tool to identify risk of the refeeding syndrome. Refeeding syndrome a life-threatening medical condition is commonly associated with acute or chronic starvation.
Methods: A multidisciplinary team was formed in Jan 2020 to conduct a quality improvement project to prevent Refeeding syndrome using "Plan-Do-Study-Act (PDSA) methodology". All stakeholders were involved, and interventions were carried out in three steps. First step was to create Assessment screening tool which would help identify the high-risk category (1st PDSA). Second step was to develop Multidisciplinary Team interventions to prevent Refeeding syndrome (2nd PDSA) and standardizing the approach by establishing an intervention guideline. Third step was to pilot in two units of the acute care units to analyze the effectiveness of this initiative (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed refeeding syndrome manage probably in the pilot units.
Conclusion: Prevention and management of refeeding syndrome in the acute care units is really challenging due to the complexity of the medical conditions. However, this project has shown refeeding syndrome treatment and prevention is possible if early screening and interventions are implemented by multidisciplinary team members. Next steps would be to roll out this project into all the acute care units.

P-049

Horticultural therapy for inpatient older adults in an acute care hospital: a pilot pragmatic randomized controlled trial

Abstract Area: Acute hospital care

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Introduction: Geriatric patients in acute care wards are at risk of functional decline related to acute illness and prolonged bed rest. The benefits of Horticultural Therapy (HT) have widely been documented in step-down care and community settings. This study aimed to investigate the feasibility and effectiveness of HT on engagement, mood, quality of life and mobility of older adults in acute care settings.
Method: Design: Pragmatic randomized controlled trial. Setting: Acute care hospital. Participants: 50 participants from a geriatric ward were randomized into intervention and control group. Intervention: Intervention group received 30 min of daily HT activities whereas control group received usual care. Measurements: Engagement: Menorah Park Engagement Scale (MPES), Mood: Apparent Affect Rating Scale (AARS) and Emoticon Scale, Quality of life: EuroQol—5 Dimensions—5 Levels (EQ-5D-5L), Mobility: Modified Perme ICU scale and Modified Johns Hopkins Highest Level of Mobility Scale (JH-HLM), Hospital experience: Modified Person-centred Climate Questionnaire (PCQ).
Results: Significant between group differences were found in engagement (MPES: passive engagement $p = 0.023$, constructive engagement $p < 0.001$ and non-engagement $p = < 0.010$), mood (AARS mood: alertness $p = < 0.01$, pleasure $p < 0.01$, post Emoticon $p < 0.001$), quality of life (post EQ5D—visual analogue scale $p = 0.017$), mobility (modified JH-HLM $p < 0.001$) and hospital experience (modified PCQ $p < 0.001$).
Key conclusion: Older adult patients receiving HT have better engagement, positive moods, higher quality of life, better hospital experience and are more physically active than those having usual care in acute hospitals.

P-050

Bimuno: administration of a prebiotic supplement to treat diarrhea without antidiarrheal medication at long term care units

Abstract Area: Acute hospital care

AlAnoud AlFehaidi[1]

[1]HMC

Introduction: Acute geriatric units in Rumailha hospital is a 30 bedded provide care 24 h to patients who have multiple comorbidities and acute illnesses and behavioral problems, Diarrhea is common in the elderly and can become a severe condition if not managed properly. Diarrhea is one of the leading causes of unintentional underfeeding in geriatric unit's patients while use of antibiotics leads to a significant change of the gut microbiome, antibiotic associated diarrhea, clostridium difficile infections and other causes connected with hospital stay. Scientific data shows that some prebiotics are useful in treatment of diarrhea.

Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in three steps. First step was to establish a nutrition management protocol which outlined use of prebiotic (Bimuno)(1st PDSA), Second step to consult dietitian to assess and prescribe prebiotic (Bimuno), They were received prebiotic (Bimuno) for 2–4 week, first week start with 3 g Bimuno twice/day, on second week and the doses for some patients are increase to 3 g four times /day, third and fourth week the dose maintenance and continue same dose. Fluid intake also increases (2nd PDSA), Third step was to monitor bowel motion every shift by using the Bowel Movement using Bristol stool chart assessment stool (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed patients passing stool every day (frequency from 2 to 3 times/day, and type of stool between 3–4 as Bristol stool scale) without antidiarrheal medication administration, also no more gases, fullness, distention and bloating present with patients.
Conclusion: treatment diarrhea in the acute geriatric unit is really challenging due to the complexity of the medical conditions. However, this project has shown diarrhea treatment and management without antidiarrheal medication is possible if interventions are implemented by dietitian to prescribed prebiotic supplement and also decreasing using of the antidiarrheal medication which reduce the cost.

P-051

Urinary tract infections in older adults. Etiological bacteria according to the patients' origin

Abstract Area: Acute hospital care

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Introduction: To identify the bacteria most frequently responsible for urinary tract infection (UTI) among older adults according to their origin before admission to an Acute Geriatric Unit (AGU).
Methods: Retrospective analysis of data on the identification of bacteria isolated from urine samples of older adults admitted to an AGU between 2016–2020. The data was analysed according to their origin: home, nursing home or residential care homes.
Results: A total of 555 UTIs were analysed. 65.22% were female, with a mean age of 86.52 years old, partial dependency measured by Barthel index (40.03) and Lawton index (1.21) and with a history of cognitive impairment (59.10%). Most of the infections were monomicrobial (78%). Escherichia coli accounted for the majority (54.95%) of these, followed by Klebsiella pneumoniae (14.77%). 83% of patients were living at home, 14.59% in a nursing home and 2.16% in a residential care home. No significant difference in UTIs etiology according to patients' origin was observed. However, K. pneumoniae was more prevalent among the residential group compared to the home group and nursing home group (25% compared to 14.49% and 12.35% respectively). P. aeruginosa was more prevalent among the residential care group compared to the home group (11.11% compared to 5.19% respectively).
Conclusions: No significant differences on etiology of UTI in older adults according to their origin before diagnosis were observed. Thus, an empiric treatment based on general recommendations should be started. No recommendation for antibiotic treatment regarding the patients' origin is given.

P-052

Prevalence of pain in elderly hospitalized patients

Abstract Area: Acute hospital care

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Introduction: Several studies indicate that pain, although very common in the elderly, is under-treated, because it is considered as a condition intrinsic to aging.
Objectives: To evaluate the prevalence and characteristics of pain among hospitalized older adults, correlated to prescribed therapy.
Methods: Prospective observational analysis of patients admitted to the Geriatrics Department at the University Hospital of Navarre during July and August of 2022. Variables analyzed: Sociodemographic characteristics, pain characteristics and analgesic treatment administered during hospitalization. Other data registered included: functional impairment, delirium, depression, etc.
Results and key conclusions: The main conclusion is that pain is often poorly considered in the elderly, thus leading to a dangerous under-treatment. We want to underline the crucial clinical impact of such under-treatment in elderly patients. We also found an interesting yet already known association with other conditions such as functional impairment and depression.

P-053

Inpatient high-flow nasal cannula oxygen therapy (HFNC) in elderly patients with acute hypoxemic respiratory failure (AHRF) in a non-intensive care geriatric setting

Abstract Area: Acute hospital care

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Introduction: Studies have shown that high-flow nasal cannula oxygen therapy (HFNC) is an effective supportive therapy for acute hypoxemic respiratory failure (AHRF). There are 5 cases presented in this abstract and up to 25 cases presented at the 18th EuGMS conference describing HFNC in a non-intensive care geriatric setting.
Methods: HFNC is performed on a geriatric ward for patients with AHRF at Vivantes Ida-Wolff Hospital (IWK), a geriatric clinic in Berlin. Another inclusion requirement is that the patients no longer desired intensive care treatment. Results are evaluated descriptively including patient characteristics, diagnostic findings, and geriatric assessment.
Results: Five geriatric patients (each > 75 years, > 3 secondary diagnoses) with AHFR (due to pneumonia, exacerbated COPD, cardiac pulmonary edema) after unsuccessful conventional oxygen therapy were treated with HFNC. Parameters before therapy (lowest

and highest score): respiratory rate (RR) 24–30/min, O2 saturation (SaO2) 71–78% below room air. All patients also received active respiratory therapy support. Normal RR, SaO2 and improvement of dyspnea were achieved in all patients after 5–7 days. Acceptance of the HFNC by nurses and physicians was good after structured training.
Conclusion: HFNC as a supportive therapy led to substantial improvement of the pulmonary situation and was well tolerated by the patients. Further studies should investigate the value of the method in geriatric settings. In the future, HFNC could become a therapeutic alternative in geriatric patients without desire for intensive care treatment, e.g. in palliative situations.

P-054

Pain management in geriatric patients

Abstract Area: Acute hospital care

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Introduction: Patients with cognitive impairment may have difficulty communicating their pain. Studies have shown that those with cognitive impairment, in particular dementia, are less likely to ask for and receive analgesics [1]. The Royal College of Physicians has a national guideline for the assessment of pain in the geriatric population. Non-verbal cues are included to help clinical staff identify patients in pain but who cannot fully verbalize, for example, tachypnoea, tachycardia and grimacing. Project's aim was to analyse methods of pain assessment used and to identify if patients with cognitive impairment were being prescribed analgesia.
Methods: Electronic patient records from four geriatric wards at a large trauma centre over a one-day period, were retrospectively reviewed to see if appropriate analgesia was prescribed.
Results: A total of 73 patient notes were reviewed. Analgesia was prescribed regularly in 52.1% of patients and prescribed PRN in 74% of patients. In patients with cognitive impairment (Average AMTS was 3.5/10), 33.3% had analgesia prescribed regularly. 81.5% of these patients had analgesia prescribed PRN. Formal pain assessments were not done in any patient.
Key conclusions: Patients with cognitive impairment are less likely to have analgesia prescribed. Regular use of tools such as the Abbey Pain Scale or Pain Assessment in Advanced Dementia (PAINAD) scale, may be of use. With the use of such tools, a repeat assessment would be needed after pain-relief interventions are taken to ensure effective delivery. This would increase nursing workload; however, it could be implemented into comfort rounding assessments.
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P-055

Brain concussion in elderly people

Abstract Area: Acute hospital care

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Objective: Aim of this study is to present cases of brain concussions in elderly peopleDesign: 50 cases are presented for a time of 5 year period and 1 year follow up.
Setting: An acurrate analysis of such cases Participants: 40 male and 10 female, range of age 66–86, mean age 71,5 yearsInterventions: 50 hospitalization and treatment.
Outcome measures: Good outcome in all 50 cases.
Main results: Pain Killer pharmacological treatment, Ct, Mri and x ray evaluation in all of them.
Conclusions: Brain concussion is a situation that needs accurate resolution and treatment

P-056

Finding, recording, investigating and treating anaemia in geriatric inpatients

Abstract Area: Acute hospital care

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Introduction: Anaemia is prevalent among the elderly population and is associated with more falls, infections, greater frailty, and increased hospital admissions [1] [2]. This study aimed to assess whether anaemia in patients on three elderly care wards in a UK Tertiary Care hospital was adequately documented, investigated, and treated.
Methods: Notes were reviewed for inpatients discharged in the first two weeks of August 2021. Haemoglobin (Hb) and Mean Cell Volume (MCV) were noted on admission and, if anaemic, it was determined whether this was documented in their notes and discharge summary. Further investigations were also noted, along with any treatment given for anaemia.
Results: 74 patients' notes were analysed (mean age = 77 years, female = 67.6%). Anaemia was present in 48/74 patients (64.9%). When present, this was documented in the notes in 18/48 (37.5%) and in the discharge summaries in 3/48 (6.3%). Iron studies were performed for 43/74 patients during admission, or within the year. Further investigations consisted of endoscopy (10/74), and CT imaging (11/74). 15/48 of the anaemic patients were treated for their anaemia. Notably, less than one third (31%) with anaemia was treated for this.

Key conclusions: While anaemia was prevalent in this population, it was not documented in most cases and was only investigated or treated in a minority of patients. This study suggests that there was a paucity of appropriate documentation of anaemia in elderly inpatients' notes, that anaemia is not adequately investigated for a cause when found, and that most of these patients remain untreated for their anaemia.

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P-057

Red cell distribution width (RDW) and clinical outcomes in patients admitted to a Medical Emergency Assessment Unit

Abstract Area: Acute hospital care

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Introduction: Elevated red cell distribution width (RDW) has been proven to predict poor prognosis in community-dwelling patients. However, there is limited evidence of its impact on older patients admitted to an Acute Medical Admission Unit (AMAU).

Methods: Prospective observational study of medical patients aged 65 years and over admitted to an Acute Medical Assessment Unit (AMAU) between 28th March and 11th April 2022 was conducted. Clinical Frailty Scale (CFS) score and RDW were recorded on admission, and clinical outcomes at 28 days were documented.

Results: We included 298 patients, 53.35% were females, median age was 79.76 (65–101). 73.48% individuals were frail (F = CFS $\geq$ 5) and 26.52% non-frail (NF = CFS $\leq$ 4). The 3 most common reasons for admission were falls (n = 58), community acquired pneumonia (n = 40) and infective exacerbation of chronic obstructive pulmonary disease (n = 21), and 51,30,14 were frails (F)—7,10,7 were non-frails (NF). The average length of stay (LOS) in the AMAU was 2.859 days, 2.967 days in elevated RDW (E) and 2.681 days in non-elevated RDW (NE). Total hospital LOS was 11.83 days, 12.681 days in E and 10.451 days in NE. Mortality at 28-days was 12.08%, 14.05% E and 8.85% NE28-day readmission was 20.72%, 25% E and 14.14% NEThe proportion of frail individuals in E was 79.47% and in NE was 63.75%.

Conclusion: RDW predicts poorer clinical outcomes in older patients admitted to AMAU.

P-058

Reflections from the transition of a general medicine ward to geriatric medicine: challenges and recommendations for future practice

Abstract Area: Acute hospital care

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[1]MFT

Introduction: Comprehensive Geriatric Assessment (CGA) delivered in ward settings can reduce institutionalisation and mortality [1,2]. Nurses have an integral role in care coordination to promote patient independence and reduce harms [3]. Following transition from a general medicine ward to geriatric medicine, several challenges were identified: communication between the multidisciplinary team, lack of basic nursing knowledge of common frailty syndromes, inadequate mealtime practices and poor use of legal frameworks. Healthcare associated harms were frequent with high rates of falls and pressure ulcers. This project aimed to improve the quality of care and reduce harm for older patients.

Methods: Interventions were designed, focused on improving patient independence, improving nutritional status, and reducing harm through 'Plan, Do, Study, Act' quality improvement methodology. Geriatrician led board rounds established continuity and accountability of care. A twice weekly advanced clinical practitioner (ACP) led education programme was implemented covering key geriatric medicine areas. A focus on nutrition and hydration was introduced by reorganising meal delivery, use of red trays and reinforcing protected mealtimes.

Results: From October 2021 to May 2022 falls reduced from 7 falls per month to 2 falls per month. Hospital acquired pressure ulcers reduced from 4 per month to 1 per month. Excellent staff feedback was received with > 90% rating the programme as excellent.

Key conclusion: Transition to a geriatric medicine ward initially created a lot of uncertainty for staff but with support, education, and role-modelling, it was possible to demonstrate the value of a CGA focused ward which improved staff satisfaction and quality of care.

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P-059

Frailty prevalence and outcomes in patients with unplanned hospital admission: systematic review and meta-analysis

Abstract Area: Acute hospital care

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Background: Older adults with unplanned admissions account for most hospital-bed days, but the burden of frailty and its impact on outcomes in this population is uncertain. We undertook a systematic review of frailty prevalence, measurement methods, and outcomes in hospital to inform clinical guidelines and plan services.

Methods: We searched MEDLINE, EMBASE and CINAHL up to 30/04/2021 and included observational studies using validated frailty

measures in unplanned adult hospital-wide or general medicine admissions. Two reviewers did screening and risk of bias assessment (RoB). Relative risks (RR) for mortality, length of stay (LOS), discharge destination and readmission were calculated and pooled using random-effects models. We explored heterogeneity with meta-regression.
Results: Among 38 cohorts (median/SD age = 80/5 years; n = 37,733,147 admissions), the median prevalence of moderate-severe frailty was 40.5% (IQR = 33.2–53.2; low-moderate RoB = 23/38). Despite considerable heterogeneity in prevalence, all studies reported increased RRs of mortality (RR range = 1.08–16.06), longer LOS (range = 1.35–3.04) and discharge to a location other than home (range = 1.97–3.45), with worse outcomes in more severe frailty. Associations with 30-day readmission varied (RR range = 0.52–1.64). Frailty prevalence accounted for 50% of variation in mortality risk (beta = − 0.0088, P = 0.0385). When analysis was restricted to prospective tools, the pooled RR was 2.57 (95% CI = 2.30–2.88) and heterogeneity was no longer significant (PQ = 0.13).
Conclusion: Increased mortality, length of stay and care needs at discharge were consistently observed despite wide variation in frailty prevalence, supporting the importance of identifying frailty in older hospital patients. Prospective tools appeared to predict mortality more consistently compared to retrospective measures, but may be less feasible for use hospital-wide.

P-060

THE Oxford Cognitive Comorbidity and Ageing Research Database (ORCHARD): protocol for a large acute care research resource

Abstract Area: Acute hospital care

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Background: Despite cognitive impairment and frailty being prevalent in older patients with unplanned hospital admission, there are few data available from unselected hospital-wide cohorts to inform guidelines and the planning of clinical services. We therefore set up the Oxford Cognitive Comorbidity and Ageing Research Database (ORCHARD) to exploit routinely acquired electronic patient record (EPR) data.
Methods: ORCHARD includes pseudo-anonymised EPR data on all patients > 65 years admitted to one of the four general hospitals that form the Oxford University Hospitals, (OUH) from 2017–2021, covering a population of 660,000. Data collected include cognitive screening (mandated for those > 70 years) comprising dementia history, delirium diagnosis (Confusion Assessment Method—CAM), and 10-point Abbreviated Mental Test; nursing risk assessments, and frailty, together with diagnoses, comorbidities (Charlson index), observations, illness acuity, laboratory tests, and brain imaging. Outcomes include length of stay, discharge destination, death and dementia enhanced by linkage to electronic mental health records.
Results: ORCHARD includes 90,304 admissions (2017–2019; 48,292 inpatient versus 42,012 day cases). Inpatient admission data are available for 30,497 unique individuals (mean/SD age = 79.2/9.6 years, female 51% (n = 15,294)), with cognitive screening reported for 60% (n = 18,335). The mean/SD Charlson score is 10.3/10.2 and 52% (n = 15,979) scored as moderate or high risk on the Hospital Frailty Risk Score.
Conclusion: ORCHARD is a large, inclusive and rich data resource that will enable studies on the prevalence and impacts of cognitive and physical frailty with relevance to design and delivery of clinical services and understanding of healthcare resource use.

P-061

Not another COVID story…

Abstract Area: Acute hospital care

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Introduction: For two years now, hypoxemic pneumonitis was associated mainly with SARS-COV-2 infection. Human Cytomegalovirus (CMV) is a DNA Virus that is usually asymptomatic in immunocompetent persons and CMV pneumonia has rarely been reported in otherwise healthy patients. Hereby, we report the case of a 97-year-old man with hypoxemic CMV pneumonia in the ERA of COVID-19.
Introduction: Since 2020, hypoxemic pneumonitis was associated mainly with SARS-COV-2 infection. Human Cytomegalovirus (CMV) is a DNA Virus that is usually asymptomatic in immunocompetent persons and CMV pneumonia has rarely been reported in otherwise healthy patients. Hereby, we report the case of a 97-year-old man with hypoxemic CMV pneumonia in the ERA of COVID-19.
Case report: A 97-year-old patient with hypertension presented with asthenia and nonproductive cough without fever. On examination, the patient had polypnea with hypoxemia requiring 9 l/mn of oxygen and had sibilant rales. Biology screening showed polynucleosis at 29 G/mm3, monocytosis at 5,4G/mm3, disturbed liver function with anicteric cholestasis and cytolysis. CRP was at 268 mg/l. RT-PCR COVID-19 was negative twice, COVID-19 serology, Influenza PCR, legionella and streptococcal urinary antigen, Viral hepatitis panel including hepatitis A, B and C were all negative. The abdominal CT scan was normal but the chest CT scan showed diffuse bilateral interstitial syndrome with intralobular reticulations (Crazy paving) and alveolar condensation along with mediastinal adenopathy. The patient was initially diagnosed with community acquired pneumonia and was started on Ceftriaxone and Clarythromycine which was maintained for 2 weeks. Because of the elevated liver enzymes, CMV was ordered and CMV IgM and IgG were elevated. A reactivation of CMV infection was evocated. The evolution was progressively favorable without antiviral and the patient was discharged at home after two weeks.
Conclusion: CMV should be considered as possible cause of pneumonitis even in immunocompetent patients especially if all other causes were ruled out.

P-062

Frailty assessment of older patients admitted to the Nostra Senyora de Meritxell's Hospital

Abstract Area: Acute hospital care

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Introduction: The concept of frailty is heterogeneous, which has led to the existence of various tools for diagnosing or screening for fragility. Amblàs-Novellas J et al. created the VIG-frail tool (2018), enabling the detection and measurement of the frailty index. The tool comprises different domains that provide information on various characteristics of patients' health (functional, nutritional, cognitive, emotional capacity, geriatric syndromes, symptoms, and the presence of clinical comorbidity).
Methods: The Ageing and Health department team have conducted an assessment with the VIG-frail tool of 57 older patients admitted to medical and surgical wards of the Nostra Senyora de Meritxell Hospital in Andorra from March 1 to May 31, 2022.
Results: The analysis comprises 57 patients over 65 years with a Barthel index for activities of daily living above 90. The median age is 76 years; 67% were female. The 8% of the people have physical frailty (SPPB: 0–9), 25% have a cognitive impairment (MOCA score less than 26), 8% have malnutrition (MNA score less than 12), 14% have poor sleep health (SATED: 0–6), 11% have a risk of depression (PHQ-9: 5–10) and 1% of the assessed have depression (PHQ9 score above 10).
Conclusion: This pilot study has enabled to detection of frailty in different domains, with cognitive frailty being the most prevalent. In this setting, interventions to reverse fragility include physical exercise, psychological support, cognitive stimulation, and nutrition and sleep quality workshops.
Results: The analysis comprises 57 persons over 65 years; 49.2% were female. The median age is 85 years (raging from 66 to 96). 84% of the patients had some degree of dependence on activities of daily living, measured with Barthel's index. 39% of the patients were admitted in surgery units, and the 49% were admitted in medical general wards. Following the VIG frail score, 93% of the patients assessed were fragile. 28% had an initial fragility, 39% had an intermediate fragility and 26% an advanced fragility. As for the patient's health history, 68% of patients had chronic heart disease, 46% had chronic kidney failure, 35% had neurological diseases, 29% had chronic respiratory diseases such as COPD, and 21% had oncological diseases. Only 7% of patients did not have any clinical comorbidity. The geriatric syndromes with the highest prevalence in the patients assessed were: polypharmacy (68.4%), dysphagia (42.6%), and confusion syndrome (30%).
Conclusion: The VIG-Frail index is an excellent tool that can enable fragility detection in the hospital field and proposes a specific therapeutic approach depending on the degree of frailty. This index has also given us more detailed information about the profile of patients admitted to our hospital.

P-063

Use of a documentation tool to support geriatric inpatient IV access care

Abstract Area: Acute hospital care

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Introduction: Insertion of an intravenous (IV) cannula is a common invasive procedure. Increasing age and cannulation duration are risk factors for poor outcomes.
Methods: A prospective quality improvement project to establish current clinical practice and improve IV access care. IV access of inpatients on a gerontology ward was reviewed on 3 discreet occasions before and after the introduction of an 'ABCDE' acronym to prompt routine IV access review and documentation. The site, duration, appearance, and indication of cannulas in-situ was recorded.
Results: 175 reviews are included (90 pre-intervention, 85 post-intervention). 45 (50.0%) patients had a cannula in the pre-intervention group compared to 41 (48.2%) patients post-intervention. The mean number of days per cannula was 4.62 in the pre-intervention group and 2.43 in the post-intervention group. 11 (24.4%) cannulas were recorded as unclean pre-intervention compared to 4 (9.75%) post-intervention. 25 (55.6%) patients in the pre-intervention group no longer had a clinical indication for IV access, averaging 1.37 days per cannula compared to 13 (31.7%) post-intervention with an average of 0.68 days per cannula. 18 (40.0%) patients in the pre-intervention group had a cannula in for more than 5 days compared to 4 (9.75%) in the post-intervention group. The ABCDE acronym was recorded in 36 (42.4%) patients notes.
Conclusions: Following the implementation of the 'ABCDE' acronym in ward round entries, fewer cannulas remained in-situ unused, unclean or for more than 5 days. The data supports the use of a tool to prompt review and documentation of cannulas helps to improve IV access care.

P-064

Mortality in COVID-19 older patients hospitalized in a geriatric ward: Is obesity protective?

Abstract Area: Acute hospital care

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Backgrounds: To investigate the relationship between obesity and 30-day mortality in a cohort of older hospitalized COVID-19 inpatients.
Methods: Patients included were aged 70 years or more; hospitalized in acute geriatric wards between March and December 2020; with a positive PCR for COVID-19; not candidate to intensive care unit admission. Clinical data were collected from patients electronic

medical records. Data on 30-day mortality were retrieved from the hospital administrative database.
Results: Patients included (N = 294) were on average 83.4 ± 6.7 years old, 50.7% were women, and 21.7% were obese (BMI > 30 kg/m2). At 30-day, 85 (28.9%) patients were deceased. Compared to survivors in bivariable analysis, deceased patients were older (84.6 ± 7.6 vs 83.0 ± 6.3 years, P = .059), more frequently with very complex health status (63.5% vs 39.7%, P < .001), but less frequently obese (13.4% vs 24.9%, P = .033) at admission. Over their stay, deceased patients more frequently (all P < .001) developed radiologic signs of COVID-19 (84.7% vs 58.9%), anorexia (84.7% vs 59.8%), hypernatremia (40.0% vs 10.5%), delirium (74.1% vs 30.1%), and need for oxygen (87.1% vs 46.4%) than survivors. In multivariable analysis that controlled for all markers of poor prognosis identified in bivariable analysis, obese patients remain with 64% (adjOR 0.36, 95% CI 0.14–0.95, P = .038) lower odds to be deceased at 30-day than non-obese patients.
Conclusions: In this population of older COVID-19 inpatients, an inverse association between obesity and 30-day mortality was observed even after adjusting for all already-known markers of poor prognosis. This result challenges previous observations in younger cohorts and would need to be replicated.

P-065

Vitamin status in hospitalised elderly patients

Abstract Area: Acute hospital care

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Hospitalisation in acute geriatric unit is scarred by acute failure organs associated with high level of inflammation. We hypothetised that elderly hospitalized had high prevalence of vitamins deficiency. A prospective routine care study was conducted (april—may 2019) in an acute geriatric unit at Bordeaux University Hospital. Oral agreement for each participant was researched, each data was anonymized. Water-soluble vitamins included vitamin B6, B9, B12 and C; fat-soluble vitamins: vitamins D25 and K; essential trace elements: selenium, zinc and iron plasma. Descriptive, comparative analyses were led (Student test for quantitative data, Chi square test ± Yates if not Fisher test). Spearman correlation was conducted. Fifty-three patients were included (89 ± 5 years, 42 women, Charlson score: 8.6 ± 3). Forty-seven patient were malnourished before hospitalisation. Twenty patients were hospitalized for acute heart failure, 17 for infectious disease. Nine teen patients had water soluble vitamins deficiency (11 for C vitamin, 5 for B9, 3 for B12 and 2 for B6). Water soluble vitamins deficiency was correlated to history of neoplasia with metastasis. Forty-four patients had fat-soluble vitamins deficiency (38 for D25 vitamin, 19 for K vitamin without anticoagulant therapy). Forty-three patients had essential trace elements. This deficiency was correlated to organ failure history. Patients treated by angiotensin II receptor antagonist or conversion enzyme inhibitor had more vitamins C and K deficiency respectively (p = 0.03; p = 0.03). Vitamins deficiency are frequent for elderly patients hospitalized in acute geriatric units. A specific supplementation should be considered.

P-066

Improving intravenous fluid prescription in geriatric medicine

Abstract Area: Acute hospital care

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Introduction: Intravenous fluid prescription occurs regularly in Hospitals. Inappropriate intravenous fluid prescription is associated with high mortality and morbidity, particularly electrolyte imbalance [1]. The National Institute for Health and Care Excellence (NICE) published guidance in 2013 to prevent inappropriate fluid prescription, however data from Medicine for Older People at University Hospital Southampton (UHS) demonstrated compliance with this guidance was inadequate.
Purpose: To ensure better maintenance fluid prescribing with adequate maintenance potassium, aiming for 30% of intravenous fluids to be glucose saline on the geriatric wards and 80% of this fluid to contain potassium.
Methods: Data was collected to review the type and quantity of intravenous fluids ordered to UHS wards in 2018. Then, a fluid prescription chart was designed which included NICE intravenous fluid prescription guidance and it was implemented across all geriatric wards. Data collection post-intervention was used to measure success of the intervention.
Results: Pre-intervention 81% of intravenous fluid ordered was Hartmann's or normal saline and 13% was glucose saline. Of the glucose saline ordered, 9% contained potassium. Following intervention 38% of intravenous fluid ordered was glucose saline and of this, 50% contained potassium.
Conclusion: Following the implementation of a fluid prescription chart highlighting NICE guidance there was an increase in administration of glucose saline fluid containing potassium across the geriatric wards at UHS.
References:
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P-067

Establishing the prevalence of osteoporotic fractures in Ireland

Abstract Area: Acute hospital care

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Background: Fragility/low-trauma fractures are a major healthcare burden, yet many are preventable through Fracture Liaison Services (FLS). A reliable estimate of fracture numbers is essential to measure FLS efficiency. Currently the Irish FLS database uses the UK estimate of 1:4 hip vs. non-hip fracture numbers. We wanted to explore its accuracy in an Irish population.

Methods: We looked at all plain x-ray reports from six individual weeks across two years in our hospital. We selected those with reported new fractures age > 50yrs. We determined ratio of hip:non-hip fractures and of admitted:discharged. We cross checked against admitted fractures from NQAIS (National Quality Assurance Information System) for the same 6 weeks. We then looked at admissions to all Irish Emergency Departments 2018–2019 with new fracture aged > 50yrs. We compared hip:non-hip fracture ratio vs. local data.
Results: From 7,654 x-ray reports, 222 new fracture patients were identified. An additional 29 patients sustained fractures during this period, either CT/MRI diagnosis or managed as fractures despite negative radiology report. The ratio of admitted:discharged fractures was 2:3. Ratio of patients with hip:non-hip fractures was 1:9.5. Nationally there were 33,627 fracture patients aged > 50y admitted to Irish hospitals in 2018–9; of these, the hip:non-hip fracture ratio was 1:3. Adding estimated numbers of non-admitted fracture patients (based on our local data) gave a 1:9 hip:non-hip ratio nationally.
Conclusion: Fracture numbers in Ireland are markedly underestimated if extrapolating from UK estimates. This has implications for service planning for FLS in Ireland, if rising fracture numbers are to be addressed.

P-068

Anemia is highly prevalent in acutely admitted older patients and associated with 90-day mortality—results from the Copenhagen PROTECT study

Abstract Area: Acute hospital care

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Introduction: The prevalence of anemia increases with advancing age and is often a random finding in older patients acutely admitted to the hospital. The aim was to determine the prevalence of anemia in acutely admitted older patients and to investigate the association with 90-day mortality.
Methods: The study was based on data from the Copenhagen PROTECT study, a prospective cohort of older (> 65y) patients admitted to Bispebjerg Hospital, Denmark between 2019 and 2021. All patients had blood drawn at admission. Anemia was defined according to WHO criteria. Iron deficiency (ID) was defined as ferritin level < 30 g/dl and combined inflammatory and iron deficiency (CIIDA) as a ferritin level < 100.
Results: Data from 1069 patients (age 78 years, 53% women) was included, and of these 127 patients died within 90 days (11.9%). In 512 patients (47.9%) anemia was present at admission. We found significantly higher 90-day mortality among patients with anemia compared to patients without (88 patients (17.2%) versus 39 (7%), $p < 0.001$). This association was confirmed in logistic regression analyses and was significant after adjusting for age, gender, ferritin, and C-reactive protein levels (OR 2.3 95% CI (1.6–3.5). Ferritin was measured at admission in 305 patients, ID was present in 26 (8.5%) of patients and CIIDA in 60 patients (19.7%).
Key conclusions: The present data demonstrate that Anemia is a frequent condition in acutely admitted older adults and associated with increased 90 day mortality. ID was involved in more than 30% of the cases where patients did not survive 90 days.

P-069

Enterococcus sensibility in patients admitted in an acute geriatric unit due to urinary tract infection

Abstract Area: Acute hospital care

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Introduction: Urinary tract infection (UTI) is a frequent diagnosis of admission in an Acute Geriatrics Unit (AGU). The majority are caused by gram-negative bacilli (GNB). However, a considerable number of UTIs are caused by gram positive cocci (GPC), particularly those patients with indwelling urethral catheters. Among this group, the most prevalent pathogen is enterococci.
Methods: Retrospective analysis of data from urine samples of older adults admitted to an AGU with UTI, between 2016–2020 was conducted. Prevalence of enterococci and its antibiotic sensibility were determined.
Results: A total of 566 UTIs were analysed. The results show that 9.7% were caused by GPC. Among this group, 76% were caused by enterococci. The distribution within the enterococci genus was: E. faecalis 77.8%, E. faecium 19.4% and E. hirae 2.8%. The antibiotic sensibility was: Gentamicin 63.6%; Ampicillin 77.7%; Vancomycin 100%; Linezolid 100%. Nitrofurantoin 100% and Fosfomycin 81.82% were evaluated just in 30% of the urine samples.
Conclusion: Enterococci prevalence is relatively high among older adults admitted to an AGU due to UTI. There is a significant resistance rate to antibiotics commonly used as Penicillin and Aminoglycoside. Therefore, it is recommended to use Vancomycin or Linezolid as an empiric treatment for older patients with a diagnosis of a severe UTI. Fosfomycin or Nitrofurantoin should be considered to empirically treat a non-complicated UTI. However, more sensibility tests must be conducted.

P-070

Urinary tract infection by extended spectrum beta-lactamases gram-negative bacilli in an acute geriatric unit

Abstract Area: Acute hospital care

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Introduction: The prevalence of urinary tract infections (UTI) caused by multiresistent microorganism in older people hospitalized is high. The aim is to determine factors related to UTI caused by extended

spectrum beta-lactamases gram-negative bacilli (ESBL-GNB) among older patients admitted to an Acute Geriatrics Unit (AGU).
Methods: Retrospective observational study of patients admitted to an AGU with UTI diagnosis and isolation in urine culture of gram-negative bacilli. Sociodemographic data, aspects of Compressive Geriatrics Assessment, comorbidities and previous hospitalisation or antibiotics intake in three months preceding AGU admission were collected.
Results: N: 500 (65.8% women, mean age 86.62% ± 5.59 years). Previous admission Barthel Index (BI): 41.7 ± 32.19, Lawton Index (LI): 1.38 ± 2.32 and Charlson Index 2.93. Comorbidities: diabetes 42%, chronic kidney disease (CKD) 36.2%, urinary incontinence (UI) 74.4%. 32.4% had at least 1 hospitalisation and 57.4% took at least one antibiotic treatment. 23,8% had urine isolation of ESBL-GNB. Higher age was related to UTI by ESBL-BGNL (97.68 ± 5.18 vs 86.28 ± 5.68; $p = 0.01$). Only CKD was significantly related to presence of ESBL-GNB (32.4% vs 19.12%; $p = 0.0011$). Previous antibiotic intake and hospitalisation also was significantly related to ESBL-BNG isolation (33.1% vs 11.27%; $p < 0.0001$) and (35.8% vs 18.05%; $p < 0.0001$) respectively. Worse BI was related with ESBL-BNG isolation (29.97 vs 45.43; $p < 0.0001$) and also lower LI (0.92 ± 1.97 vs 1.47 ± 2.4; $p = 0.009$).
Conclusions: Prevalence of ESBL-GNB in AGU patients is high and it was related significantly with previous hospitalisation, antibiotics intake, more dependence, urinary incontinence and chronic kidney disease. These results could help deciding empiric antibiotherapy in this type of patients.

P-071

E. Coli sensibilities in patients admitted in an acute geriatrics unit by urinary tract infection

Abstract Area: Acute hospital care

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Introduction: Urinary tract infection (UTI) is a frequent diagnosis of admission in an Acute Geriatrics Unit (AGU). Most of them are caused by gam-negative bacilli (GNB) with high prevalence of E. coli. The aim is to describe antibiotics sensibilities of E. Coli that cause UTI in patients admitted to AGU between 2016–2020.
Methods: Retrospective descriptive study in 566 patients diagnosed with UTI and urine culture analyzed in the first 48 h from admission. Patients with UTI diagnosed during hospital stay were excluded.
Results: N: 566. 72.71% were produced by GNB, most prevalent was E. coli (74.59%). The antibiotics sensibilities were: ampicillin 29.83%, amoxicillin/clavulanic 67.43%, cefuroxime 73.93%, ceftriaxone 74.1%, cefepime 73.42%, cotrimoxazole 63.60%, ciprofloxacin 53.44%, piperacillin/tazobactam 89.96%, imipenem 99%, fosfomycin 93.22%, gentamycin 77.96%.
Conclusions: Patients admitted to AGU with UTI caused by E. coli present high resistances to widely used empiric antibiotics for UTI treatment. Cephalosporins are an effective option for empiric treatment. Carbapenems are recommended as a treatment for critically ill patients in absence of resistances. Fosfomycin is recommended as an empiric treatment in non-severe UTI in patients admitted to AGU.

P-072

One hundred explicit definitions of potentially inappropriate prescriptions of antibiotics in hospitalized older patients

Abstract Area: Acute hospital care

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Introduction: Explicit criteria for potentially inappropriate prescribing (PIP) are useful to improve drug use in the field of geriatric medicine. However, there is no available list dedicated to antibiotic prescriptions. The aim of this study was to develop an expert consensus on explicit definitions of antibiotic PIPs (antibiotic-PIPs) for hospitalized older people.
Methods: We prepared a list of eligible explicit definitions through two preliminary studies (a systematic review and a qualitative study). We then conducted a two-rounds Delphi survey involving French experts on antimicrobial stewardship. Experts gave their opinion on each explicit definition proposed, made comments and could propose new definitions. Proposals with at least 75% of favourable rating were adopted. Results were discussed during consensus meetings after each round.
Results: We proposed a list of 103 explicit definitions of antibiotic-PIPs to the Delphi survey. A total of 155 experts were invited and 128 (82.6%) participated in the whole survey: 59 (46%) were infectious diseases specialists, 45 (35%) geriatricians, and 24 (19%) other specialists. During the first round, 65 explicit definitions were adopted and the participants proposed 21 new definitions. During the second round, 35 explicit definitions were adopted. Results were discussed and validated during consensus meetings, with 44 participants after the first round, and 54 participants after the second round.
Conclusions: This is the first list of 100 explicit definitions of antibiotic-PIPs for hospitalized older patients, that may help to reduce inappropriate prescriptions of antibiotics.

P-073

ABSTRACT 1. Strategic planning of number of geriatric acute care units (GACU) beds and geriatricians needed in spain based on health resources. Projections 2018–2035

Abstract Area: Acute hospital care

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Introduction: National Summary of Hospital Morbidity-2019 published with data of health resources utilization. The aim of this study was to calculate the number of geriatricians needed to cover the 25% and 60% of GACU health resources needed regarding hospital beds and number of geriatricians in Spain.

Methods: Hospital discharges of people aged over 75 from 2012–2019 were registered in 17 Communities-Health-Systems and yearly projections were made until 2035. Average length of stay (A-LOS) was calculated multiplying A-LOS in each age group by number of admissions in each age group. Hospital GACU beds were calculated with Bridgman´s formula under different assumptions. Considering 60% of acute care admissions to be candidates to admission in GACU and considering a minimum recommended by Spanish Geriatric Medicine Society (SEMEG) of 25% admissions of over 75 yr-old. Ratios of 10–8 beds per geriatrician have been considered.
Results: During 2019 ENMH publishes 1440630 hospital acute-care admissions in people over 75 yr with an A-LOS of 10.38 days. Depending on the standard considered, between 12.751 GACU-beds and 30.602 GACU-beds (3060–3825 geriatricians) are needed considering 2019 admissions. When hospital admissions projections based on previous years are considered until 2035, 1.934.545 admissions are projected with an A-LOS of 17,38. Between 27093 and 65023 GACU-beds and ranges of 6502 and 8128 geriatricians will be needed.
Conclusions: Strategic planning of care needs may be useful to take actions to plan both health care resources, continuing care needs and young geriatricians training needs

P-074

Prevalence of acute medical conditions in patients in a long-term care facility

Abstract Area: Acute hospital care

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Introduction: Acute medical conditions are important events in the health trajectory in the elderly. An acute medical illness is a stressful and potentially dangerous event for older persons that often leads to clinical complications, such as functional decline, dysability and mortality. Very old frail patients and those with preadmission functional limitation are at higher risk of complications.
Methods: An observational study of the development of the acute conditions in patients hospitalized in the long-term care facility was conducted from January 2022 to March 2022. 124 patients > 65 years old were enrolled. The prevalence of the acute conditions—pneumonia, acute renal failure, acute heart failure, bone fractures and stroke, as well as the mortality rate, were evaluated. The patients with acute illness were transferred to the acute geriatric ward/intensive care.
Results: 124 patients were enrolled, 85 females, 39 males, with mean age 78.58 $\pm$ 7.24 years. Acute conditions have developed 76 patients (61.3%, 33.8% females, 27.4% males). The prevalence of the specific conditions was: pneumonia 33(43.4%), acute renal failure 12 (15.8%), acute heart failure 21 (27.6%), bone fracture 5 (6.6%) and stroke 5 (6.6%). Fatal outcome was registered in 8 patients (10.5%), 5 in acute heart failure group, 1 in stroke group and 2 in pneumonia group.
Key conclusions: High percent of the patients (61.3%) in a long-term facility has suffered from some acute condition. The mortality rate was higher in acute illness group (OR 2.53, 95% CI 0.51–12.4) and in patients with acute heart failure (OR 4.3, 95% CI 0.9–19.9).

P-075

Acute hemichorea-hemiballismus syndrome secondary to non-ketotic hyperglycemia: about a case

Abstract Area: Acute hospital care

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An 80-years-old man was referred to the Acute Geriatric Unit for the study of the sudden onset of involuntary violent choreathetotic movements in the left arm and leg. Among his comorbidities highlighted a clear cell renal cell carcinoma treated with nephrectomy and a secondary chronic renal failure, and a subsegmental pulmonary thromboembolism 10 months ago. Functionally, he walked with walker and was semi-dependent in BADL (IBmod 68/100). Cognitively intact. He lived with his sister. In physical examination highlighted a hemiballismus in the left side of the body with burns in the left upper and lower limbs due to abnormal movement. In the blood test was objectified a hyperglycemia (283 mg/dL), acute phase reactants and mild worsening of kidney function. A hyperdensity of right basal nuclei was observed in cranial-CT, which was compatible with hemichorea-hemiballismus syndrome due to non-ketotic hyperglycemia. An alteration of right lenticular nucleus with peripheral signal hyperdensity in T2-Flair was objectified in cranial-MRI, confirming the diagnosis. Haloperidol and clonazepam was initially tried, without clinical improvement. Finally, tetrabenazine slightly improved the movements. Hyperglycemia is the second most common cause of the Hemichorea-hemiballismus syndrome (the first is vascular origin). Its pathophysiology is thought to be correlated with cerebral hypoperfusion causing activation of anaerobic metabolism and gamma-aminobutyric acid depletion in basal ganglia neurons, and also alterations in the dopaminergic activity of the striatum. Cranial-MRI is the electing test. In addition to typical and atypical neuroleptic drugs, tetrabenazine is a dopamine depleting drug with weak anticholinergic action that has been described effective.

P-076

Prevalence of frailty in an internal medicine department of a Portuguese tertiary hospital

Abstract Area: Acute hospital care

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Introduction: Hospitalization is a major stressor in frail patients and is often associated with falling and delirium among other complications. Additionally, it leads to clinical deterioration and increased dependency. The aim of this one-day observational study was to

determine the point prevalence of frailty in the elderly population in an internal medicine department of a Portuguese tertiary hospital.
Methods: A one-day point prevalence of frailty was assessed in eligible hospitalized patients over 65 years (48 out of 88 patients) using the Bedside Version of the Edmonton Frail Scale. Factors associated with frailty were assessed.
Results: The overall point prevalence of frailty was 89.6% (43 out of 48 patients). According to Edmonton Frail Scale, we found that 4.2% (2 out of 48) were non-frail, 6.3% (3 out of 48) were vulnerable, 12.5% (6 out of 48) were mildly frail, 37.5% (18 out of 48) were moderately frail with an additional 39.6% (19 out of 48) that were classified as severely frail patients. Age was the most frequent associated factor with frailty.
Key conclusions: In the studied population of internal medicine patients at our hospital, frailty is exceedingly prevalent. Furthermore, among these frail patients, the majority were classified as severely frail. Considering the adverse health outcomes associated with frailty, this finding reinforces the urgent need for frailty assessment and focused intervention in this population.

P-077

Impact of Covid19 on the social frailty of hospitalised geriatric patients

Abstract Area: Acute hospital care

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Introduction: Healthcare Social Worker (HSW) of Geriatrics Interdisciplinary Functional Unit (GIU) is in charge of assessing social frailty of elderly patients admitted in Hospital del Mar.
Aim: Analyze differential characteristics and social risk factors, pre-pandemic and pandemic, from patients assessed by GIU's HSW during 2019 and 2021. METHOD: Retrospective observational study of patients assessed during 2019 and 2021. Data collected: Age, gender, Gijón scale, current Barthel Index (BI) and previous (BIp), Lawton Index (LI), coexistence unit (CU), diagnostic groups (DG), consulting service (CS) and destination at discharge (DD).
Results: A total of 1856 patients were analyzed (922 from 2019 vs 934 from 2021), 47.3% vs 51.3% male. Mean age 77.33 vs 77.99. Gijon Scale 11.08 vs 11.28. BIp 79.53 vs 80.82; BI 32.44 vs 30.35; LI 4.41 vs 4.32. CU: 38.6% vs 38.7% alone; 34.4% vs 33.7% couple; 17.0% vs 21.1% family; 2.2% vs 0.5% institution; 7.8% vs 5.9% others. DG: Traumatologic 38.5% vs 27.4%; Neurologic 11.3% vs 15.9%; Infectious 21.1% vs 27.4%; Cardiac-respiratory 29.1% vs 29.3%. Main CS: Internal Medicine 9.0% vs 12.6%. DD: Intermediate Care Unit 69.5%; home 22.8%; died, 4.4%; residence 1.1%.
Conclusions: No significant differences were found in social frailty situation in the geriatric patients assessed by the GIU. Pre-pandemic patients were more institutionalized whereas pandemic patients increased family coexistence.

P-078

A case of acute transverse myelitis

Abstract Area: Acute hospital care

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Introduction: Acute transverse myelitis (ATM) is a heterogeneous syndrome with an acute and a subacute onset, in which an inflammation of the spinal cord results in neurologic deficits such as weakness, sensory loss and autonomic dysfunction. It ensues significant neurologic implications and requires urgent attention. It is frequently associated with infectious or systemic autoimmune diseases, but its etiology remains unknown in a substantial portion of cases, which are classified as idiopathic.
Case report: A 80 year-old man with a history of coronary artery disease, hypertension and sleep apnea, presented with a 5-day progressive left leg paresis and a loss of proprioceptive sensation, followed by an onset of urinary incontinence and constipation. COVID-19 vaccination was administered 3 months earlier. The brain MRI showed no acute vascular lesions and the spine MRI established the diagnosis of ATM wtih lesions in the thoracic region. Infectious, para-infectious, auto-immune and paraneoplastic etiologies were all excluded. The delay between vaccination and symptoms was considered to be too long. Diagnosis of idiopathic ATM was concluded. No corticosteroid therapy was administered, as our patient spontaneously improved.
Key conclusions: ATM represents an etiologically heterogenous syndrome with significant neurologic implications and a need for urgent attention. Delayed treatment and diagnosis may cause long term sequelae. ATM has been reported as a rare and known complication of various types of vaccination and has been implicated in COVID-19 vaccines. We should keep it in mind in this ongoing pandemic, as it generally declares itself within the first few weeks of vaccination. It was therefore not the primary suspected cause in our patient.

P-079

Economic evaluation of a national intervention to reassess geriatric acute care units (GACU) beds and geriatricians needed in spain according to Spanish Geriatric Medicine Society Recommendations projections 2018–2035

Abstract Area: Acute hospital care

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Introduction: Based on National Summary of Hospital Morbidity 2012–2019 data, projections of number of geriatricians needed to cover the 25% and 60% of GACU health resources needed regarding hospital beds and number of geriatricians in Spain were evaluated. If an intervention was made to reassess care needs according to SPANISH GERIATRIC MEDICINE SOCIETY (SEMEG) recommendations, and GACU-standards of care implemented homogeneusly across the National Territory, the Average Length of Stay (A-LOS) and health resources needed were recalculated, as well as the economic savings.
Methods: Hospital discharges of people aged over 75 from 2012–2019 and yearly projections were made until 2035. Average length of stay (A-LOS) was calculated multiplying A-LOS in each age group by number of admissions in each age group. Hospital GACU beds were calculated with Bridgman´s formula under different assumptions. Considering data suggested by literature (Baztan, 2009) and recommendations of the Spanish Geriatric Medicine Society (SEMEG) data were recalculated to meet standards of care (10 days A-LOS) or Literature findings (− 10%).
Results: in the event of meeting standard of care of 10 days A-LOS, between 15583 and 37413 beds would be needed and, in the case of reduction of 10% in A-LOS, 24384 beds and 58520 beds would be needed. Geriatricians needed would range from 5852 to 7315. The econocmic cost of a hospital bed/day in Spain is around 1000 euros in 2022 and assuming the same price for 2035, with no intervention this would cost from 98.889.450 annual euro to 237.333.950 euro. With the GACU intervention, the annual cost could range from 56.899.850 to 136.557.450 euro in the first assumption and from 89.001.600 to 213.598.000 euro in the second assumption.
Conclusions: There is a wide window of opportunity to work in pro of the sostenibility of the Spanish Health Care National System, by approaching a GACU National Health System

P-080

Sensory deprivation in older medical inpatients—are we aware enough?

Abstract Area: Acute hospital care

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Background: Visual and hearing impairment is common amongst older adults admitted to the acute hospital setting. Sensory deprivation can contribute to falls and incidence of delirium, particularly in those who have underlying cognitive impairment. Interventions which reduce sensory deprivation have been recommended to avoid these complication {1}.
Methods: Patients over 75 admitted to 11 medical wards in a University Teaching Hospital were assessed. Baseline demographics were collected. Documentation regarding hearing and visual impairment, delirium, completion of 4 AT, and underlying cognitive impairment was reviewed. Inpatient falls were documented.
Results: 100 older adults were included in the audit. (Mean age—83.5). 73% of patients had a visual impairment and 23% had a hearing impairment. 67% had access to their glasses and only 27% of patients had access to their hearing aids. Documentation of sensory disability in either medical or nursing notes was 19%. 29% of patients had documented delirium during their inpatient stay. 4AT was performed on 76% of admitted older adults in the selected wards.
Conclusion: Visual and hearing impairment is common amongst older admitted medical inpatients. Despite this, there can be a lack of access to glasses and hearing aids. There is a paucity of documentation regarding sensory deprivation, therefore interventions targeting this risk factor for delirium may not be allocated to the cohort most at risk. We recommend strategies highlighting awareness of sensory deprivation in older adults admitted to hospital. 1.Surkan, M.J. and Gibson, W., 2018. Interventions to mobilize elderly patients and reduce length of hospital stay. Canadian journal of cardiology, 34(7), pp.881–888.

P-081

Abscess in iliopsoas in relation to osteosynthesis. about a case

Abstract Area: Acute hospital care

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A 97-year-old man was referred to the Acute Geriatric Unit from Geriatric Home Care for functional impairment and analytical alterations (dissociated cholestasis pattern and elevation of acute-phase reactants. The patient has operated on left pertrochanteric fracture one month ago, and he had returned to the emergency room due to fever and gluteal swelling after an injury, that had improved with Levofloxacino. Functionally, he was dependent in BADLs since the fracture, being a wheelchair user. Cognitively, he had a moderate cognitive impairment. He lived at home with his daughter. As comorbidities highlighted Type II Diabetes, atrial fibrillation, arterial hypertension, and a right ischiopubic ramus fracture 4 months ago. In physical examination was observed somnolence and edema and swelling in the left lower limb. After analytical worsening, a CT angiography showed subsegmental pulmonary thromboembolism, and a left lower limb CT objected an abscess in the iliopsoas and left hip in relation to osteosynthesis. In abdominal echography chronic liver disease was observed. He was referred to Traumatology for treatment, but finally, the patient died. Although rare, iliopsoas abscess has a high rate of morbidity and mortality. Its diagnosis is difficult given the numerous etiologies (one could be osteosynthesis material) and varied clinical presentation, which varies by country. It is more prevalent in immunocompromised (Diabetes Mellitus and VIH above all), and can be confused with an uninfected hematoma. Antibiotic coverage and surgical or percutaneous drainage are the main treatment.

P-082

leukocytoclastic vasculitis: manifestation of ulcers in lower limbs

Abstract Area: Acute hospital care

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Introduction: Leukocytoclastic vasculitis (LCV) is a small vessel vasculitis that usually affects only the skin, with systemic involvement being infrequent. The age range of presentation is wide, being infrequent in elderly. The cause in 50% of cases is idiopathic; however, histopathologic diagnosis by biopsy should be performed as soon as possible to rule out other causes such as systemic, neoplastic or infectious diseases.
Methods: 94-year-old male patient with 18 days of evolution, with ulcer on the right foot and leg, with torpid evolution despite antibiotic treatment at home, with subsequent appearance of erythematous-violaceous plaques with purpuric border and vesiculo-pustules and pustules on the surface of both ankles, with significant edema in both legs, ankles and feet, admitted to the geriatric acute care unit due to poor evolution of lesions and increased extension of lesions on the trunk and upper limbs. Arterial and/or venous pathology was initially ruled out by vascular surgery. Due to increased C-reactive protein and leukocytosis 13,000 μL, empirical treatment with ceftriaxone was started. He also presented proteinuria of 5 g/L/day. Skin biopsy of lesions was taken, confirming leukocytoclastic vasculitis, with focal reactivity to IgA, initiating treatment with corticosteroids at 0.5 mg/kg/day. Microbiological study was negative.
Conclusions: It is a rare pathology, being the diagnostic approach a challenge for our clinical practice, due to the great variability of its clinical manifestations and causes. Systemic glucocorticoids are the most commonly used agents for the treatment of acute single episodes of LCV.

P-083

Factors associated with adverse outcomes in older adults directly discharged from the Emergency Department

Abstract Area: Acute hospital care

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Over 40% are directly discharged from the ED. The risk of adverse outcomes is high following discharge including unplanned ED return, institutionalisation, and mortality. The purpose of this study was to highlight factors that predict these adverse outcomes. A secondary analysis was completed of SOAED (a prospective cohort study examining screening instruments to predict adverse outcomes for undifferentiated older adults attending the ED) and OPTIMEND (randomised control trial examining the effectiveness of an intervention by a team of Health and Social Care Professionals along with usual care and compared this to standard ED care alone). 309 patients were discharged directly from ED (mean age 80 years; 58% female). 96 patients re-attended ED, and 66 patients were re-hospitalised within 6 months. 16 patients died within six months of discharge. 63% of the discharged patients screened positive for frailty measured by PRISMA-7 (3 or more). Relative risk ratio analysis confirmed that the risk of revisiting a hospital was 1.241 times for patients that scored frail compared to those who scored not frail. The risk of mortality was 1.075 times for patients that scored frail compared to those who scored not frail. The risk of being admitted to a nursing home was 1.146 times for patients that scored frail compared to those who scored not frail. Older people have a high ED re-attendance rate of 31%. Frailty (scored on PRISMA-7) is a significant predictor of adverse outcomes. Focused screening and intervention for frail patients who attend the ED should be a priority.

P-084

Ageing and HIV-risk in non-gravid female humans

Abstract Area: Ageing biology

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Background: Mammalian reproductive endocrine system has been associated with a number of immune functions, some potentially beneficial against viral illnesses. However, the concept of reproductive endocrine (dys)-functions against HIV infection in humans is ill-understood. Objective: to estimate the association between clinical conditions associated with total abdominal hysterectomy (a marker of ageing process) and immune functions (i.e. HIV-risk) among adult non-gravid female humans.
Design and Methods: We did a secondary data analysis, from a prospective, observational, hospital-based study conducted in Dar es Salaam, Tanzania between March-October 2017. The primary study population included all women planned for Total Abdominal Hysterectomy (TAH). Independent variables included chronological age, family/social history, sexual activity history (recent & distant), comorbidity, medication history, vitals and clinical indications for TAH. HIV-risk was the dependent variable. We analysed each participant in the primary study from the time of surgery plan, to at most 72-h post-hysterectomy and/or discharge from the ward, whichever came first. Data were analysed via a generalized linear model using SAS statistical software version 9.4. Verbal informed consent was sought from each participant prior to recruitment into the primary study.
Results: We analysed 40981 women-days of follow-up. None of the participant seroconverted against HIV, making an HIV-incidence of 0/40981 women-days. All participants were black Africans (median age 42 (IQR: 37–47) years). We found a statistically significant drop in HIV-risk after age 45 (aOR: 0.687, 95% C.I.: .445—.897) among hysterectomised women. Serial correlation between age and HIV-serostatus was found ($\gamma = -0.514$, $P < 0.001$). Association between HIV and marital stata was barely significant ($\chi 2 = 8.0176$, $df = 3$; $p = .0457$).
Conclusion: There was a statistically significant reduced risk of HIV after age of 45 among hysterectomised women in this study. None of the participant seroconverted against HIV during the follow-up period. Participants who reported married had the highest HIV-seropositivity rate. Recommendations: Ageing process may not necessarily be a deleterious process in humans!

P-085

Lipid profile and risk for cardiac events in elderly patients

Abstract Area: Ageing biology

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Introduction: There is a significant connection between age and lipid profile and as we age, the prevalence of lipid disturbances increases and thus, the risk for cardiovascular diseases. The aim of the research was to determine the relationship between atherogenic index (AI), HeartScore and lipid changes, in elderly patients.
Methods: Study was conducted among 196 patients: elderly group-over 65 years ($n = 136$) compared to adult group ($n = 60$). We calculated AI as log (trygliceride/HDLcholesterol) and HeartScore with a risk assessment system and the risk divided into 3 categories: low, medium and high.
Results: For both groups, AI has a value above 0.24 indicating a high atherogenic risk for all patients included in the study. HeartScore values in elderly patients are raised with 61.08% (4.24 vs. 1.65, $p < 0.0001$) compared with adults. Linear regression equation revealed a positive significant correlation between HeartScore and AI at both elderly ($r = 0.348$, $p < 0.0001$) and adult patients ($r = 0.336$, $p < 0.01$) and HeartScore is also positively correlated with age ($r = 0.434$, $p < 0.0001$).
Conclusion: Changes in lipid profile begin early in adult life, and level of risk remains high as we age. On the contrary, risk of developing cardiovascular diseases is at low-medium level for adults and rose at high-very high level at elderly. It can be concluded that aging and risk for cardiovascular diseases are in a strong and close relationship. Thus, AI and HeartScore can be a useful tool for diagnosis and prevention of major cardiac events.

P-086

Focus on possible drug interactions between oral anticoagulants VKA or DOACs and cranberries in older women living in nursing homes (a risky association?)

Abstract Area: Ageing biology

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In order to prevent the infection of urinary tracts in older women living in nursing homes, a daily ingestion of cranberries, particularly cranberry juice, has been promoted though the beneficial effect of cranberries in preventing symptomatic infections has not really been shown yet. Despite the existing controversy about their supposed effectiveness, cranberries are often given to older women to treat urinary infections and to avoid antibiotic treatments. Nevertheless, published studies investigating the effectiveness of cranberry consumption have led to contradictory.
Results: People being treated with VKA (Vitamin K antagonist) should avoid ingesting a lot of cranberries because of potential interactions (3 drugs available in France: acénocoumarol, fluindione, warfarin). Interactions between cranberries and direct oral anticoagulants (DOACs), 3 drugs available in France: apixaban, dabigatran, rivaroxaban, have not yet been reported. The poster focuses on the possible interactions and their mechanisms between cranberries and oral anticoagulants, ingested together, reported in the literature and by pharmacovigilance data. Therefore particular caution must be exercised before drinking or eating cranberries when on VKA or DOACs.

P-087

Unusual presentation of sarcoidosis in elderly: a case report

Abstract Area: Ageing biology

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Introduction: Sarcoïdosis is a multisystem granulomatous disease with several features. All organs can be involved, but most commonly the lungs. Pulmonary hypertension, a common manifestation of advanced sarcoïdosis, is thought to result from fibrosis with chronic hypoxia and destruction of small vessels, extrinsic compression of pulmonary arteries, or granulomatous vasculitis. We report a case of sarcoidosis-associated pulmonary hypertension in elderly.
Case report: A 73-year-old woman with a medical history of mellitus diabetes, was admitted for severe hypercalcemia at 3.35 mmol/l. A month ago, she was presenting with syncope and shortness of breath secondary to obstructive cardiomyopathy in the department of Cardiology. Physical examination showed blood pressure 140/85 mmHg; heart rate 84; respiratory rate 16, and SaO2 at room air was 96% at rest, bilateral pulmonary crackles and bilateral axillary lymph nodes. The remainder of the examination was unremarkable. Thoracic/abdominal CT scan revealed deep lymph nodes, pulmonary micronodules and enlargement of the pulmonary arteries. Our patient was diagnosed with sarcoidosis based on noncaseating granulomatous inflammation on bronchial biopsy, high level of angiotensin converting enzyme and negative tuberculin skin reaction. Repeated cardiac ultrasound revealed pulmonary arterial hypertension at 47 mmHg. She was treated with corticosteroïds 0.5 mg/kg day with good clinical outcomes and hypercalcaemia resolved. Prednisone was slowly tapered over 2 years. The follow-up is 5 years with no relapse.
Conclusion: The disease course and management of sarcoidosis in older patients may be different. This case illustrates the importance of complete testing to establish, espacially in elderly a correct diagnosis.

P-088

Nature therapy and active ageing: Calabriando study

Abstract Area: Ageing biology

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The objectives of this study were to assess the effect of a specific physical activity programme on a group of persons observed for active ageing, in Catanzaro (Italy). Specifically, we enlisted a group of people, evaluating their cognitive function (MMSE) and psychophysical well-being (BIDA), at the beginning and at the end of the physical activity program. Body Image Dimensional Evaluation Tool (BIDA) has been used. The program, carried out with medical examination, included walking in the mountain woods for five consecutive days (from 12 to 15 km/day). The participants were recruited by "ASD Calabriando", amateur sports association, in Catanzaro, Italy. At the baseline (T0) and after 5 days (T1), cognitive functionality and Psycho-Physical Well-being, were evaluated by MMSE and BIDA, respectfullyA total of 15 subjects (59.73 ± 7.10 years, M = 53%) were enrolled. Partecipants had to indicate their perceived and ideal body shape, the most appropriate body shape for their peers, and the body shape most appreciated by the opposite sex. From the Data Analysis, it appears that there has been an improvement in cognitive functionality, detected with the MMSE (29,20 ± 1,01 vs 29,87 ± 0,35; P = 0,012) As for the BIDA, there was a significant difference only between pre and post CBD (− 11.17 ± 20.20 vs − 20.78 ± 20.92: P = 0.037). These preliminary data are very suggestive and demonstrate the need for a careful choice of physical activity program on people who aspire to a successful aging. The implementation of the collected data will bring further details

P-089

Investigation on the prevalence of microalbuminuria in middle-aged and older adults in the community

Abstract Area: Ageing biology

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Introduction: Early diagnosis of chronic kidney disease can prevent its progression to end-stage renal disease. It is more accurate to predict the prognosis of CKD in combination with glomerular filtration rate and albuminuria. However, previous studies have mostly used urine dipstick testing to detect proteinuria and there is a lack of information on microalbuminuria.
Methods: Data for this study were extracted from the community proteinuria screening Database of Taichung Veterans Hospital in the years 2021. All participants were aged 40 years and older. Demographic data including age, educational level, past medical history, and family history are collected. Microalbumin and albumin to creatinine ratio (UACR) of urine are checked for albuminuria screening.
Results: A total of 234 older adults participated in this community microalbuminuria screening. We defined patients with microalbuminuria as having Random Urine Microalbumin > 1.9 mg/dL. The prevalence of microalbuminuria was found to be 32.4%. Higher rates of microalbuminuria in people of advanced age (70.01 ± 10.35vs 77.49 ± 10.04, $p < 0.001$), hypertension (35.4% vs 56.6%, $p = 0.002$), diabetes (15.8% vs 28.9%, $p = 0.019$) and those on long-term medication (65.8% vs 80.3%, $p = 0.023$). We use urine albumin to creatinine ratio (UACR) > 30 mg/g as the cut-off point. The prevalence of microalbuminuria was found to be 32.4%. Participants with a history of hypertension (39.2% vs 55.6%, $p = 0.045$), diabetes (14.3% vs 44.4%, $p < 0.001$) and hepatitis C (0% vs 2.2%, $p = 0.04$) have a higher rate of (UACR) > 30 mg/g. The proportion of microalbuminuria was not higher in participants with hyperlipidemia.
Key conclusions: In the community, we need to pay more attention to microalbuminuria in older people with a history of hypertension and diabetes.

P-090

Characterization of immunosenescence in multiple sclerosis through the analysis of immunological cell populations

Abstract Area: Ageing biology

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Introduction: Immunosenescence is an age-related process that leads to a progressive reduction in the ability of the immune system (IS) to trigger effective immunological responses. The continuous activation of the IS could lead to premature immunosenescence, which has been linked to immune-mediated diseases like rheumatoid arthritis, Alzheimer disease or multiple sclerosis (MS). Despite this, much remains to be discovered. Our aim was to analyze the principal immunological cell populations, their function (immunological response) and senescence marks to characterize possible premature immunosenescence in MS.
Methods: Blood samples of 42 healthy controls (HC) and 68 MS patients from different ages (20–82) were obtained. Three different multicolor flow cytometry panels were designed. Cell surface markers were used to analyze immunosenescence and immunological response (CD3/CD19/CD56/CD14/CD16/CD4/CD8/CD28/CD57/CD69/CD25/CD127/CD196). The correlation analysis with age was done with the percentage data in IBM SPSS Statistics and R studio.
Results: We found that age-related changes in natural killer, monocyte, B and T cell populations differed between MS and HC. Regarding senescent cells, CD8 + CD28-CD57 + cells increase in both groups, but only reached statistical significance for MS patients. The CD8 + CD28 + CD57- cells increase with age in MS patients, while they fall in HC. MS patients present an overall raise of CD28 antigen with age in CD8 + cells.
Key conclusions: Our results show age-related differences in some of the main immunological populations between MS and HC, suggesting that aging mechanisms are different in MS patients. However, premature immunosenescence could not be confirmed. Further research is needed to understand the mechanism behind these promising results.

P-092

The prevalence of oxidative stress at older patients with metabolic syndrome

Abstract Area: Ageing biology

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Intoduction: Metabolic syndrome (MS) is a clinical condition characterized by a group of metabolic risk factors (central obesity, high blood pressure, high fasting glucose, and dyslipidemia) responsible for the onset and development of cardiovascular disease and diabetes. The multitude of factors that contribute to the increased risk of triggering cardiovascular disease varies depending on which component of the syndrome is present and its association with other non-metabolic risk factors. It has been reported that patients with MS have decreased antioxidant protection, and increased protein and lipid oxidation levels. Oxidative stress plays an important role in the pathogenesis of vascular alterations by either triggering or intensifying the biochemical processes accompanying the metabolic syndrome.
Methods: Our study has proposed to evaluate the association between metabolic syndrome and low density lipoproteins susceptibility to lipid peroxidation (LDLox) in two study groups of older patients (aged 68.4 ± 9.8 years): a group of control patients and a group of patient with metabolic syndrome. The LDL susceptibility to in vitro induced lipid peroxidation was evaluated following its incubation with a FeSO4/ascorbic acid prooxidant system.
Results: Results obtained showed the susceptibility of LDL to in vitro oxidation has been increased in metabolic syndrome group (3.29 ± 2.81 v.s. 1.52 ± 0.97 mmoles MDA/dL serum) compared to the control group.
Key conclusions: This results indicate that lipid peroxidation, as an index of oxidative stress, it associated with metabolic syndrome, especially in aging process, when metabolic and cardiovascular diseases are present and the risk of diseases increases with age.

P-093

What is the impact of acute healthcare utilisation on functional decline in older adults over time? a population-based cohort study. What is the impact of acute healthcare utilisation on functional decline in older adults over time? A Population-Bas

Abstract Area: Ageing biology

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Introduction: Acute healthcare use varies by age, with older adults the highest users of most acute healthcare services. Using data from The Irish Longitudinal Study on Ageing (TILDA), the aim of this study was to investigate the impact of acute healthcare utilisation at baseline on subjective and objective measures of function at four-year follow-up in older adults.
Methods: This study represents a secondary analysis of a prospective cohort study where data from Wave 1 and Wave 3 of TILDA were analysed in conjunction with a public and patient involvement group of older adults. Acute healthcare utilisation was defined as an Emergency Department (ED) visit with or without hospitalisation in the previous 12 months. Function was assessed objectively using Timed-Up-and Go (TUG) and grip strength and subjectively using self-report limitations in activities of daily living and instrumental activities of daily living.
Results: A total of 1516 participants met the study inclusion criteria. Mean age was 70.9 years (SD = 4.6) and 48% were male. At baseline, 1280 participants reported no acute healthcare use. 118 indicated an ED visit but no hospitalisation in the previous twelve months and 118 reported both an ED visit and hospitalisation. Adjusting for all covariates, compared to those with no acute healthcare utilisation, those with an ED visit with no hospital admission had poorer TUG performance at follow up ($\beta = 0.67$, 95% CI: 0.34, 1.29, $p = 0.039$).
Key conclusion: The results of this study support a relationship between acute healthcare utilisation and functional decline assessed by TUG at follow-up.

P-094

The association of oxidative and antioxidant potential with physical activity in the group of 60- to 65-year-old seniors from Central Poland

Abstract Area: Ageing biology

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Introduction: Oxidative stress is linked with cardio-metabolic risk. On the other hand, health promoting factors such as physical activity may influence both the redox balance and cardio-metabolic risk. The pathophysiological pathways between those components are to be determined.
Methods: In the group comprised of sex matched 300 subjects, we evaluated the physical activity according to the Stanford and Seven Day Physical Activity Recall (7DPAR) Questionaries. Secondly, we assessed total antioxidative status (TAS), total oxidative status (TOS) and other markers of oxidative stress like plasma and platelets lipid peroxides, free thiol and amino groups in platelets and plasma proteins, and finally superoxide anion generated by resting and homocysteinylated platelets.
Results: Moderate physical activities were not related to oxidative stress markers. Subjects with at least one intensive physical activity from Stanford questionnaire had significantly lower level of TOS. Lower energy expenditure assessed by 7DPAR was associated with higher TAS, higher lipid peroxides free thiol and amino groups in platelets proteins and higher superoxide anion generation.
Conclusions: Recreational physical activity may be significantly related to the level of oxidative stress, but its protective effect seems to depend on its intensity. Increased physical activity measured by energy expenditure (also taking into account professional physical activity) seems to have a negative impact on the markers of oxidative stress, especially those associated with blood platelets.
Keywords: Oxidative stress, physical activity, elderly people.

P-095

Causes of anemia in the elderly

Abstract Area: Ageing biology

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Introduction: Anemia is a major public health problem very common among the elderly. It could have several etiologies and contributes significantly to morbidity, mortality and poor quality of life. The aim of this study is to determine the main causes of anemia in the elderly.
Patients and methods: We carried out a retrospective study including patients aged 65 years and older who were hospitalized for anemia in the Internal Medicine Department of Mahdia University Hospital, between January 2012 and December 2020.
Results: 47 patients older than 65 years were admitted to our department during the study period for anemia. The mean age was 78.04 years (65–69). The female gender was predominant (57,4%). 59.6% of patients were polypathological. Anemia was poorly tolerated in 70.2%. The mean hemoglobin level was 5.72 g/dl (3.10 g/dl–10.3 g/dl). Anemia was microcytic in 51.1%, macrocytic in 46.8% and normocytic in 2.1%. It was associated in 23.4% of cases with leucopenia and in 31.9% with thrombopenia. Iron deficiency was the most common etiology (53.2%), followed by megaloblastic anemia (42.6%). A central origin was reported in only one case as well as renal failure. The most common mechanism was vitamin b12 deficiency (42.6%), inadequat iron intake in 17% of cases, followed by malabsorption (8.5%). Blood loss was reported in 6.4%; digestive and gynecologic bleeding in respectively 4.3% and 2.1% of cases. Etiological survey was negative in 21.3%.
Conclusion: Anemia is a frequent pathology in geriatrics requiring a detailed etiological investigation for a better multidisciplinary management.

P-096

Circumstances of discovery of anaemia in the elderly

Abstract Area: Ageing biology

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Introduction: Anemia is a common diagnosis in the geriatric population. The tolerance and symptomatology of anaemia in the elderly is highly variable from patient to patient depending on ageing and comorbidities. It is recognised as a major risk factor for hospitalisation, morbidity and mortality in the elderly. The aim of this study was to describe the different circumstances of discovery of anemia in the Department of Internal Medicine of mahdia university hospital.
Patients and methods: We performed a retrospective study of 47 patients aged 65 years and older who were hospitalized for anemia in the internal Medicine Department of Mahdia University Hospital, over a 8-year period (January 2012 to December 2020).
Results: A total of 47 patients aged 65 years or older were hospitalized for anemia during the study period. The mean age was 78.04 ± 7.66 years with a female predominance (57.4%). The mean hemoglobin level was 5.72 ± 1.66 g/dl. The discovery of anaemia was incidental in 6.4% (n = 3) it was revealed by an anemic syndrome in 23.4%(n = 11) and by a poorly tolerated anaemia in 70.2% (n = 33). The signs of mal-tolerance were in order of frequency; poorly tolerated tachycardia (n = 7),hypotension (n = 7),lipothymia (n = 6), anginal pain (n = 4), resting dyspnea (n = 4),neurofocal deficit (n = 3) and lower limb oedema (n = 1).
Conclusion: Given the frailty of the elderly and the serious complications of anaemia, it is important to detect anaemia early and manage it in a multidisciplinary manner.

P-097

Encouraging physical activity or decreasing sedentary behaviour in community dwelling 50–70 year olds: systematic review

Abstract Area: Ageing biology

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Introduction: Increasing physical activity and/or decreasing sedentary behaviours is an important part in delaying the onset of long-term conditions. Physical activity can help maintain function and independence, decrease the need for hospitalisation/institutionalisation and provide important socioeconomic benefits to healthcare providers. Previous reviews have focused on the 'oldest' old, so we conducted a systematic review of evidence in community dwelling adults aged 50–70.
Methods: The review followed PRISMA guidelines (PROSPERO registration CRD42020169957). The interventions were psycho-social, non-pharmacological, and non-invasive interventions utilising components based on counselling, education, and Behaviour Change Techniques (BCTs), that evaluated change in physical activity and/or sedentary behaviour.
Results: Eleven RCT studies fulfilled our inclusion criteria. Interventions (duration 12–52 weeks) utilised a blended approach for delivery. The Trans-Theoretical Model and Social Cognitive Theory were the most commonly used models, and the number of BCTs used ranged from 16 to 37. Nine studies were effective in increasing the amount of physical activity (total number of days or minutes) during the interventions, however two studies displayed no change in physical activity when compared to baseline measurements. Changes in physical activity were categorised and assessed using different measures of physical activity, which affected comparability of results between study interventions.
Conclusion: The interventions evaluated were effective in the short term, but longer follow-ups are needed to evaluate if effects can be maintained. The use of BCTs is effective, but more focus is needed to address the potential barriers. Future trials need to incorporate measures of fidelity to ensure correct implementation.

P-098

Outcome prediction: the Metabolomic Mortality Score and the Multidimensional Prognostic Index

Abstract Area: Ageing biology

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Background: The development of "true" biological metrics of aging is an active area of investigation and several "aging clocks" have been developed based on diverse omics-data from gene-expression, DNA- methylation to metabolomics. Although these indexes should capture the biological mechanism of aging and may reveal trajectories

of aging that are different between individuals, these tools are largely tuned on chronological age only.
Patients & Methods: Within the frame of a large prospective study with one year follow up in the Emergency Department (ED) (> 1,000 participants until time of submission), a blood withdrawal for NMR-spectroscopy metabolomic analyses as well as the comprehensive geriatric assessment (CGA)—based Multidimensional Prognostic Index (MPI) as a surrogate marker of biological age were performed in a subgroup of 191 patients (85F, 76.5 ± 6.8y).
Results: The well-established Metabolomic Mortality Score (MMS) and the MPI correlated well ($r = 0.3$, $p < 0.0001$) independent of chronological age. The MMS predicted mortality at one year more strongly ($p < 0.0001$) than the MPI ($p = 0.007$).
Conclusion: Despite the preliminary nature of the analyses, the MMS appears to be a stronger predictor of mortality in older patients admitted to the ED compared to the MPI. Further analyses are ongoing to explore more in depth these associations, as the MPI and the MMS might enhance each other to capture together the more representative multidimensional, biopsychosocial risk profile with advancing age.

P-099

Diagnosis and treatment of suspected obstructive sleep apnoea (OSA) in older people: a retrospective comparative analysis

Abstract Area: Ageing biology

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Background: OSA is common yet often undiagnosed in older people as symptoms of fatigue and poor sleep are common and non-specific. OSA screening tools also lack validity in older patients. This study aims to review the clinical presentation, use of screening tools and treatment adherence in older people.
Methods: A retrospective cohort study of patients > 65 years attending a tertiary sleep clinic who underwent polysomnography for suspected OSA was performed. Electronic patient records were interrogated and CPAP usage rates were compared with a matched cohort of 176 patients < 65 years.
Results: A convenience sample of 100 consecutive older patients were included. Snoring was reported in 86%, apnoeas in 56% and fatigue in 53%. Moderate or severe OSA was confirmed by polysomnography in 91% cases. BMI and the STOP-BANG questionnaire were positively correlated with OSA severity as measured by Apnoea Hypopnea Index, while ESS and Berlin Questionnaire were not. Positive pressure ventilation was initiated in 90% patients. CPAP was extremely effective with the median AHI falling to within normal range on follow up. CPAP usage was significantly higher in older patients compared with younger matched control (85% vs 66% $p = 013$).
Conclusion: Older people present with classical symptoms of OSA. The screening tool Berlin Questionnaire did not perform as well as the STOP-BANG in this patient population. Usage rates and efficacy with CPAP was extremely high in older patients.

P-100

Sarcopenia physical activity and metabolomic

Abstract Area: Ageing biology

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Sarcopenia is a factor of frailty and therefore, ultimately, of loss of autonomy in the elderly. Currently, no biomarker of muscle failure has a high sensitivity, specificity and positive predictive value. Several results, although preliminary, suggest that metabolomics could facilitate the early identification of frail patients, allowing the implementation of primary prevention strategies. Untargeted high-resolution metabolomics analysis would identify discriminative biomarkers and biological mechanisms associated with frailty. Finally, the hypothesis that metabolic signatures can be identified as risk factors for the development of age-related dynapenia should be tested in a longitudinal design. The aim of this study is to identify metabolomic signatures of muscle failure in the elderly. 60 patients were included (30 sarcopenic and 30 non-sarcopenic). Preliminary results appear to show that participants with sarcopenia were characterized by higher levels of asparagine, aspartic acid, citrulline, ethanolamine, glutamic acid, sarcosine, and taurine, whereas higher concentrations of alpha-amino butyric acid and methionine were found non-sarcopenic. This study will contribute to the improvement of knowledge on the diagnosis of sarcopenia. In addition, it will help to improve management by proposing optimal training programs.

P-1000

What trans- national sex and age disaggregated data has taught us about prescribing practices that are consistent with or suggestive of potential prescribing cascades

Abstract Area: Pharmacology

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Introduction: Prescribing cascades are a key contributor to problematic polypharmacy. To date, little is known about sex and age disaggregated data using different types of data, across settings of care and countries, that can identify patterns and gender differences in the occurrence of prescribing cascades.
Methods: We conducted a cross-sectional study of adults ≥ 65 years using data from: (a) ICES Canada; (b) Maccabi Healthcare Services (MHS) Israel; (c) REPORTAGE from geriatric hospital admissions, Italy; (d) multi-country SHELTER data on long-term care (LTC)

residents; and (e) multi-country SENATOR hospitalized patients clinical trial data. Gender variables included socioeconomic status, education, marital status. The prevalence of co-prescribing calcium channel blockers (CCB) and diuretics was examined as a marker for a potential prescribing cascade.
Results: ICES included 2,303,982 older people (54% women) in community and 75,356 (69% women) in LTC. MHS included 296,419 (54% women) in community and 6,716 (68% women) in LTC. REPORTAGE had 6,737 (58% women), SHELTER had 3,966 (74% women), and SENATOR had 1,537 (47% women). Women were older (all datasets), poorer (18% vs 13%; ICES), had less university education (46% vs 33%; SENATOR) and were more often widowed (55% vs 23%; REPORTAGE, 70% vs 37%; SHELTER). Co-prescribing of CCBs and diuretics occurred in 2.2%–9.6% of the population, with this potential cascade occurring more commonly in women across all settings.
Conclusions: Across different settings of care and countries, our findings suggest that women experience a potential CCB-diuretic prescribing cascade more commonly than men, suggesting a true gender difference in cascade risk.

P-1001

Statins in geriatric patients with pressure ulcers as deprescribing target—retrospective analysis

Abstract Area: Pharmacology

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Introduction: Pressure ulcerations often develop in severely ill patients. Statins are very popular drugs with proven effectiveness in cardiovascular protection. However, their usage in patients who develop pressure ulcers for instance severely frail or end-stage dementia patients, is debatable.
Methods: We did retrospective review of electronic medical records of patients aged $\geq$ 65 years hospitalized between January 2019 and December 2020 in the Department of Internal Medicine and Geriatrics of the University Hospital, Cracow, Poland. The indications for the usage of statins were defined as the history of a stroke or myocardial infarction or atherosclerosis.
Results: Pressure ulcers were diagnosed in 168 of 1,291 patients (13.0%). Thirty-eight (22.6%) of them were taking a statin preparation at the time of hospital admission. Thirteen patients (34.2% of those on statin) did not have indications for statin use. The following pathologies were diagnosed in the analyzed group: deterioration of the nutritional status—26 (68.4%), appetite disorder—8 (21.1%), dementia—13 (34.2%), low (< 35 g/dl) albumin level—30 (78.9%). Nineteen patients (50%) died during hospitalization.
Conclusions: Significant percentage of patients with pressure ulcerations take statins without clear-cut indications. Despite the short expected survival which is an important indication for active deprescribing, many patients with pressure ulcerations take medications that they cannot benefit from. These results encourage further research in this area.

P-1002

Medication and urine

Abstract Area: Pharmacology

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A 67 year old female, presented with pyrexia, confusion, cough and "orange" coloured urine. Past medical history included COPD, hypertension and recently diagnosed rheumatoid arthritis. Medication history included salbutamol inhaler 2 puffs QDS, amlodipine 10 mg OD, hydroxychloroquine 200 mg OD and sulfasalazine 1 g TDS. An orange urine colour was initially queried as haematuria, prompting investigation for UTI and referral to urology. Upon pharmacist medication review, it was highlighted that an orange urine colour may be due to the patient's newly started medication: sulfasalazine. Urine inspection and analysis can be a clinically helpful assessment tool for reaching a diagnosis, and in helping to point towards current-medications the patient is taking. Urine output will also give crucial information about the kidney function prior to laboratory testing—for example oliguria is the first sign of acute kidney injury; before increase of urea and creatinine and decline in eGFR, a reduced urine output will indicate pathology. Medications can affect the urine in several aspects: symptoms, output, colour, pH, and electrolyte content. Therefore, urine inspection and analysis can be very helpful clinical tools. What urine colour can show:Colour: Associated Medicine: -Orange: Sulfasalazine, Ferrioxamine, Rifampicin and WarfarinBright yellow: Vitamin B supplements (particularly vitamin B12). Reddish brown: Levadopa, nitrofurantoin, metronidazole and ChloroquineGreen: Amitriptyline, Cimetidine, Indomethacin, Methylene blue, Phenylbutazone, Promethazine, Propofol, Metoclopramide and TriamtereneBlack: stimulant laxatives e.g. senna, sorbitol and Levodopa. Overview of classes of medications, and their urinary symptoms: Anticholinergic medications can increase the obstructive symptoms in men with enlarged prostate, e.g. hesitancy (difficulty to start urination), weak or interrupted urine stream, dribbling at the end of urination and inability to completely empty the urinary bladder. Drugs with anticholinergic properties have similar urinary symptoms: Antipsychotics (e.g. Thioridazine), H1-antihistamines (e.g. Chlorpheniramine, diphenhydramine), Tricyclic antidepressants (e.g. Amitriptyline), and Gastrointestinal/urinary antispasmodics. Diuretics increase urinary frequency during the day and at night. Diuretics increase urinary incontinence in all types of incontinence (stress, urge and mixed). Vasopressor adrenergic decongestants (e.g. pseudoephedrine) worsen enlarged prostate symptoms because of constriction of the bladder neck. Medications and urine output: Diuretics increase the urine output Withdrawal of angiotensin converting enzyme inhibitors (ACI) and angiotensin receptor blockers (ARB) can temporarily increase urine output due to the reversal of the preferential vasodilatation of the efferent arterioles compared to the afferent arterioles and subsequent increase of the intra-glomerular pressure with diuresis. Medications and urinary pH: Acetazolamide, sodium bicarbonate, ammonium chloride, methenamine mandelate and potassium citrate can cause alkaline urine. In alkaline urine, acidic drugs are more readily ionized. Medications and electrolyte content: Loop diuretics, Potassium sparing diuretics and osmotic diuretics increase urinary sodium. Potassium sparing diuretics reduce urinary potassium excretion. Thiazides decrease calcium excretion.

Conclusion: Including urine inspection and analysis as part of clinical assessment can aid in reaching a correct diagnosis more quickly. Omission of this assessment may result in oversight of important factors surrounding effects of patient's current medications.

P-1003

Proton pump inhibitors and levothyroxine absorption in primary hypothyroidism—what is the evidence?

Abstract Area: Pharmacology

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Introduction: Levothyroxine (LT4) is the gold standard treatment of hypothyroidism. It is a safe and effective drug, but it has a narrow therapeutic window particularly in oral formulations. Many factors can influence its absorption, including concomitant use with other drugs. Dyspepsia is a common complaint in Primary health care, which often leads to prescription of proton pump inhibitors (PPI). The aim of this study is to understand whether there is an influence of PPI on LT4 absorption in patients with primary hypothyroidism.
Methods: A search using the MeSH terms "proton pump inhibitors" and "levothyroxine " was carried out in Pubmed, Cochrane, National Guideline Clearinghouse, Canadian Medical Association Practice Guidelines Infobase and Nice databases for articles published between 2010 and 2021 in English, French and Portuguese. The search included meta-analysis, systematic review, randomized controlled studies and clinical guidelines. Inclusion/Exclusion criteria were: human subjects, $\geq$ 18 years of age, primary hypothyroidism and free full articles.
Results: The search returned twelve studies. After application of the inclusion/exclusion criteria on the abstract, four were selected for full reading. The results point that not all PPI influence the absorption of LT4, however some have a negative impact on supplementation therapy in primary hypothyroidism.
Key conclusions: In cases where there is indication for the concomitant use of LT4 and a PPI, we should privilege one that as shown absence of effect on the absorption of the first.

P-1004

Are we correctly prescribing in the fourth age?—A population study in a community healthcare centre

Abstract Area: Pharmacology

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Introduction: The Beers Criteria, updated in 2019 by the American Geriatric Society, are a relevant tool to support the prescription, as they list the potentially inappropriate drugs (PID) for elderly individuals. This study aims to characterize, through this tool, the prescription in the elderly population aged 80 or over in a Community Health Centre.
Methods: Observational and descriptive study with an analytical component. Clinical processes of the population of patients aged 80 or over were consulted. There were included in the study those with at least one medical appointment between January 2020 and February 2021.
Results: From the 777 clinical files analyzed, 561 met inclusion criteria. The mean age was 86 years, mostly females (68%). It was found that 63.3% (n = 355) had at least one of the PID included in this study. From the analyzed population: 40.3% (n = 226) were chronically medicated with benzodiazepines or Z drugs; 3.2% (n = 18) were medicated with potentially inappropriate antidepressants; 2.9% (n = 33) were medicated with antipsychotics; 2.5% (n = 14) were medicated with potentially inappropriate antiarrhythmics; 4.8% (n = 27) were medicated with non-steroidal anti-inflammatory drugs. There were, on average, 7 drugs on the chronic medication lists.
Conclusions: Of the population studied, there were 63.3% medicated with PID. Among PID, the group of psychotropic drugs stands out. Polypharmacy (5 or more drugs) is evident in the population studied. The results will encourage the implementation of improvement strategies to prescribe in the elderly at the Community Health Centre.

P-1005

Center based versus home based geriatric rehabilitation on sarcopenia components: a systematic review and meta-analysis

Abstract Area: Sarcopenia

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Objective: To investigate the available evidence on the components of sarcopenia in geriatric rehabilitation, and to examine whether changes in different settings are associated with sarcopenia.
Data sources: PubMed, the Cochrane Central Register of Controlled Trials in the Cochrane Library, and EMBASE were searched from initiation to August 30th, 2021. Study selection: We included randomized controlled trials (RCTs) of older adults receiving geriatric rehabilitation that included strength exercise training.
Data extraction: The following study contents were extracted: study design, patient characteristics, sample size, description of the rehabilitation setting, follow-up timepoint and outcomes. The main outcomes were muscle mass, muscle strength and physical performance.
Data synthesis: Weighted mean difference for 'Timed up-and-go' score and standardized mean difference for other parameters were calculated.
Conclusions: Center-based geriatric rehabilitation improved lower limb strength and Timed up-and-go test score to a greater extent than home-based geriatric rehabilitation in elderly people. Center-based training seems to show a minor superior effect on gait speed in prolonged follow-up rather than at the endpoint of intervention. To draw a stronger conclusion, further high-quality trials with standard protocols and longer follow-up are needed.

P-1006

The UK Hertfordshire Cohort Study: Nutrition and Physical Activity (NAPA) study—a pilot study of healthy conversation skills in older community-dwelling adults during the COVID-19 pandemic

Abstract Area: Sarcopenia

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Introduction: Sarcopenia, a major public health problem, is associated with lifestyle factors. Healthy Conversation Skills (HCS) have been used previously as an intervention to empower lifestyle changes. We hypothesise HCS could be utilised to improve lifestyle choices in older adults (OAs) aged 79–89 years.
Methodology: Data were available for 176 community-dwelling OAs from the Hertfordshire Cohort Study. Baseline data collected between November 2019-March 2020 included the Longitudinal Aging Study Amsterdam Physical Activity Questionnaire (LAPAQ), a short-food frequency questionnaire (prudent diet scores were calculated) and anthropometric measurements. After randomisation, 87 in the intervention arm received a HCS-styled conversation at initial contact then by telephone at 1,3,6, and 9 months, 89 in the control arm received a healthy-living leaflet at baseline. A follow-up postal questionnaire was sent at one year.
Results: At baseline, median age was 83.1 (IQR 81.5–85.5) for men and 83.8 (81.5–85.9) for women; median activity time in previous 2 weeks (min/day) was 98.9 (60.8–150.0) for men and 150.0 (102.9–198.6) for women. At follow-up, questionnaire response rate was 88%, and 95% completed the intervention with all scheduled phone calls. Annual changes in LAPAQ and prudent diet score did not differ significantly ($p > 0.05$) between the two arms in either sex, however there was a trend towards a greater improvement in prudent diet score in intervention women ($p = 0.075$).
Conclusion: It is possible to engage OAs in conversations about their lifestyles by telephone. Compared to studies with younger populations, the reduced impact on health behaviours could reflect the impact of the COVID-19 pandemic.

P-1007

Influence of IGF-I serum concentration on muscular regeneration capacity in patients with sarcopenia

Abstract Area: Sarcopenia

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Background: Previous research has described a neuroprotective effect of IGF-I, supporting neuronal survival, axon growth and proliferation of muscle cells. OBJECTIVES. The association between IGF-I concentration, muscle histology and electrophysiological markers in a cohort of patients with sarcopenia dares investigation.
Methods: Measurement of serum concentrations of IGF-I and binding partners, electromyographic measurements with the MUNIX (Motor Unit Number Index) method and muscle biopsies were performed in 31 patients with acute hip fracture older age 60 years. Molecular markers for denervation (neural cell adhesion molecule NCAM) and proliferation markers (Ki67) were assessed by immunofluorescence staining of muscle biopsy tissue. Skeletal muscle mass by bioelectrical impedance analysis and hand-grip strength were measured to assess sarcopenia status according to EWGSOP2 criteria.
Results: 31 patients (20 women) with a mean age of 80.6 ± 7.4 years were included. Concentrations of IGF-I and its binding partners were significantly associated with sarcopenia ($ß = -0.360$; $p = 0.047$) and MUNIX ($ß = 0.512$; $p = 0.005$). Further, expression of NCAM ($ß = 0.380$; $p = 0.039$) and Ki67 ($ß = 0.424$; $p = 0.022$) showed significant associations to IGF-I concentrations.
Conclusion: The findings suggest a pathogenetic role of IGF-I in sarcopenia based on muscle denervation.

P-1008

Increasing walking steps daily plus resistive exercise can improve muscle strength but not muscle mass in sarcopenia older thai people: a randomized controlled trial

Abstract Area: Sarcopenia

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Introduction: Sarcopenia related to decreased muscle mass and low physical function or/and poor muscle strength. Increasing physical activity (PA) plus resistive exercise has been recommended in older people. Therefore, the study aimed to explore the effect of increasing in PA by accumulating at least 7 500 steps d-1 plus Thera band on sarcopoenia component.
Methods: Ninety individuals with aged over 60 years were enrolled (i.e., 60 sarcopenic older people and 30 participants without sarcopenia). Sarcopenia is defines as low skeletal mass index (SMI: measured by Bioimpedance analysis), accompanied with, either low physical performance (i.e., six-meter gait speed), or low muscle strength (i.e., handgrip strength) according to the Asian Working Group for Sarcopenia criteria. A total of 30 older people with sarcopenia was assigned to the 12-week home based walking program (7 500 steps d-1) for 5 days/week and perform the Thera Band resistance exercise twice a week. The control groups (i.e., 30 sarcopenia and 30 older people without sarcopenia) were required to be consistent with their daily routines.
Results: Increasing in handgrip strength was observed in the intervention group ($n = 28$) compared to control ($n = 30$) and no-sarcopenia ($n = 23$) groups ($p < .001$; 3.50, 0.30, and − 0.91 kg, respectively). Furthermore, individuals with no sarcopenia had a significantly reduced gait speed (− 0.05 m/s) and decreased SMI (− 0.18 kg/m2) compared to sarcopenia groups over 12-week.
Conclusion: The accumulation at least 7 500 steps d-1 plus Thera Band resistance exercise over 12-week resulted in increased in muscle strength and can decrease risk of sarcopenia in older Thai participants.

P-1009

Pathophysiological interactions between sarcopenia and type 2 diabetes: a two-way street

Abstract Area: Sarcopenia

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Background: Type 2 diabetes mellitus (T2DM) portrays a considerable strain on the global health systems, in particular for the elderly population. In recent years sarcopenia has been shown to be a frequent comorbidity of diabetes.
Objectives: This review will try to elucidate the interconnected pathophysiology of both sarcopenia and T2DM and will try to identify a common pathway to explain their development.
Methods: A review was performed by searching the PubMed database for articles published about the underlying pathophysiology, diagnosis and treatment of both sarcopenia and T2DM. The medical subject heading (MeSH) terms "physiopathology" OR "diagnosis" OR "therapeutics" AND "sarcopenia" AND "diabetes" were used. The search was limited to the English language. Titles and abstracts were screened to select potentially relevant articles. After screening 66 papers were used.
Results: Sarcopenia and T2DM share multiple pathophysiological mechanisms. Common changes in muscle architecture consist of a shift in myocyte composition, increased myosteatosis and decreased capacity for muscle regeneration. Both diseases are further linked to an imbalance in myokine and sex hormone production. Chronic low-grade inflammation and increased levels of oxidative stress are also known contributors to the ageing process and play a part in the development of T2DM. Possible underlying mechanisms to explain this significant overlap in pathophysiology might be found in the post-receptor insulin signaling cascade or in a reduced expression of peroxisome proliferator-activated receptor gamma coactivator 1 (PGC-1α) on the genetic level.
Conclusion: Research efforts in the future should be aimed at discovering possible common checkpoints in the development of T2DM and sarcopenia. These checkpoints could determine new and possibly shared therapeutic targets for both diseases. Current treatment for diabetes mellitus with biguanides and insulin might already convey a protective effect on the development of sarcopenia. Furthermore attention should be given to early diagnosis of sarcopenia within the population of type 2 diabetics given the sizeable extra physical and medical burden it encompasses. A combination of simple diagnostic techniques could be used at the regular diabetes check-ups to identify sarcopenia at an early stage and to start lifestyle modifications and treatment as soon as possible.

P-101

BELANCE: BELgian ANtiCoagulation survey for Elderly patients with NVAF

Abstract Area: Cardiovascular medicine

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Introduction: Non-Valvular Atrial Fibrillation (NVAF) has an estimated prevalence of 10% in older people [1]. Patients typically require long-term management making a clear explanation of the expected implications important.
Methods: This is a Belgian multicenter observational survey investigating the opinion of 103 geriatric NVAF patients ($\geq$ 75 years old) on the risk-benefit ratio of the New Oral Anticoagulants (NOAC). Statistical analyses were based on descriptive **Methods: Results:** Ninety-four percent (n = 97) of patients indicated that preventing a stroke or thrombosis is more important to them than the risk of a bleeding event when using a NOAC. In case of a bleeding, 26% (n = 27) of patients would discontinue their NOAC treatment themselves whereas this is not recommended by the geriatricians. Seventy-three percent (n = 75) of patients prefer to take a NOAC once a day over twice a day. On average the patients had a fear of 4.6 ± 2.4 out of 10 to encounter a bleeding while using a NOAC, whereas the fear for stroke/thrombosis was 6.9 ± 2.3 out of 10 ($p < 0.05$).
Conclusion: Communication on NOAC initiation and follow-up can still be optimized in geriatric patients. Emphasis should be put on evaluate, treat, and repeat information in order to improve patient education that supports the use of and adherence to NOACs. Finally, fear for bleeding while using a NOAC should not be a reason to discontinue anticoagulation treatment, as the patient's fear for stroke/thrombosis is found to be significantly higher.[1] Abumuaileq D. et al. 2019 Atrial fibrillation in the old/very old: prevalence and burden, predisposing factors and complications. e-Journal of Cardiology Practice, Volume 17, Issue 1, 13 March 2019.

P-1010

The relationship between sarcopenia and pancreatic exocrine insufficiency in patients with type 2 diabetes mellitus

Abstract Area: Sarcopenia

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Introduction: The prevalence of sarcopenia is higher in Type 2 Diabetes mellitus (T2DM) patients. In T2DM patients, increased prevalance of pancreatic exocrine insufficiency (PEI) was related with malabsorption and malnutrition. There is no study that investigate the role of PEI on sarcopenia in T2DM patients.
Material and methods: 120 old aged ($\geq$ 65 years) T2DM patients were included to this cross-sectional study. PEY was diagnosed with fecal elastase test, and handgrip strength and bioelectric impedance analysis were used to diagnose sarcopenia according to EWGSOP2 definition. We investigated whether there is a possible independent relationship between sarcopenia and PEY in old aged T2DM.
Results: Of 120 patients (64.2% female), 59.1% of the patients had low muscle strength (men: 53.4%,women: 62.3%) and 15% had low appendicular muscle mass index (ASMI) (men: 25.6%,women: 9.1%). According to the EWGSOP2, 10% of the patients (7 men, 5 women) had confirmed sarcopenia. PEI was diagnosed in 22.5% of the patients. Although probable sarcopenia was associated with vitamin D deficiency in women, it was associated with PEI in men. Muscle strength was significantly lower in patients with PEI in men. Although muscle mass was also lower in men with PEI, such

difference did not showed statistical significance, that can be related with the number of patients recruited to the study.
Conclusion: Our results showed that PEI is associated with lower muscle strength in old aged T2DM male patients. PEI should be investigated in old aged T2DM patients with sarcopenia. Key words: Type 2 Diabetes mellitus, sarcopenia, pancreatic exocrine insufficiency

P-1011

Relationship of phase angle with gait speed and hand grip strength based on different dynamometers in subjectively healthy older adults

Abstract Area: Sarcopenia

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Introduction: The phase angle (PhA) is a new indicator for functional status and muscle quality. We aimed to investigate the relationship of PhA with gait speed (GS), and hand grip strength (HGS) measurements with the three different (type and model) dynamometers in older individuals; the digital, and analog Jamar dynamometers, and digital Takei dynamometer.
Methods: This study was carried out in older individuals > 60 years of age applied to the outpatient clinic between March 2019 and March 2021. PhA was assessed by bioelectrical impedance analysis. HGS was measured by the Jamar dynamometer (both digital and analog), and digital Takei dynamometer. Physical performance was evaluated by 4-m walking test. A complete Compressive Geriatric Assessment was carried out.
Results: A total of 125 older adults without acute and chronic conditions were involved. The median age was 67 (60–90) years for women (52% of the study population) and 70 (60–88) years for men. There was no correlation between PhA and HGS by three dynamometers in women ($P > 0.05$). There was a positive correlation between PhA and HGS by Jamar digital dynamometer ($r = 0.316$, $p = 0.014$) and Takei dynamometer ($r = 0.351$, $p = 0.006$) in men. There was no relationship between PhA and GS (women $r = 0.200$, $P = 0.109$, men $r = 0.228$, $P = 0.079$) in both genders.

P-1012

Association of probable sarcopenia and frailty with cognitive impairment among community-dwelling older adults in Modena county

Abstract Area: Sarcopenia

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Introduction: Both frailty and sarcopenia are associated with cognitive impairment (CI) among older adults. The objectives of the study are to evaluate the association of probable sarcopenia and frailty with drug prescription, falls, and social context among older adults with CI.
Methods: consecutive patients referring to the geriatric clinic of the AUSL of Modena from October 2020 to June 2021. Cognition was screened according to MMSE (< 24 indicated CI); probable sarcopenia was defined as SARC-F > 4; frailty was defined as CFS > = 5. Polypharmacy was defined as the concurrent use of > = 5 drugs; falls were assessed in the previous 12 months. Poor social context was defined as Cohen's social support scale > = 10. Telephonic follow-up after four months was performed to collect data about new falls and hospitalizations.
Results: 285 patients (mean age 82.4 + 7.9 years, 67.6% females) were evaluated. CI was present in 188(66.0%) participants, frailty in 168(63.4%) participants, probable sarcopenia in 153(55.2%), history of falls in 122(42.8%), polypharmacy in 191(66.7%). Mean number of drugs was 6 ± 3. Regarding patients with CI, Frailty was not associated with drugs while SSRI, ACE-inhibitors and PPI were less prescribed among sarcopenic patients ($p < .05$ for all). Hospitalization and new falls were more prevalent among sarcopenic vs. non-sarcopenic (6.2% vs. 3.4%, $p = 0.024$; 10.8% vs. 6,4%, $p = 0.034$) but not among frail patients. Poor social context was more prevalent among frail vs. non-frail patients (31.4% vs. 25.3%; $p = 0.012$).
Conclusions: Among patients with CI, probable sarcopenia and frailty are associated with different drugs and outcomes. Both frailty and sarcopenia should be assessed when dealing with patients with CI.

P-1013

The longitudinal associations of sarcopenia definitions with functional deterioration: a comparative study

Abstract Area: Sarcopenia

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Background: We aimed to study the longitudinal associations of different sarcopenia definitions with functional outcomes.
Methods: A retrospective study included geriatrics outpatients applied to a university hospital between November 2012-December 2021. The patients that have follow-up assessments for activities of daily living (ADL) and instrumental activities of daily living (IADL) were included. Probable sarcopenia (low muscle-strength) was assessed by standard and regional different thresholds, i.e., 27 kg/16 kg and 35 kg/20 kg in males/females. The patients were assessed for deterioration in ADL and IADL in the follow-up.
Results: Among a total of 1970 patients, 195 patients had follow-up data for functional measures and included in the study. The mean age was 75.5 + 6.5; 142 (72.8%) were female. In the basal evaluation, the prevalence of probable sarcopenia for EWGSOP2 standard cut off (27 kg /16 kg) and by regional cut-offs (35 kg /20 kg) 8.7% and, %35.4% respectively. In a median of 560 days (56–2823) of follow-up deterioration in ADL and IADL occurred in 7.2% and 27.7% of the patients, respectively. In univariate analyses (Kaplan Meier log-rank test), the presence of probable sarcopenia (27 kg /16 kg) was neither (not) associated with deterioration in ADL ($p = 0.39$) or IADL ($p = 0.11$). On the other hand, the presence of probable sarcopenia (35 kg /20 kg) was associated with deteriorations in both ADL ($p = 0.04$) and IADL ($p < 0.001$). In multivariate Cox analyses, adjusted for age, sex and baseline nutritional status, the presence of

probable sarcopenia (27 kg /16 kg) was neither (not) associated with deterioration in ADL ($p = 0.86$) or IADL ($p = 0.86$); the presence of probable sarcopenia (35 kg /20 kg) was associated with deterioration IADL ($p = 0.03$; HR = 1.88, 95% CI = 1.07–3.30) but not ADL ($p = 0.07$). In multivariate Cox analyses, adjusted for age, sex baseline nutritional status and impairment in physical performance (low UGS), the presence of probable sarcopenia (27 kg /16 kg) was neither (not) associated with deterioration in ADL ($p = 0.98$) or IADL ($p = 0.84$); the presence of probable sarcopenia (35 kg /20 kg) was associated with deterioration in IADL ($p = 0.03$; HR = 1.86, 95% CI = 1.05–3.26) but not ADL ($p = 0.14$).

Conclusion: Regarding the diagnosis of probable sarcopenia, consideration of population-specific handgrip strength (HGS) cut-offs (35/20 kg) was superior to standard HGS cut-offs (27/16 kg) to predict future functional deterioration. Our findings suggest that stratification of patients by population specific muscle strength cut-offs provide better insight for risk of adverse outcomes. These results point out the importance of obtaining population-specific cut-offs when diagnosing sarcopenia.

Keywords: sarcopenia, probable, diagnosis, adverse outcomes, population, specific

P-1014

Effects of nicotinamide adenine dinucleotide precursors on physical function and frailty: a systematic review

Abstract Area: Sarcopenia

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BackgroundNicotinamide adenine dinucleotide (NAD+) skeletal muscle concentrations are low in older people with muscle weakness. We evaluated the effects of NAD + precursor supplementation on domains of the Fried frailty phenotype in humans.

Methods: We included randomised controlled trials assessing Fried frailty phenotype domains: slowness; weakness; exhaustion; low activity and weight loss. A systematic search of several databases (MEDLINE, EMBASE, CINAHL, CENTRAL, ISRCTN, clinicaltrials.gov, NHS e-Library and Google Scholar) was performed. Risk of bias was assessed using the Cochrane Risk-of-Bias 2 tool. Results were grouped by phenotypic domain and described through narrative synthesis.

Results: Twenty studies met the inclusion criteria; size ranged from 2 to 77 participants. No studies assessed frailty as an integrated outcome. Nicotinamide riboside ($n = 5$) and acipimox ($n = 5$) were the most commonly used interventions. Most studies examined short-term interventions up to 6 months prior to outcome measurement, with 10/20 interventions lasting one week or less. A wide range of outcomes were measured; heterogeneity precluded meta-analysis. Study populations were also heterogenous; only 3 studies enrolled participants with a mean age > 65 years. Risk of bias analysis showed unclear or high risk of bias in all but one study. There was no clear pattern as to whether NAD + precursors were better than control for any domain of the frailty phenotype; the majority of studies reported null findings for most outcomes.

Conclusion: Current literature on NAD + precursor supplementation does not enable conclusions on physical performance and the frailty phenotype to be drawn. Further high-quality studies in older people are required.

P-1015

Muscle loss in older adults during an hospitalization for acute disease. The ECOSARC Project

Abstract Area: Sarcopenia

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Introduction: The main objective was to analyze the evolution of muscle characteristics of the anterior vastus quadriceps rectus femoris (avQRF) between admission and discharge, in older adults hospitalized with an acute medical disease in Acute Geriatric Units (AGUs).

Methods: Results of the Project ECOSARC (Sarcopenia measured with ultrasound in hospitalized older adults). Prospective multicentric observational cohort study in 7 AGUs from University Hospitals in Spain. Ultrasound measurements of avQRF were acquired at 2/3 distal between antero-superior iliac spine and patella in both legs by trained Geriatricians. Hospitalized adults ≥ 70 years old, able to ambulate and without severe dementia were included. Ultrasound Chison model ECO2 was used. Ultrasound methodology has been previously described (Hernández-Socorro CR. Nutrients 2018;10:1849). Sponsor Abbott Laboratories SA.

Results: From the complete sample (n = 143), in 45 (31.5%) participants, ultrasound images were classified as non-valid by an expert radiologist. Mean age 87.8 (SD 5.4). From those with valid images, 36 (49.3%), 2 (2.7%), and 35 (47.9%) presented a decrease, equal values, or an increase in avQRF area from baseline to discharge, respectively, and 40 (54.1%), 2 (2.7%), and 32 (43.2%) presented a decrease, equal values, or an increase in avQRF thickness, respectively. 26 (35.6%) presented a decrease in more than 0.2 cm2 of avQRF area, and 23 (31.1%) a decrease in more than 0.1 cm of avQRF thickness. Only 4 (5.4%) patients presented new edema, while 13 (17.6%) worsened echogenicity.
Key conclusions: One third of older adults with an acute disease develop significant muscle loss during the hospitalization.

P-1016

Prevalences of sarcopenic obesity in older adults with the new diagnostic criteria by different handgrip strength thresholds

Abstract Area: Sarcopenia

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Introduction: Sarcopenic obesity (SO) threatens the health and quality of life of older people. There was no standardized definition of SO in the literature to date. Recently, definition and diagnostic criteria of SO were indicated in the ESPEN and EASO consensus statement. So, we aimed to compare the prevalence of SO by the regional and EWGSOP2 handgrip strength (HGS) thresholds with the new SO consensus criteria in the elderly.
Methods: This study was carried out in older individuals $\geq$ 65 years of age evaluated in internal medicine outpatient clinic between July 2016 and March 2021. Patients with sociodemographic data, comorbidities, functional parameters, and body composition data by bioelectrical impedance analysis as well as HGS measurements were involved. Groups according to regional (35/20 kg), and EWGSOP2 (27/16 kg) HGS thresholds were compared.
Results: Among 1491 older adults, 408 participants (median age; 73 (65–101), 65% females) were involved whereas 37% (n = 149) were obese, and 36% (n = 148) had clinical symptoms or suspicion factors. Low HGS prevalences with EWGSOP2 and local thresholds among positively screened patients were 18%, and 57%. Among positively screened patients, there were 26 individuals with increased fat mass, and 95 individuals with reduced muscle mass (18%, and 64%, respectively). SO prevalences by EWGSOP2, and regional < 35/20 kg HGS thresholds were 1% (n = 6), and 4% (n = 17), respectively.
Key conclusions: We evaluated SO prevalence by the new criteria with different thresholds. By the new criteria, SO prevalence with regional HGS thresholds is higher than the prevalence with EWGSOP2 HGS thresholds. Key Words: Sarcopenia, obesity, sarcopenic obesity

P-1017

Vitamin D and grip strength: a Mendelian Randomisation study in UK Biobank

Abstract Area: Sarcopenia

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Introduction: Muscle weakness, often indicated by low grip strength, is a major public health concern. Similarly, low vitamin D exposure is a widespread phenomenon. It is therefore imperative to understand whether variation in vitamin D exposure causally influences muscle strength and whether supplementation could help prevent and/or treat muscle weakness.
Methods: 368,890 UK Biobank participants, aged 37–73 years, with valid data on Vitamin D (i.e., circulating 25-hydroxyvitamin D (25(OH)D concentration) and maximum grip strength were included. We examined sex-specific observational associations between 25(OH)D and grip strength. Using Mendelian randomisation (MR), we estimated the strength of the 25(OH)D——grip strength associations using genetic instruments for 25(OH)D as our exposure. Crucially, because the effect of vitamin D supplementation on muscle strength could vary by underlying 25(OH)D status, we allowed for non-linear relationships between 25(OH)D and strength in both observational and MR analyses.
Results: Median (25th, 75th centile) of 25(OH)D in males and females was 48 nmol/L (34 nmol/L, 66 nmol/L). In both sexes and in both observational and MR analyses, there was evidence of non-linear associations between 25(OH)D and grip strength. For example, in observational analyses, compared to males with 50 nmol/L circulating 25(OH)D, males with circulating 25(OH)D at 25 nmol/L had 1.00 kg (95% CI: 0.92,1.07) weaker grip, while those with circulating 25(OH)D at 75 nmol/L had 0.35 kg (0.30,0.39) stronger grip. Results were broadly similar for females.
Conclusions: Using two different methods to triangulate evidence, our findings suggest causal non-linear links between circulating 25(OH)D and grip strength. Vitamin D supplementation could improve strength, but only in individuals with low 25(OH)D concentration.

P-1018

Promising methods for the diagnosis of dina/sarcopenia in women with arterial hypertension

Abstract Area: Sarcopenia

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Introduction: Vascular stiffness, which is a marker of vascular damage and an independent predictor of cardiovascular diseases, can be used not only as an indicator of vascular aging, but also as an indicator of the development of geriatric syndromes. The determination of vascular stiffness is considered to be a promising method for diagnosing lesions of the cardiovascular system and the development of dina/sarcopenia in hypertension in women of different ages. Materials and **Methods:** 118 women with stage II arterial hypertension were included in the research. The stiffness index, the vascular wall augmentation index were measured using the AngioScan-01P apparatus, as a result of a six-minute walking test, the walking distance and walking speed were determined.
Results: During the photoplethysmographic method it was revealed that the vascular wall stiffness index increases proportionally to the increase in age in patients with arterial hypertension (middle age − 7.57 ± 0.08%, elderly age − 7.57 ± 0.12%, senile age − 8.29 ± 0.17%), which leads to an increase in the augmentation index (middle age − 8.97 ± 1.78%, elderly age − 14.57 ± 2.03%, senile age − 24.17 ± 2.13%). The results of the six-minute walking test (middle age − 438.2 ± 8.82 m, elderly age − 371.45 ± 10.15 m, senile age − 213.3 ± 8.31 m shows decrease in walking speed (middle age − 1.22 ± 0.02 m/s, elderly age − 1.03 ± 0.03 m/s, which proves the presence of presarcopenia; senile age − 0.59 ± 0.02 m/s) with age, which indicates the development of sarcopenia. Determination of the stiffness index, the augmentation index will allow to develop diagnostic and prevention programs at the initial stages of the development of dina/sarcopenia.
Keywords: stiffness index, sarcopenia.

P-1019

Lifetime body mass index and grip strength in midlife: exploring the complex life course associations between obesity and muscle in the 1970 British Cohort Study

Abstract Area: Sarcopenia

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Introduction: Ongoing rises in obesity prevalence have caused concern about potential increases in the burden of age-related musculoskeletal conditions including sarcopenia and sarcopenic obesity among future generations of older adults who have lived extended periods of their lives in an obesogenic environment. We aimed to examine longitudinal associations between body mass index (BMI) and grip strength using data from the 1970 British Cohort Study (BCS70).
Methods: BCS70 participants were included in analyses if they had a valid measure of maximum grip strength at age 46y (N = 7,547). Using sex-specific linear regression models we examined associations of: i) BMI at ages 10, 16, 30 and 46y and ii) age at onset of obesity, with grip strength.
Results: Higher BMI at all ages was associated with stronger grip and the scale of associations were greater in males than females from age 16 onwards. For example, in fully-adjusted models a 1 standard deviation increase in BMI at age 16 was associated with mean differences in grip strength at age 46y of 1.41 kg (95% CI: 1.07,1.75) in males and 0.72 kg (0.53,0.91) in females. Associations of greater length of exposure to obesity and stronger grip were also more consistent among males than females.
Conclusions: Findings suggest that in midlife anabolic effects of fat on muscle are outweighing the catabolic effects thought to lead to the manifestation of sarcopenic obesity later in life especially among men. Midlife may therefore be an optimal time to intervene to prevent sarcopenic obesity. Note: These findings are based on a paper recently accepted for publication in Journal of Cachexia, Sarcopenia and Muscle https://onlinelibrary.wiley.com/doi/full/10.1002/jcsm.12992

P-102

Profitability and profile of the elderly in echocardiography

Abstract Area: Cardiovascular medicine

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Introduction: Echocardiography is very value for diagnostic in cardiology. However, its utility in older adults is controversial. The increasing ageing population has changed the profile of patients in hospital admissions. Aging produces physiological changes that do not itself indicate pathology. It is difficult to differentiate whether degenerative change has reached sufficient intensity to be considered pathological. Purpose: to describe characteristics of older adults compared to younger population. To analyze the utility of echocardiography of older adults.
Methods: descriptive cross-sectional study carried out on 135 patients with echocardiogram performed between September and December 2020 in hospital non-cardiology setting.
Results: From total sample of 135, 54 patients were more than 70 years old. Global mean age 64.8 ± 14.33. Male profile was predominant in elderly (61.1%). High blood pressure (74.1%), dyslipidemic (61.1%) and diabetic (46.3%) were more prevalent cardiovascular risk factors in old people. Elderly had worse echocardiographic window (25.9%), mild left ventricular hypertrophy (59.3%), greater dilatation cavities (66.7%) with 37% mild left atrial dilatation. We found that 75.9% of older adults suffer from valvular heart disease where mild tricuspid regurgitation and mitral regurgitation were the most prevalent (35,2%; 24,1%). Similar results for heart disease (34.6% younger than 70; 38.9% older than 70) with most frequency hypertensive etiology (29.6%; 27.8%); although ischemic heart disease was higher in older (13%; 6,2%). Only 1.2% of young people had a bicuspid aortic valve. We found greater dilatation of the aortic root in young people (9.9%) compared to elderly (5,6%). Older adults who underwent an echocardiogram generate more hospital (11.1%; 3,7%) and outpatient (14.8%; 9,9%) consultations. Echocardiogram changes plan of cares in 31,5% and modifies treatment in 20,4% of older adults. Generally, the main reason for request an echocardiogram was dyspnea in elderly (29.6%) and functional

assessment in younger adults (59.3%). In both cases, the specialist who most frequently request this test were internists (34.1%) and neurologists (24.4%); while geriatricians only request it in 2.2% (n = 3).
Conclusions: More echocardiography is requested in young people for functional assessment, while in elderly it tends to be performed due to underlying symptoms at hospital admission. We found more echocardiographic findings in the elderly that generate more consults to cardiology while it has a low impact in pharmacological or surgical treatment. The low request for echocardiography by geriatrics is notorious. It emphasizes the importance of the optimization in diagnostic test request.

P-1020

A novel index for sarcopenia: psoas muscle area to vertebra area ratio predicts mortality in intensive care unit patients

Abstract Area: Sarcopenia

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Background: Computed tomography (CT)-based measurement of the psoas muscle has been reported to be a simple marker to predictive outcomes. We aimed to investigate the association between the psoas muscle area and mortality among patients in the intensive care unit (ICU). Also, we examined, mean psoas muscle area/vertebra area (Pa/Va), could be a useful marker. Materials and **Methods:** We conducted a retrospective cohort study in a single center, between May 2012 and 2018. We calculated the psoas muscle and the L3 vertebra areas using CT. Survival data were determined through telephone interviews. We performed univariate and multivariate Cox survival analyses to document whether mean psoas muscle area and mean Pa/Va were related to in-ICU or overall mortality.
Results: There were 370 participants (mean age: 61.1 ± 18.1 years, 33.8%: female). 24.6% of the patients died during ICU stay. In patients who died in-ICU or after-discharge, the mean psoas muscle area and Pa/Va were lower [($p = 0.003$ and < 0.001) and ($p = 0.005$ and $p < 0.001$), respectively]. Cox survival analysis revealed that, when compared to the subgroup with lowest Pa/VA tertile, in-ICU mortality risk was significantly lower in the second tertile [Hazard ratio (HR) = 0.438, 95% confidence interval (CI) = 0.248–0.774, $p = 0.005$] and highest tertile (HR = 0.526, 95% CI = 0.294–0.941, $p = 0.030$). The results were similar for after-discharge mortality [(HR = 0.543, 95% CI = 0.386–0.765, $p < 0.001$) and (HR = 0.574, 95% CI = 0.392–0.839, $p = 0.030$), respectively].
Conclusion: In ICU patients, higher mean Pa/Va was associated with higher survival in the ICU and after-discharge. Our results suggest that it can be a useful marker for mortality risk stratification.
Keywords: psoas muscle, sarcopenia, intensive care unit, mortality, L3 vertebra

P-1021

Cut-offs for a promising index to evaluate low muscle mass: CT-based measurement of psoas muscle area adjusted for vertebral area

Abstract Area: Sarcopenia

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Background: Low skeletal muscle mass (LMM) assessed by computerized tomography (CT) is a convenient measure to be assessed in clinical settings where plain CT examinations are ordered for any other reason. The most common approach is isolated assessment of psoas and total skeletal muscle area at L3 vertebra level. We have recently suggested a new index based on psoas muscle area adjusted for vertebral area (Pa/Va) that has shown as a prognostic marker in intensive care unit patients. Our aim was to calculate the first cut-offs for this novel index derived from a young reference-population.
Methods: Using the preoperative abdominal CT images of healthy living liver donors aged between 18 and 40 in an 8 years period, we calculated cut-off values for Pa/Va. Grade 1 LMM was defined as mean minus one standard deviation and grade 2 LMM as mean minus two standard deviations. Cut-offs were calculated separately by sex.
Results: The study population involved 482 individuals (mean age ± standard deviation, 28.8 ± 5.9). The females constituted 44.4%. The cut-offs of Pa/Va were for grade 1 LMM was 141% in males, 96% in females. The mean body mass index was 24.3 g/m2 indicating normal body mass index in the majority. The cut-offs for grade 2 LMM were 97% for males and 67% for females. These cut-offs were significantly different between the genders ($p < 0.05$).
Conclusions: After suggesting a novel index to assess LMM, we reported its first cut-offs to be used in future studied. The assessment requires no additional data if a plain abdominal CT is undertaken for any other indication. These cut-offs have to be validated, to predict total SMM and/or adverse outcomes related to low muscle mass and malnutrition, for proving its potentially beneficial use.

P-1022

Do we need to apply different cut-points to SARC-F depending on the characteristics of our population? Findings from the Newcastle SarcScreen project

Abstract Area: Sarcopenia

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Introduction: The SARC-F is a simple questionnaire devised to aid sarcopenia case-finding[1]. A recent systematic review concluded that

the use of SARC-F, based on cut-point ≥ 4, may be limited based on consistent findings of low to moderate sensitivity across studies[2]. As the sensitivity of SARC-F was improved by lowering the cut-point in a general population sample[3] we aimed to assess the impact of applying different cut-points to SARC-F in an older clinical population.

Methods: We included 160 men and 313 women aged 56–98 years who had completed the SARC-F questionnaire and had their maximum grip strength measured during a visit to an Older People's Medicine Day Unit[4]. We applied cut-points of ≥ 4, 3 and 2 to SARC-F and tested the agreement between these different binary categorisations and muscle weakness (grip strength < 27 kg men, < 16 kg women) in analyses stratified by sex and obesity status.

Results: 68.1% of men and 77.3% of women had SARC-F scores ≥ 4, and prevalence of muscle weakness was 86.9% and 82.4%, respectively. Sensitivity of the SARC-F increased at lower cut-points (77% for ≥ 4 vs 95% for ≥ 2). There was considerable variation in the sensitivity and specificity of the SARC-F by sex and obesity status; the SARC-F typically had greater sensitivity among women than men and among those classified as obese vs non-obese.

Conclusions: The sensitivity and specificity of the SARC-F varies depending on the characteristics of the people being screened; different cut-points may therefore be required for different patient subgroups to optimise its utility.

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P-1023

Are inflammatory markers associated with sarcopenia-related traits in older adults with sarcopenia?—a cross-sectional analysis of the ENHANce study

Abstract Area: Sarcopenia

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Introduction: Inflammageing is a major driving mechanism behind sarcopenia. We aimed to explore the relationship between inflammatory markers and sarcopenia-related traits in sarcopenic older adults.

Methods: Baseline data of the ongoing Exercise and Nutrition for Healthy AgeiNg (ENHANce) study were used for a secondary, exploratory, cross-sectional analysis. ENHANce is a 5-armed triple blinded randomized controlled trial, in older adults (> 65y) with sarcopenia defined according to the revised criteria of the European Working Group of Sarcopenia in Older People (EWGSOP2). Inflammatory markers C-reactive protein (CRP), albumin, interleukin-1β (IL-1β), IL-6, IL-8, and tumor necrosis factor-α (TNF-α) were assessed at baseline. Spearman's rho (ρ) correlation coefficients were calculated to associate these inflammatory markers with baseline sarcopenia-defining parameters (handgrip strength, chair stand test, appendicular lean mass [aLM], gait speed, Short Physical Performance Battery), physical activity (step count) and quality of life (SF-36, SarQoL).

Results: We included 40 sarcopenic subjects (15 men/25 women, age 77.1 ± 6.8 years). Contrary to expectations, the pro-inflammatory IL-1β correlated positively with handgrip strength (ρ: 0.376; $p = 0.024$) and IL-6 with aLM (ρ: 0.334; $p = 0.0433$). Step count inversely correlated with IL-6 (ρ: -0.358; $p = 0.048$). Subgroup analysis revealed important gender differences. IL-8 inversely correlated with handgrip strength in women (ρ: -0.425; $p = 0.034$) but not in men. In contrast, pro-inflammatory cytokines CRP (ρ: -0.615; $p = 0.019$), IL-6 (ρ: -0.604; $p = 0.029$) and TNF-α (ρ: -0.615; $p = 0.025$) inversely correlated with the SF-36 physical component score in men but not in women.

Key conclusions: Inflammageing might play a role in sarcopenia-related traits, but this exploratory study highlights a potential role of gender. Future research should take this into account when elucidating the Inflammageing-sarcopenia interplay.

P-1024

Feasibility of neuromuscular electrical stimulation in fragility fracture patients

Abstract Area: Sarcopenia

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Introduction: We investigated the feasibility of a study of Neuromuscular Electrical Stimulation (NMES) in the management of people with fragility fractures. MethodPatients with fragility fracture on a hospital trauma register between October 2021 and mid-February 2022 were identified. Patients were ineligible if the fracture had not affected their mobility, they were too ill for rehabilitation or had contraindications to NMES, unable to give informed consent, or were anticipated to have a short length of stay. Consenting patients were randomly allocated to receive daily NMES for up to 30 min to either the left or right leg until discharge. Outcome was assessed prior to discharge. Feasibility outcomes were the recruitment rate, number of NMES treatments given, and proportion assessed prior to discharge.

Results: 380/428 patients with fragility fracture were ineligible: 62 had not lost mobility; 83 were too ill or had contraindications; 140 did not have capacity; 61 had a short anticipated length of stay, and 34 had other reasons for exclusion. 9 of the 48 eligible patients consented (4 male, 5 female, mean age 80.4 ± 5.9 years, 8 hip and 1 knee fractures). The mean number of NMES sessions delivered was 2.1 (1–3). The mean length of stay was 6 days (2–12). Pre-discharge

outcome assessments were made in only 2/9 participants, because the decision to discharge them was made and their discharge occurred without warning.
Conclusion: This trial of NMES as currently planned was not feasible.

P-1025

Minimal effective intervention time of structured physical activity resulting in improvement in physical fitness of older people with sarcopenia—Polish part of SPRINT-T Project

Abstract Area: Sarcopenia

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Older adults require longer period of rehabilitation to achieve improvement in physical fitness. Aim: to identify effective number and frequency of rehabilitation sessions resulting in improvement in physical fitness.
Methods: study group consisted of Polish 100 participants aged $\geq$ 70 years with sarcopenia recruited for the SPRINT-T project ("Sarcopenia and physical frailty in older people: multi-component treatment strategies"). Sarcopenia was confirmed with densitometry and decreased physical fitness assessed with Short Physical Performance Battery (SPPB; score 3–9). They were randomly assigned to: an intervention group—50 seniors participated in over two-year structured physical activity program (MCI)—one-hour sessions twice a week, and to control group—other 50 persons participated in educational meetings once a month (HALE). MCI group was divided depending on the number of completed exercise sessions: MCI_high ($>$ 100 sessions; n = 22) and MCI_low ($\leq$ 100; n = 28). For both MCI groups frequency index (number of sessions/number weeks) was calculated.
Results: Mean participants' age was 79^{6}years, majority were females (62.6%). Mean time of participating in the high_MCI group was 140 weeks (1.14 session/week) and for low_MCI group—92 weeks (0.43 session/week). Significant improvement in SPPB was observed in high_MCI group compared to HALE group (from 6.86 to 9.14 vs. from 6.63 to 6.61, respectively, p = 0.028). SPPB did not improve in low_MCI group, and was similar to SPPB in participants of HALE group.
Conclusion: Preliminary analysis of Polish SPRINT-T data showed that participating at least once a week in rehabilitation sessions for 2 years improved physical fitness among sarcopenic older people.

P-1026

Prevalence and determinants of sedentary behaviour among Chinese nursing home adults aged 60 years and over

Abstract Area: Sarcopenia

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Introduction: Sedentary behaviour is an important risk factor of diverse diseases and adverse outcomes. It is particularly common among nursing home older residents, which may deteriorate health outcomes of them. The aim is to estimate the prevalence and explore determinants of sedentary behaviour among nursing home residents.
Methods: We retrospectively analysed a cross-sectional study with adults aged 60 years and over in 4 nursing homes in China. The main outcome was sedentary behaviour, measured and categorised according to Physical Activity Scale of Elderly (PASE). Explanatory variables included age, gender, education, medical condition, falls, nutritional status using Mini Nutritional Assessment (MNA), cognitive function using Mini-Mental State Examination (MMSE), depression status using Geriatric Depression Scale (GDS). Univariable binary logistic regression analysis was initially used to identify factors associated with sedentary behaviour. Multivariable binary logistic regression analysis was used to determine the independent determinants of sedentary behaviour through backwards stepwise regression.
Results: 375 nursing home older adults (80.65 $\pm$ 9.4 years) were included. 27.2% participants were categorised as having sedentary behaviour. Adjusted by age and sex, multivariate logistic regression results showed that depression yielded a significant higher sedentary behaviour risk by over 7 times (OR = 7.59; 95% CI 1.29–44.63), which followed by cognitive impairment (OR = 2.33; 95% CI 1.41–3.86), illiteracy (OR = 1.96; 95% CI 1.13–3.39) and number of falls in the past year (OR = 1.45; 95% CI 1.12–1.88).
Conclusion: Four modifiable factors, depression, cognitive impairment, illiteracy and falls experiences are found to be the determinants of sedentary behaviour, which could point the way for sedentary interventions.

P-1028

Muscle mass measured by bioelectrical impedance analysis was associated with handgrip strength but not with chair stands time in older falls clinic attendees

Abstract Area: Sarcopenia

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BackgroundSarcopenia, accelerated loss of muscle mass and strength with ageing, is a major global health burden. The European Working Group on Sarcopenia in Older People (EWGSOP) revised guidelines recommend assessing probable sarcopenia with both hand grip strength (HGS) and time on the five chair stands test (5CST). Recent research has shown the prevalence of sarcopenia varies significantly depending on which measure is used. We sought to investigate the how these measures were associated with bioelectrical impedance analysis (BIA) measured muscle mass in older falls clinic attendees.

Methods: Attendees to a falls and syncope unit, over the age of 50 years were recruited. HGS measured with handheld dynamometer and 5CST were assessed. Appendicular skeletal muscle mass (ASM) was derived from the Sergei equation using BIA (TANITA® DC-430MAP). Sarcopenia was defined as per the EWGSOP revised guidelines. Multivariable linear regressions (adjusted for age and sex) were computed to assess HGS/5CST as independent predictors of ASM.
Results: 74 patients were included (mean age 71; 54% female), 52% had probable sarcopenia, 28% low muscle mass and 16% sarcopenia. Linear regression showed that there was a significant positive association between ASM and HGS ($\beta = 0.10$, $P < 0.05$, $R2 = 0.46$). However, there was no significant association between ASM and 5CST time ($\beta = -0.01$, $P = 0.87$, $R2 = 0.46$).
Discussion: Muscle mass measured by BIA correlated with HGS but not with 5CST in this sample. This suggests that HGS may be a more useful test than 5CST for assessing sarcopenia in clinical settings where direct measurement of muscle mass may not be practical.

P-1029

Impact of hip fracture on loss of muscle mass, strength and power

Abstract Area: Sarcopenia

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Introduction: Sarcopenia is characterized by decreased muscle mass, strength and/or power [1]. There are several tools that allow the evaluation of sarcopenia, we propose muscle ultrasound to quantify the loss of muscle mass secondary to hip fracture and the loss of mobility it entails and to know its impact on muscle strength in the short term.
Methods: patients over 65 years of age with hip osteoporotic fracture were included. Sociodemographic variables, physical function, comorbidity, nutritional status and pain were collected, and muscle mass loss was assessed by musculoskeletal ultrasound of the anterior rectus quadriceps muscle in both lower limbs the first and last day of hospitalization, muscle strength by dynamometry and physical function by non-objective measures.
Results: 30 patients were included. 56% had a muscle thickness of less than 1 cm in the healthy lower limb on the first day of hospitalization, as well as 86% of the men and 78,3% of the women had low muscle strength. A loss of muscle strength was observed in more than 3 out of 4 women and in 4 out of 5 men, with a mean loss of strength of 2,8 kg, a mean muscle loss of 0,07 cm in the healthy lower limb and of 0,16 cm in the fractured lower limb.
Conclusions: there is a loss of strength and muscle mass in older patients hospitalized for hip fractures. Ultrasound is a simple, cheap and accessible technique that allows quantifying muscle mass at the bedside and making an accurate diagnosis.
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P-103

Dynapenic abdominal obesity as a risk factor for the incidence of metabolic syndrome in individual 50 years of age or older: evidence from the English Longitudinal Study of Ageing

Abstract Area: Cardiovascular medicine

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Introduction: The reduction in neuromuscular strength (dynapenia) can coexist with obesity among older people. Adipose tissue and muscle are endocrine organs, and the co-occurrence of the two conditions in the same individual may increase the likelihood of the incidence of metabolic syndrome (MetS). The objective was to analyse whether dynapenic abdominal obesity is a risk factor for the incidence of MetS in individuals 50 years of age or older.
Methods: A longitudinal study was conducted with an eight-year follow-up involving 3,952 individuals from the English Longitudinal Study of Ageing (ELSA) who were free of MetS at baseline. Dynapenic abdominal obesity was defined based on waist circumference (> 102 cm for men and > 88 cm for women) and grip strength (< 26 kg for men and < 16 kg for women). The participants were classified as non-abdominally obese/non-dynapenic (NAO/ND), abdominally obese/non-dynapenic (AO/ND), non-abdominally obese/dynapenic (NAO/D) and abdominally obese/dynapenic (AO/D). The outcome was the incidence of MetS. Poisson regression models were run and controlled for sociodemographic and behavioural variables.
Results: The adjusted model demonstrated that although abdominal obesity was a risk factor for the incidence of MetS (IRR: 2.73; 95% CI: 2.28–3.27), the effect size of the association was greater in AO/D individuals (IRR: 4.09; 95% CI: 2.51–6.66).
Key conclusions: Dynapenic abdominal obesity increases the risk of the incidence of MetS with a higher effect size compared to obesity alone. The understanding of this synergic action could guide specific clinical strategies in order to prevent cardiovascular disease, disability and death.

P-1030

Assessment of renal function in old age: does body mass matter? Insights from a Swedish population based cohort of older adults

Abstract Area: Sarcopenia

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Introduction: There is uncertainty as to which estimated glomerular filtration rate (eGFR) equation should be used among older adults. We aimed to: [1]quantify the agreement among five equations in older adults; [2]compare their discriminative capacity in predicting 15-year mortality; [3]identify sources of potential discrepancies.
Methods: We included 3094 participants (aged 60–102) from the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K). Five creatinine-based equations were considered: Modification of Renal Disease (MDRD), Chronic Kidney Disease Epidemiological Collaboration (CKD-EPI), Revised Lund-Malmo (RLM), Berlin Initiative Study (BIS) and European Kidney Function Consortium (EKFC). Agreement was quantified using Cohen's Kappa. Discriminative capacity was quantified using area under the receiver operating characteristic curve (AUC) and Harrel's C statistic. Calf circumference (proxy for sarcopenia), body mass index (BMI) and age were explored as potential correlates of discrepancies.
Results: Cohen's kappa between dyads of equations ranged from 0.43 to 0.85, with poorest agreement between CKD-EPI and EKFC and best between RLM, BIS and EKFC. MDRD and CKD-EPI were less likely to classify participants in advanced CKD stages. The best mix of AUC and Harrel's C statistic was observed for BIS (0.80 and 0.73 respectively), however the prognostic accuracy for death decreased in subgroups. Differences among equations were not consistent across levels of calf circumference, BMI and age.
Conclusions: Different equations provided different estimates of GFR. BIS outperformed other equations in predicting mortality, however its discriminative capacity was reduced in subgroup analyses. Further studies are needed to optimize eGFR equations for older adults.

P-1031

SARC-Za study: evaluation of different recruitment methods for participation in a non-pharmacological multicomponent intervention for the treatment of sarcopenia in people over 65 years in Zamora (Spain)

Abstract Area: Sarcopenia

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Primary objective: To evaluate the efficacy of different recruitment methods for community-dwelling people aged 65 + years to participate in a multi-component, non-pharmacological intervention to treat sarcopenia.
Methods: Prospective, pragmatic, population-based intervention study in the city of Zamora (62,000 inhabitants). The effectiveness of three recruitment methods that were implemented consecutively was analyzed, from July 1, 2021, to December 31, 2021. Each method was used for two months: 1.- Direct contact of local social groups and associations, 2.- Personal contact by primary care physicians and nurses, and 3.-Dissemination through a campaign in the local media (posters, press, radio, and TV).
Inclusion criteria: All patients aged 65 years or older who live in the city of Zamora. Exclusion criteria: None.
Results: The target population was people aged 65 + years in Zamora (15,816 persons). During the full recruitment period, 292 persons (1.8%) contacted the program, and 227 (1.43%) completed the screening. Associations to which 3,170 older people were affiliated produced 84 participants (28.8%). Only 24 participants (8.2%) were referred from health care providers (4 from primary care physicians and 20 from a day care center). The media campaign produced 132 (45.2%) participants. When asked about how they learned about the study, 52 participants (17.8%) described finding out by word of mouth from study participants or staff and not by any proposed recruitment method. Characteristics of the population undergoing screening: mean age 75.0 years (65–97), 184 women (81%), 132 married (58.1%). Mean number of independently performed ADLs 4.8, IADLs 7.42. Self reported comorbidity: diabetes 34 (15%), ischemic heart disease 15 (6.8%), kidney failure 11 (5%), dementia 5 (2%). Of the 227 participants screened, 55 (24%) met diagnostic criteria for sarcopenia according to the ESWOP2 standards, all of them accepted been included in the sarcopenia treatment intervention.
Conclusion: Dissemination through the media was the method that obtained a highest number of contacts, with referral from the health environment was the less efficient. The results obtained must be interpreted in the context of the SARS-cov2 pandemic.

P-1032

Are statins making older people weaker?—a discontinuation study of muscular side effects

Abstract Area: Sarcopenia

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Background: Twelve percent of the population are treated with a statin—almost half of these are in primary prevention and most are > 65 years. Statins have well known muscular side effects (i.e. myalgia) which are correlated to reduced muscle function. Do years of statin treatment in older patients negatively influence age-related loss of muscle mass and strength?
Methods: Subjects: 98 men and women (71.1 ± 3.6 yrs (mean ± SD)) in primary prevention treatment for elevated blood cholesterol and/or LDL cholesterol with a statin. Intervention: Discontinuation of statin treatment for two months and reintroduction for two months. Primary outcome: Muscle strength and functional muscle capacity. Secondary outcome: MyalgiaTests: Body composition by DXA scan. Muscle strength and -function by handgrip dynamometer, chair stand test (CST) and six-minute walk test (6MWT).
Results: 6MWT increased after discontinuation (from 542 ± 88 to 555 ± 91 m, $P < 0.05$) and remained increased after reintroduction (557 ± 94 m). Same significant results were found with CST (15.7 ± 4.3 to 16.3 ± 4.9 no. of rep/30 s). Muscle discomfort during rest was lowered at discontinuation (VAS 0.6 ± 1.4 to 1.2 ± 2.0) and muscle discomfort during activity increased at reintroduction (2.5 ± 2.6 to 1.9 ± .9) (both $P < 0.05$). After 2 weeks of discontinuation cholesterol and LDL increased from 4.8 ± 0.7 to 6.5 ± 0.9 mM and from 2.2 ± 0.5 to 3.9 ± 0.8 mM, respectively, and remained elevated until the reintroduction of statins ($P < 0.05$).
Conclusions: Significant and lasting improvements in muscle function and myalgia were found at discontinuation and reintroduction of statins. The loss of muscular function is of concern for statin users and may accelerate age-related muscle loss.

P-1033

Dynapenia prevalences according to EWGSOP2 and 2 different suggested regional hand grip strength thresholds and their correlations with physical performance among Turkish older adults

Abstract Area: Sarcopenia

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Introduction: Using different threshold levels for low HGS, the prevalence of dynapenia may be calculated in a wide range in the same study population. Thus, we intended to evaluate the change in dynapenia prevalences among community-dwelling Turkish older adults according to EWGSOP2 and 2 different suggested regional hand grip strength thresholds. EWGSOP2 suggested 27 kg and 16 kg in males and females as cut-off levels defining low grip strengths while Bahat et al. suggested 32 kg and 22 kg in males and females. Bulut et al. suggested 28 kg and 14 kg.
Methods: This was an observational and cross-sectional study. We included 248 community-dwelling older adults. Hand grip strength of each attendant was measured with a Takei TK 5401 hand-dynamometer with a standardised protocol. Timed up and go test (TUGT) was performed by the same experienced nurse. Dynapenia prevalences were calculated by using aforementioned cut-off levels in the same study group.
Results: Dynapenia prevalences in our study were 19.2%, 62.8% and 16.4% respectively when cut off levels suggested by EWGSOP2, Bahat et al. and Bulut et al. used. P values of correlation analysis between calculated dynapenia prevalences and TUGTs were 0.05, 0.05 and 0.24 respectively.
Conclusion: Dynapenia prevalences which were calculated according to suggested cut off levels for low HGS by EWGSOP2 and Bahat et al. were correlated well with TUGT. By using appropriate cut-off level, dynapenia is a good predictor of low functionality.

P-1034

TEMPUS-FUGIT: a study protocol to explore the gut-muscle axis in older adults with sarcopenia

Abstract Area: Sarcopenia

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Introduction: The Trial in Elderly with Musculoskeletal Problems due to Underlying Sarcopenia– Faeces to Unravel the Gut and Inflammation Translationally (TEMPUS-FUGIT) explores the gut-muscle axis, comparing gut microbiota (GM) composition between non-sarcopenic and sarcopenic older individuals. In the latter group, associations between GM, systemic and intestinal inflammatory markers and sarcopenia-defining parameters (muscle mass, strength, physical performance) will be determined. Effects of optimized/individualized anabolic interventions for sarcopenia on GM and intestinal inflammation will be explored.
Methods: In a cross-sectional study, 100 community-dwelling healthy controls are matched to 100 participants ($\geq$ 65 years) from the 'Exercise and Nutrition for Healthy Ageing' (ENHANce NCT03649698) trial.ENHANce is an ongoing randomized, placebo-controlled, triple-blind, trial (RCT) exploring the effects of single/combined interventions (exercise, protein, omega-3 supplementation) in 5-intervention arms in older adults with European Working Group on Sarcopenia in Older People 2 (EWGSOP2)-defined sarcopenia. In stool samples, intestinal inflammatory markers are compared between sarcopenic and non-sarcopenic individuals. Systemic inflammatory markers are determined in fasted blood samples. Linear regression is used to determine associations between GM, inflammatory markers and sarcopenia-defining parameters. ENHANce participants deliver 5 intermittent stool samples to determine longitudinal GM-changes during the 12-week intervention. Linear mixed models are used for analysis. The trial was ethically approved (s65127) and registered at ClinicalTrials.gov (NCT05008770).
Results: This study protocol is close to submission. Results are expected by 2024.
Conclusions: TEMPUS-FUGIT aims to impact clinical practice by clarifying the relationship between the gut-muscle axis and sarcopenia. TEMPUS-FUGIT contributes to discovery of new biomarkers for sarcopenia, possibly opening future perspectives for novel sarcopenia treatment strategies targeting GM.

P-1035

Sarcopenia correlated with frailty syndrome in institutionalized elderly patients

Abstract Area: Sarcopenia

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Introduction: Aging is associated with the presence of fragility and chronic conditions, which causes a functional and cognitive decline. Sarcopenia is a major component of frailty syndrome (FS), both being considered as strong predictors of morbidity, disability and death in older people. It is characterized by a progressive loss of skeletal muscle mass and loss of muscle function. The purpose. Assessment of the particularities of sarcopenia in the context of frailty in the elderly to identify informative value indices.
Methods: The epidemiological study included 152 patients (74,46 $\pm$ 0.57 years), the sarcopenia determined according to SARC-F score and the FS—by Fried criteria. The results were analyzed in the software program Statistics 7.
Results: The elderly included into the study had sarcopenia, according to the results of FS screening—robust elderly people − 13,15%, pre-fragile people − 24,34% and fragile elderly − 62,5%. The functional aspect of FS was determined—dynamometry, mean value − 11,88 $\pm$ 0,86 kg, Tinetti score − 18.10 $\pm$ 0.57, Katz score − 9.48 $\pm$ 0.20, Lawton score − 10.73 $\pm$ 0.33. The mean values of the SARC-F score had a direct correlation with-MMSE ($R = 0.49$; $p < 0.05$), mini-Geriatric Depression scale ($R = 0.58$; $p < 0.05$), low autonomy—Lawton score ($R = -0.62$; $p < 0.05$), Groningen Frailty Index ($R = 0.71$; $p < 0.05$), SPPB ($R = -0.45$; $p < 0.05$), MNA ($R = -0.49$; $p < 0.05$). Correlations between mean values of SARC-F score and Fried frailty criteria were established—decreased walk speed ($R = 0.57$; $p < 0.05$).

Conclusion: The results of the study reveal the functional status as one of the most affected aspects of sarcopenia on the background of altered physical condition, such as fragility syndrome.
Key-words: sarcopenia, frailty syndrome, functional, elderly.

P-1036

Intra and interobserver repeatability of ultrasound assessment of the skeletal muscle

Abstract Area: Sarcopenia

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Introduction: The ultrasound assessment of muscle as a part of the diagnostic process for sarcopenia is a promising method. However, the standardisation of the measurements is of potential concern.
Methods: Within the framework of the SARCUS project, in the Krakow (Poland) centre, three non-radiologist observers independently examined 26 subjects. The ultrasound examination of the skeletal muscles was performed with Phillips Affinity 70G using a linear probe L12-3 with a frequency of 3–12 MHz. For the rectus femoris and the vastus lateralis muscles the cross-sectional area, thickness and the pennation angle were measured three times by each observer according to the SARCUS protocol. For the forearm group of muscles the thickness has been measured similarly. Using SAS 9.4, we calculated the intraclass correlation as a measure of within-observer, and plotted the funnel plots of between observer difference against the mean for the between-observer agreement.
Results: We included data of persons aged between 20 and 90 years. The intraclass correlations were between 0.93 and 0.99 and from 0.98 to 0.99 for the cross sectional areas and thicknesses of the rectus femoris and vastus lateralis, respectively, and for the thickness of the forearm muscle group. For the pennation angles, the intraclass correlations for rectus femoris ranged from 0.79 to 0.82, and for vastus lateralis from 0.85 to 0.92. The Bland-Altman plots indicated good interobserver agreement.
Key conclusions: Although still at the phase of assessment of its clinical usefulness, the ultrasound is a repeatable method to measure amount and structure of the skeletal muscle.

P-1037

Higher dietary protein intake is associated with sarcopenia in older British twins

Abstract Area: Sarcopenia

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BackgroundMuscle loss occurs with age; however, some older adults develop sarcopenia, characterised by an accelerated loss of muscle mass and function. The aim of this study was to evaluate protein intake and other factors associated with low muscle strength and sarcopenia.
Methods: This study utilised cross-sectional data from a study of community dwelling twins aged $\geq$ 60 years. Data on socio-demography, diet, anthropometry, muscle strength and mass, frailty, appetite, physical activity, and gut microbiota diversity were collected. Sarcopenia was defined using the European Working Group on Sarcopenia in Older People criteria. Protein intake was categorised according to the European Society for Clinical Nutrition and Metabolism guidance in g/kg/day. Factors associated with low muscle strength and sarcopenia were analysed using multivariate logistic regression.
Results: Participants (n = 3302) were 89% female (n = 2923), with an average age of 72.1 ($\pm$ 7.3) years, and comprised of 858 (55%) monozygotic, 709 (45%) dizygotic twin pairs and 168 individual lone twins. The prevalence of low muscle strength was 12.1% (n = 401) and sarcopenia was 4.3% (n = 129). There was no significant association between protein intake and low muscle strength (OR 0.95; 95% CI 0.82–1.09; p = 0.430), or between low protein intake and sarcopenia (OR 0.7; 95% CI 0.39–1.25; p = 0.229) in unadjusted models. High protein intake was associated with risk of sarcopenia (OR 2.04; 95% CI 1.21–3.44; p = 0.008), and this association was robust to adjustment for demographic, anthropometric and dietary factors. Regressions fitted to include coefficients for within-twin-pair and between-pair effects revealed that associations between muscle strength and income, education, frailty, and physical activity, were accounted for by shared twin factors, whereas weight, BMI, healthy eating index, protein intake, and microbiota alpha diversity, the association was independent of shared twin factors.
Conclusions: High protein intake is associated with increased risk of sarcopenia in a cohort of healthy older twins. Factors that were independent of shared twin factors may be more modifiable in future studies aiming to prevent/treat low muscle strength and sarcopenia.

P-1038

Sarcopenia in the Emergency Department

Abstract Area: Sarcopenia

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BackgroundThe age-related syndrome sarcopenia is one of the main features and causes of frailty. Recent advances define frailty, beyond the physical phenotype, as a multidimensional surrogate marker of biological age, which can be captured and quantified by the comprehensive geriatric assessment (CGA)- based Multidimensional Prognostic Index (MPI). This study aimed at investigating the MPI characteristics of older patients with sarcopenia admitted to the Emergency Department (ED).
Patients and methods: The preliminary database includes 552 patients (308 M, 244 F, MAge = 76 $\pm$ 6,76) who presented to the ED due to acute illness. Upon admission, all patients received a CGA and a sarcopenia diagnostic by means of handgrip strength and bioimpedance measurements.
Results: The mean MPI-Score was 0.31 $\pm$ 0.16, the mean appendicular skeletal muscle index (ASMI) was 7.45 kg/m2 $\pm$ 1.66 (M),

6.2 kg/m2 ± 1.84 (F), the mean body cell mass (BCM) was 28.05 kg ± 7.66 (M), 19.95 kg ± 5.56 (F) and the mean handgrip strength was 29 ± 10.5 kg (M), 18 kg ± 7.04 (F). The MPI Score correlated significantly with both handgrip-strength and BCM ($p < 0{,}001$). The handgrip-strength correlated significantly with the ASMI, the BCM, the (Instrumental) Activities of Daily Living and the Exton-Smith Scala ($p < 0{,}001$).

Discussion: Muscle strength, muscle mass, handgrip strength and the multidimensional frailty appear to be closely correlated. In light of its functional and prognostic implications, the evaluation of sarcopenia might be useful for clinical decision making already in the ED.

P-1039

Diabesity and sarcopenia, is there an association in the ALEXANDROS study?

Abstract Area: Sarcopenia

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Introduction: Chile is experiencing an advanced demographic transition characterized by an increase in life expectancy and in the prevalence of chronic diseases. Diabesity is defined as the simultaneous diagnosis of type 2 diabetes (DM2) and obesity, previous studies proposed that individuals with diabesity are susceptible to the acceleration of sarcopenia. Our aim is to evaluate the relationship between diabesity and sarcopenia in the Alexandros cohort study.

Methods: Cohort study of 611(67.92% female), community-dwelling older Chileans from the Alexandros cohorts, with data of DM2(Assessed through self-reported diagnosis) and obesity (Body mass index cut-off point > 30 kg/m2) at baseline and sarcopenia (Evaluated using the algorithm of the European Working Group on Sarcopenia in Older People (EWGSOP1)) in the follow-up study, logistic regression models were performed to evaluate association.

Results: A prevalence of 8.84% of diabesity was detected in the baseline and an incidence of 13.75% of sarcopenia was detected in the follow-up study without statistically significant differences by sex. When comparing the incidence of sarcopenia between normal subjects (without DM2 or obesity), only DM2, only obesity, and diabesity, we found statistically significant differences, being higher in participants with DM2(46) with 30.43% vs 17.34% in normal (323), 6.38% in obese (188) and 3.7% in diabesity (54) $p < 0.001$. In the fully adjusted model DM2(RR = 1.65; 95% CI: 1.05–3.49) and age (RR = 1.15; 95% CI: 1.10–1.20) were negatively associated with Sarcopenia.

Conclusions: No negative association was found between diabesity and sarcopenia, possibly due to the number of people with diabesity, more studies are needed to establish the relationship between diabesity and sarcopenia in older Chileans.

P-104

Evaluation of orthostatic hypotension among the community dwelling older persons

Abstract Area: Cardiovascular medicine

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Postural Hypotension or Orthostatic Hypotension (OH) is generally considered a common finding in older persons. Given the rapidly ageing population and growing demand for healthcare resources related to the ageing population, a robust estimate of prevalence is justified in order to plan service providers. Besides, a better understanding of the relevance of OH to health outcomes in older persons and the mechanisms by which OH leads to these health outcomes should also be determined to guide resource planning and direction for future research. Our aim is to evaluate the relationship between cerebral autoregulation via middle cerebral artery blood flow (CBF) estimated with transcranial Doppler ultrasonography. Individuals were divided into four groups accordingly to SBP drop with standing using ≥ 30 mmHg as a cut-off and falls status. In total, 40 participants were included. The cerebrovascular resistance (CVR) of the four groups were compared using various challenge manoeuvres. Our findings suggest superior cerebral autoregulatory capacity in individuals with SBP drop ≥ 30 mmHg with standing and no falls in 12 months compared with controls with neither. Our findings highlight the complexity of the relationship between postural haemodynamic responses and health outcomes in older individuals and challenges the prevalent clinical concept of the significant postural drop. Future studies should determine the implication of cerebral autoregulation modification by pharmacological and non-pharmacological modalities on falls and other related outcomes

P-1040

Validity of the urinary dipstick test in the diagnosis of urinary tract infections in adults

Abstract Area: Urinary incontinence

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Introduction: The aim of this study was to evaluate if urine dipstick analysis can be used to detect significant bacteriuria. This cross-sectional study was performed in the Emergency Department of Copenhagen University Hospital, Herlev, Denmark.

Methods: We recorded urine dipstick analysis from 500 adult patients admitted to the Emergency Department with symptoms suggestive of UTI (urinary tract infection) and with non-specific symptoms (fever, dehydration, dyspnoea, malaise). Dipstick results were compared with urinary culture.

Results: Sensitivity for leukocyte esterase (LE) was 80.9%, but specificity was 58%. The sensitivity of nitrite was 46.5%, and specificity was 90%. The positive predictive value (PPV) and negative predictive value (NPV) of LE for women were 54.5% and 75.9%; for men, 50.0% and 91.6%. PPV and NPV for nitrite in women were 85.9% and 66.8%; for men, 62.9% and 88.7%. Positive LE and positive nitrite had a PPV of 90.2% for women and 70.4% for men. Negative LE and negative nitrite had an NPV of 80.9% for women, and 93.3% for men.

Conclusions: No single parameter or combination of parameters on the urine dipstick analysis can be used reliably to predict positive urine culture in women. The most accurate predictor of negative urine culture in men is the combination of negative nitrites and negative LE. To minimize unnecessary use of antibiotics, treatment can be delayed in female patients with positive urine dipstick until urine culture results are available.

P-1041

The Health Literacy Survey 2019 in Italy: the determinants of vaccine literacy in the elderly population

Abstract Area: Vaccines

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Introduction: Although vaccines represent a primary public health achievement of the last century, vaccine awareness and uptake still face significant challenges, as evidenced by the COVID-19 pandemic. Vaccine Literacy (VL) is the ability to find, understand, judge immunisation-related information to make appropriate immunisation decisions.
Methods: In 2021, participating to the WHO M-POHL (Measuring Population and Organizational Health Literacy) network, a cross-sectional study was conducted on a sample of 3,500 participants, representative of the Italian general population aged 18 + years. A validated questionnaire on Health Literacy, sociodemographic characteristics, risk factors, lifestyles was used. VL was measured by four items using a 4-point Likert scale based on very easy, easy, difficult, very difficult categories, and categorised in 'good' (very easy + easy = 100.0% of the 4 items), 'sufficient' (very easy + easy = 75.0%), 'limited' (very easy + easy < 75%). An ordinal logistic regression analysis was performed to assess the association of sociodemographic factors with VL.
Results: Prevalence of limited VL was lower in elderly than in adults (28.6% vs. 33.8%, p-value = 0.0037); the opposite for both sufficient (21.4% vs. 19.6%) and good (50.0% vs. 46.5%) levels, even though not statistically significant. The odds of a low VL (sufficient/limited) decreased by 14% in the elderly and increased by 41%, 90%, and more than triple in persons with a low, considerable, and severe financial deprivation level, respectively.
Key conclusions: Improving VL in Italy should be a top priority in the health political agenda as shown during the last crisis due to the COVID-19 pandemic. Special attention should be paid to socioeconomic disadvantaged communities.

P-1042

The challenge Of COVID-19 vaccination in a Geriatric French Hospital: an experience feedback

Abstract Area: Vaccines

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Introduction: In 2021, the antiCOVID-19 French vaccination strategy required prioritization of the elderly. Our challenge was to vaccinate massively our geriatric patients with the mRNA Pfizer/BioNTech vaccine. The aim of this work was to build rapidly an efficient, structured and adaptable medication circuit.
Methods: To think up this circuit based on the standard steps, three methods are used: multidisciplinary meetings, benchmarking and brainstorming. The following issues are considered: supply tensions, short expiry date, compliance with the vaccine schedule, multi-dose vial requiring dilution and availability of the medical devices.
Results: Our multidisciplinary method led us to a 5-step vaccination circuit: 1.Prescription: physicians identified eligible patients and notified pharmacists by sending a liaison form for traceability and assistance in planning 2nd doses; 2.Supply: pharmacists planned vials orders, coordinated requests according to allocated quotas and planned vaccination sessions, using the liaison form and Excel® tables for vaccinations and orders follow-up; 3.Storage: pharmacy technicians received thawed vials and stuck an over-label identification of the expiry date; 4.Drug dispensing: pharmacy technicians dispensed vials according to liaison forms. They joined medical devices and the operating procedure for preparation and administration; 5.Preparation and administration: after training by a pharmacist, nurses prepared and labelled syringes (drug, patient and expiration time identification) then administered the vaccine. An internal procedure detailed the vaccination circuit, which was adapted to both laboratory and health authorities' recommendations.
Key conclusions: Thanks to this effective multidisciplinary organization, we managed to vaccinate quickly our high-risk patients with very little drug waste.

P-1043

Prevalence of vaccination in a nursing home in Spain and relationship of it with admission to emergency and hospitalizatioN

Abstract Area: Vaccines

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Introduction: Vaccines are one of the greatest public health achievements of the last century. In older people, vaccination becomes more important due to immunosenescence, and comorbidity increases the risk of developing serious complications after infections and hospitalization. In the recommendations published in Madrid, it recommended the systematic vaccination of older people against Influenza, SARS-COV-2 (spike protein mRNA vaccine), Pneumococcus and Tetanus. Likewise, depending on personal history and risk factors individual, vaccination against whooping cough, hepatitis A and herpes-zoster may also be indicated.
Methods: Descriptive study on the vaccination status of residents of a nursing home in Madrid, Spain in march 2022. We selected the nursing home residents and reviewed the primary care vaccination database.
Results: From the 132 residents with an average age of 86.11 years old. 81.52% were women, 8 were excluded because of lack of

information. From the included patients 41.13% have all the recommended vaccines. 98.39% were fully vaccinated of Coronavirus Cov sars 2 with three doses (spike protein mRNA vaccine). 93.55% were vaccinated in 2021 of influenza. 78.23% fully vaccinated of pneumococcus. 47.58% fully vaccinated of tetanus.
Conclusion: Of the nursing home residents studied less than half were fully vaccinated according to the recommendations. The vaccine with the most deficit in the nursing home was tetanus while Coronavirus SARS-COV-2 was the one with the higher percentage of fully vaccinated residents followed by influenza.

P-1044

Herpes Zoster burden of disease: an analysis of the placebo group data from three randomized phase III studies

Abstract Area: Vaccines

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Introduction: Risk of herpes zoster (HZ) is associated with a decline in immunity, linked to ageing and/or immunodeficiency. We performed a post-hoc analysis to assess the incidence and burden of HZ pain in patients ≥ 50 years of age (YOA) and in hematopoietic stem cell transplantation (HSCT) recipients ≥ 18 YOA.
Methods: ZOE-50 (NCT01165177), ZOE-70 (NCT01165229) and ZOE-HSCT (NCT01610414) were phase III studies conducted in immunocompetent adults ≥ 50 YOA, ≥ 70 YOA, and in HSCT recipients ≥ 18 YOA, respectively. Participants received 1 or 2 doses of zoster vaccine or placebo, 1–2 months apart. HZ pain and interference with daily activities were assessed by the Zoster Brief Pain Inventory instrument in unvaccinated/placebo subjects who had a confirmed HZ episode during the studies.
Results: Overall, 280 HZ-patients ≥ 50 YOA, 240 HZ-patients ≥ 70 YOA, and 172 HZ-patients ≥ 18 YOA were included in the placebo groups for the ZOE-50, ZOE-70 and ZOE-HSCT studies, respectively. HZ incidence was 9.1/1000 person-years in both the ZOE-50 and ZOE-70 placebo groups and 95.6/1000 person-years in the ZOE-HSCT placebo group. In the 3 studies, most individuals with HZ experienced severe pain, with approximately 90% of individuals reporting clinically significant pain. Descriptive statistics on the rash location, number of dermatomes, presence of pain and its intensity will be presented by study group.
Conclusion: Incidence and burden of HZ are high in immunocompetent adults ≥ 50 YOA and even higher in HSCT recipients ≥ 18 YOA. Funding: GlaxoSmithKline Biologicals SA.
Acknowledgement: Investigators of the ZOE studies. BDLS c/o GSK (Coordinator: Maxime Bessières)

P-1045

Safety and immunogenicity of a tetanus toxoid conjugated quadrivalent meningococcal vaccine (MenACYW-TT) in meningococcal vaccine-naïve older adults (≥ 56 years of age)

Abstract Area: Vaccines

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Background: MenACYW-TT [MenQuadfi®] is a quadrivalent (serogroups A, C, W & Y) meningococcal conjugate vaccine, licensed for use in ages 12 months and older in EU and certain other countries.
Methods: We report the results of 1208 study participants pooled from two studies (301 from a Phase II and 907 from a Phase III study) conducted in the USA, randomized to receive a single dose of either MenACYW-TT or MPSV4 (quadrivalent polysaccharide vaccine; Menomune®). Serum bactericidal assays with human complement (hSBA) were used to measure antibodies at baseline (D0) and 30 days post-vaccination (D30). Safety data were collected up to 30 days (Phase II study) and 6 months (Phase III study) post-vaccination.
Results: At D30, the majority (≥ 78%) of MenACYW-TT recipients had hSBA ≥ 1:8 (seroprotection). Higher seroprotection rates for all 4 serogroups were observed in MenACYW-TT recipients than in MPSV4 recipients. At D30, hSBA geometric mean titers (GMTs) were higher in the MenACYW-TT recipients for all serogroups (A [53.8 vs 31.5], C [80.6 vs 23.5], W [28.3 vs 15.7] and Y [59.2 vs 20.1]). Similar trends were observed in age subgroups '56–64 years' and ' ≥ 65-years'. Fewer participants reported solicited local reactions following MPSV4, likely driven by the differences in formulation between the two vaccines. No safety concerns were identified.
Conclusion: MenACYW-TT vaccine was well tolerated and demonstrated a robust immune response in meningococcal vaccine-naïve older adults. Results of the pooled analysis were consistent with individual studies in supporting the use of MenACYW-TT in this age group.

P-1046

Pneumococcal disease and cardiac events in the elderly—clinical outcomes and risk factors

Abstract Area: Vaccines

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Background: Pneumococcal disease (PD) is a major cause of morbidity and mortality in the elderly. Objective: To compare clinical outcomes between elderly patients with PD who developed cardiac events during inpatient period with those who do not developed them and to identify potential risk factors for cardiac events.
Methods: This retrospective observational study includes patients aged 65 years and older admitted by PD with positive urinary antigen to Streptococcus pneumoniae at any ward of a hospital center during 2018. Patients who had a concomitant microorganism identified and those temporary living in our country were excluded. Data were collected using medical records and include demographic data, comorbidities, pneumococcal vaccination status, and form of presentation of PD and cardiac events. Length of stay, admission at intensive care unit (ICU) and inpatient mortality were the primary outcomes. Statistical analysis was performed using SPSS. Continuous variables, expressed as mean ± standard deviation, were compared with Student's t-test or Mann-Whitney test, whereas categorical variables, expressed as number and percentage, were compared with Chi-square test. Independent predictors for cardiac events were identified by multivariate logistic regression analysis. A $p < 0.05$ was considered statistically significant.
Results: Among the 93 patients meeting the inclusion criteria, 34 developed any form of cardiac event. This group presented longer length of stay (15.6 ± 10.6 versus 8.4 ± 5.8 days, $p < 0.05$), and greater rate of admission at ICU (29.4 versus 3.4%, $p < 0.05$) and inpatient mortality (32.4 versus 13.6%, $p = 0.030$). Chronic cardiac disease and stage ≥ 3 chronic kidney disease were pointed as predictors of cardiac events (OR 5.2, $p = 0.001$; OR 4.4, $p = 0.011$). Overall vaccination against PD was rare (3 out of 30 patients).
Key conclusions: PD shows poorer outcomes when cardiac events develop during the inpatient period. As it is largely preventable by vaccination, all efforts should be done to increase the rate of immunization.

P-1047

Treatment for herpes and COVID-19 vaccinations: is there an association?

Abstract Area: Vaccines

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Introduction: An association between SARS-CoV2 vaccination and the reactivation of herpetic infections has been hypothesized, due to an antigen-mediated immunological cascade and a transient lymphopenia.
Aim: We aimed to describe the relation between the prescription of antiherpetic drugs and SARS-CoV2 vaccination in older adults.
Methods: It was a retrospective observational study on older adults in the Marche region that required at least one drug prescription for a herpetic reactivation after SARS-CoV2 vaccine in 2021. Sex, age, date and type of vaccination administered were recorded.
Results: We analysed data about 1177 subjects, 55.2% women, aged 78.2 ± 8.1 years. Among the sample, 17.4% of subject received Vaxzevria, 1% received Janssen vaccine, 11% were vaccinated with Spikevax and the majority (70.5%) with Comirnaty. After the first dose, 204 prescriptions followed the administration of Astrazeneca, 12 Janssen, 66 Spikevax and 362 Comirnaty. Regarding the second dose, only one was recorded after Vaxzevria, 64 after Spikevax and 488 after Comirnaty. The mean time between vaccination and prescription was 19.8 + 17 days (23.4 + 16 days after Vaxzevria, 18.8 + 6.7 days after Janssen, 18.9 + 15.7 after Spikevax and 19.8 + 17.4 days after Comirnaty; $p = 0.013$). Men received a prescription early then women after vaccination (18.8 + 16 days and 20.6 + 18.2 days respectively, $p = 0.073$). There was a correlation between older age and the time of prescription (Pearson correlation 0.168, $p < 0.001$).
Conclusions: We will compare the rate of use of herpes zoster drugs between vaccinated and unvaccinated older people. A possible association between herpes reactivation and SARS-CoV2 vaccine would reinforce the importance of herpes zoster vaccination.

P-1048

SARS-CoV-2 infection and vaccination patterns determine long-term protective antibody responses in Nursing Home Residents: data from NH-COVAIR

Abstract Area: Vaccines

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Introduction: Older Nursing Home Residents (NHRs) are at greatest risk of morbidity and mortality from SARS-CoV-2, particularly in the context of both waning vaccine efficacy and the emergence of Variants-of-Concern (VOCs). There is no data to date on long-term protective antibody responses in older NHRs**Methods:** Blood samples were obtained pre-vaccination, 6-weeks and 6-months following primary vaccination and 6-months following booster vaccination from older NHRs. Antibody titres and avidity for Wuhan strain/major VOC antigens were measured using an electrochemiluminescence assay and a custom bead-based assay. Stepwise adjusted linear regression assessed determinants of vaccine-induced antibody responses.
Results: Of 86 participants (81.1 ± 10.8 years; 65% female), just under half (45.4%) had evidence of previous SARS-CoV-2 infection. Previous SARS-CoV-2 infection was the strongest predictor of antibody responses at all timepoints (β: 3.59; 2.89, 4.28; $P < 0.001$ for 6-months). Age (β: − 0.05; − 0.08, − 0.02; $p < 0.001$) and frailty (β: − 0.22; − 0.33, − 0.11; $p < 0.001$) were both associated with faster waning. Cross-reactivity and avidity were significantly lower for Beta (B.1.351) and Gamma (P.1) VOC strains (all $p < 0.001$), with faster antibody waning and reduced avidity to Beta and Gamma VOC antigens in SARS-CoV-2 naïve NHRs.
Conclusion: Responses were more durable, with a greater cross-reactivity to and avidity for VOCs in those with previous SARS-CoV-2 infection. Increasing age and greater frailty in NHRs was associated with faster antibody waning. Our findings support ongoing serological surveillance and use of additional vaccine doses in older NHRs,

particularly in SARS-CoV-2 naïve NHRs, to afford protection from emerging VOCs.

P-1049

Gripwise® versus Jamar®: the challenge of devices assessing handgrip strength for sarcopenia diagnosis in older inpatients

Abstract Area: Sarcopenia

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Backgrounds: The diagnosis of sarcopenia is based on the measurement of HandGrip Strength (HGS), for which the gold standard dynamometer is the Jamar®.
Objectives: The electronic Gripwise® is smaller and lighter and its measurements have been found correlated with the Jamar® in laboratory tests, to confirm in real life, handled by aged patients.
Methods: This monocenter cross-sectional study included inpatients aged 65 years and older. Considering the Intraclass Correlation Coefficient (ICC) of HGS measurements should be greater than or equal to 0.90 ± 0.02 with an alpha risk of 5%, the sample size was calculated at 348 patients.
Results: From 2021 September the 1st to November the 18th, 348 out of 649 eligible inpatients were included, of whom 174 patients were allocated to start the measurements set with the Jamar® or the Gripwise®. The patient's mean age was 79 years ± 9 and 48% were male. The ICC was 0.93 (95% CI 0.92; 0.94, $p < .001$) for the maximum value and of 0.94 (95% CI 0.93; 0.95, $p < .001$) for the mean values, whatever the dominant hand side and the seated/bedridden position of the patient. However, there was a significant difference in detecting low values (< 16 kg in women, < 27 kg in men): 48% with the Jamar®, and 71% with the Gripwise® ($p < .001$).
Conclusion: The measurements correlation between the Gripwise® and the Jamar® was confirmed in real life. However, lower values obtained with the Gripwise® could lead to over-diagnose sarcopenia and applying a correction coefficient could be necessary.

P-105

Few geriatric heart failure patients investigated according to clinical guidelines: a retrospective review of patient records

Abstract Area: Cardiovascular medicine

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Background: Research on heart failure (HF) has often focused on younger patients. The aim of this study was to analyze extent of investigation and treatment among older patients prior to referral to inpatient geriatric care for worsening of HF.
Methods: Data on etiology, ejection fraction (EF) by echocardiography (ECHO), level of functioning according to New York Heart Association (NYHA), analysis of N-terminal-pro-brain natriuretic peptide (NT-Pro-BNP), ongoing treatment, adherence to guidelines, and information from previous caregiver were collected from patient records prior to admission from a sample of 134 patients.
Results: Few patients had been examined by a cardiologist (14%) during the year prior to referral. EF assessment had been performed in 78% (n = 105). The patients were categorized as having HF with reduced (HFrEF 28%), preserved (HFpEF53%) or mid-range (HFmrEF 19%) EF. HFpEF patients had older EF assessments (mean 517 days) than those with HFrEF (385 days). In 61% (n = 82) at least one assessment with NT-Pro-BNP had been performed, being older among patients with HFpEF (290 days vs 16 days). Information about NYHA class was found in 4 patients (3%) only. There was a strong positive correlation (OR 4.9, $p = 0.001$) between having recent assessments of EF and NT-Pro-BNP (n = 30, 21%) and being presented with etiology in the referral, adjusted for EF, age, sex, and comorbidity. It was not possible to estimate adherence to treatment guidelines since NYHA assessment was rarely performed. However, in a subgroup of patients with EF < 35%, it was found that 19% were treated with mineral receptor antagonists according to guidelines.
Conclusions: The three major findings were that only a minority of the patients had had a recent contact with a cardiologist, that the investigations were old and that information on investigations was strongly correlated to information about etiology in the referral. The insufficient investigations, the lack of contribution from cardiologists and the poor referral information on etiology may lead to less optimal treatment of HF in older people. Improving adherence to HF guidelines regarding investigation and treatment for HF in older people is therefore urgent and calls for more collaboration between specialists in cardiology and geriatric medicine.

P-1051

The effect of Caregivers Support Groups attendance on burnout of family caregivers of older adults with dementia

Abstract Area: Cognition and dementia

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Introduction: Family caregivers who care for a relative with dementia for a prolonged period of time are prone to develop burnout. This study aimed to explore the existence of burnout among family caregivers with regard to their participation or not in caregivers support groups.
Methods: A cross-sectional study was carried out in a convenience sample of 153 pairs of patients and family caregivers who were administered questionnaires regarding sociodemographic data and the Maslach Burnout Inventory (MBI), in 3 Dementia Day Care centers in Attica.
Results: The majority of the participants were women (76,5%) and daughters of the patients (50,3%), caring for their relative for an average of 4,28 years since diagnosis and 12,07 h per day. Family caregivers presented moderate levels of emotional exhaustion (score 19–26) moderate levels of low personal achievements (score 34–39) and low levels of depersonalization (score < 5), so they experienced an average of moderate to low level of burnout. A percentage of 23,5% participated in caregivers support groups compared to 76,5%

who never did. Caregivers who participated in such groups had a 2,4 times higher probability to experience a lower level of depersonalization. Regression analysis showed that attendance of support groups was an independent prognostic factor for higher levels of personal achievements.

Key conclusions: Support and education that take place in family caregivers support groups contribute to higher levels of satisfaction from care and should be a priority in national strategies since it will result in prevention and management of caregivers' burnout and eventually in better patient care.

P-1052

Serum level of total protein and albumin effect on dementia risk in oldest-old in nursing homes

Abstract Area: Cognition and dementia

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Background: some studies show association between serum protein level and cognitive disorders, but it has been poorly studied in oldest old.

Purpose: to determine serum total protein level, serum albumin and to evaluate their effect on cognitive status of oldest-old in nursing homes.

Materials and methods: 400 subjects (22.8% male) aged 90–101 (mean 92.6–2.4) years who live in nursing homes were included in the study. In all subjects was evaluated total protein level and serum albumin. All patients had stable health condition without signs of acute illness or decompensation of chronic diseases. Cognitive functions were assessed using Mini Mental State Examination (MMSE) Clock Drawing Test, Frontal Assessment Battery (FAB).

Results: serum total protein level ranged from 51 to 94 (median 71; IQR 66–75) g/l. Serum albumin level ranged from 21.8 to 50.4 (median 38.2; IQR 35.1–41.5) g/l. Only 338 (84.5%) subjects had normal total protein level and 363 (91.4%) subjects had normal of serum albumin level. The MMSE score ranged from 0 to 30 (median 18; interquartile range 11–24). Dementia (MMSE score ≤ 23) was diagnosed in 279 (69.8%) subjects. We found positive correlation between serum total protein, serum albumin and cognitive tests score. Univariate regression analysis with age and sex adjustment with considering serum total protein and serum albumin level as a continuous variables showed that serum total protein and albumin increase by 1 g/l are associated with dementia risk reduction by 6% (OR 0.94; 95% CI 0.91–0.97; $p < 0.001$) and 14% (OR 0.86; 95% CI 0.81–0.91; $p < 0.001$) respectively.

Conclusions: in oldest old who live in nursing homes, increase of serum level of total protein and albumin play a protective role for the risk of dementia. This 2 parameters can be considered as indicators of dementia risk control in this population.

P-1053

Correlation between frailty, BPSD and cortical atrophy in older patients diagnosed with dementia: a single center longitudinal study

Abstract Area: Cognition and dementia

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Introduction: Behavioral and Psychological Symptoms of Dementia (BPSD) are a group of affective disorders co-existing with the cognitive decline [1–2]. Being dementia a widespread geriatric syndrome, we aimed to evaluate the possible correlation between frailty and BPSD and the association between different BPDS clusters and brain atrophy.

Methods: A total of 144 outpatients with a clinical diagnosis of dementia were enrolled. Patients were categorized as "severely frail", "mild/moderately frail" and "robust" based on the Clinical frailty scale (CFS, respectively, ≥ 7, 4–6 and ≤ 3). The Neuropsychiatric inventory scale was used to assess the presence and severity of BPSD. According to Aalten et al., BPSD were classified in three clusters: "mood/apathy" (depression, apathy, sleep disturbances, appetite disturbances),"psychosis" (delusions, hallucinations, anxiety) and "hyperactivity" (agitation, elation, motor aberrant behavior, irritability, disinhibition)[3]. Brain atrophy was assessed applying Global Cortical Atrophy (GCA) and Posterior Atrophy scales (PA).

Results: Although the most represented group of patients was mildly-moderately frail, the percentage of patients with at least one symptom per cluster was higher in the "severely frail" compared to "mild/moderate frail" subgroup, suggesting that frailty itself could increase the risk of developing BPSD. A significant correlation between frailty and "hyperactivity" cluster was detected, both at baseline and follow up visits. We also found a significant association between "hyperactivity" cluster and posterior cortical atrophy as measured with PA scale.

Conclusions: These data suggest the possible link between frailty and BPDS, highlighting the usefulness of an in-depth study in a larger cohort of patients with cognitive impairment.

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P-106

DANTE (Diagnostic Acute patieNt Tool in Emergency) & BEATRICE (Bedside Echocardiographic AssesmenT foR Improve Clinical Evaluetion) for geriatric patients

Abstract Area: Cardiovascular medicine

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Objectives: To determine whether comprehensive quantitative bed side echocardiogram could be used as a usual assessment tool in acute geriatric patients and to assess its effect on patient care. Design: retrospective. Setting: DEA di II livello IRCSS Policlinico san Matteo. Patients: acute ill medical, trauma and surgical patients. A doctor enrolled in the discipline of emergency medicine was assigned to perform bedside echocardiograms of acute inpatients. This work took only geriatric patients into consideration. (> 65aa) Interventions: The Bedside Echocardiographic AssesmenT foR Improve Clinical Evaluetion (BEATRICE), a comprehensive transthoracic echocardiogram was performed. Measurements and Main Results 6-month period, 369 BEATRICEs were performed. The mean patient age was 76.2 (± 14.3) years. 95% were hospitalized in medical departments and 5% in surgical ward. In 97.4% of cases BEATRICE was performed in a timely manner. The ejection fraction, cardiac index and the volumetric indices of the left ventricle is reported in 97% of the reports. Estimated stroke volume, longitudinal systolic function with tissue Doppler and atrium study is reported in 99.7%, 98.6% and 98.9% of BEATRICE studies. The study of diastolic and atrium function is reported in 99.3% and 98.9% of the reports respectively. Estimated left ventricular filling pressures are reported in 98.3% of the measurements. Information on the vena cava reported for 98%. Right heart function was assessed for 91.8%. Mean or systolic right ventricular pressures, or both, were also estimated in 91.9% of the reports. The BEATRICE was judged to be useful by the consulting primary care team in over 96% of cases, BEATRICEs allow the modification of therapy or the diagnostic process in over 40% of cases (in 27% of cases they allow to significantly modify the therapy and in 16% of cases they allow to significantly modify the diagnostic therapeutic procedure) and speeding up the diagnostic process in over 30% of cases.

Conclusions: The BEATRICE is feasible and alters care in the intensive care unit by providing clinical data not otherwise available at the bedside. Further studies are warranted to assess the impact of comprehensive echocardiogram-directed resuscitation on patient outcomes.

P-107

Prehabilitation in older patient with severe aortic stenosis pending intervention

Abstract Area: Cardiovascular medicine

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Prehabilitation programs involve preoperative lifestyle changes, such as nutritional supplementation, exercise, stress reduction, and smoking cessation. They are used to improve postoperative **Results:** The specific protocols of each institution regarding the primary responsibility for the prehabilitation process are variable. In the case of Hospital Universitario de Getafe, this pilot experience is being directed from geriatrics, through interconsultation and the geriatric day hospital. We write this scientific letter to present the first clinical data on the use of preoperative prehabilitation in elderly patients awaiting intervention for severe aortic stenosis. It should be noted that we did not select symptomatic patients due to the high risk of complications, such as syncope, ventricular tachycardia, and death. Prehabilitation is a novel concept that differs from "preoperative optimization" in that it requires lifestyle changes made by the patient, rather than physician-managed interventions (eg, medication changes, correction of anemia) to achieve an optimal preoperative state. The prehabilitation programs in our center have been aimed at pre-frail and frail elderly patients undergoing onco-specific treatments or major oncological surgery, as well as elective cardiovascular surgeries. We believe that this experience should be known by physicians who manage this profile of patients and who may consider the use of prehabilitation in older people with severe aortic stenosis pending intervention. There is a lack of randomized clinical studies that certify the good practice of prehabilitation in this surgical pathology.

P-108

Factors associated with poor prognosis of congestive heart failure in elderly patients comorbid with cognitive impairment

Abstract Area: Cardiovascular medicine

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Introduction: Congestive heart failure (CHF) in elderly patients is known to be poor. Recently, prevalence of cognitive impairment (CI) in such patients are reported to be synergistically worsen the prognosis. We herein examine the prognostic factors in elderly CHF patients comorbid with CI in Japan.

Method: We prospectively examined 195 patients above 75 years old who were hospitalized from April 2019 to March 2020 at our facility due to CHF and followed for 730 days. We categorized them into the CI group (less than 23 points by Mini-Mental State Examination) and the non-CI group. Then we compared the difference in mortality within 730 days between the groups by Chi-squared test. Furthermore, we evaluated the independent prognostic factors for all-cause mortality within 730 days in both groups by multivariate analysis adjusted for Geriatric Nutritional Risk Index (GNRI) and family structure as a representative of living surroundings adding to the classical risk factors.
Result: Among 195 patients, 45% were in the CI group. The all-cause mortality was 69% and 24% in the CI and the non-CI groups, respectively (RR 2.83, 95% CI 1.94–4.12, $P < 0.001$). GNRI independently associated with the prognosis in both groups, however, family structure, which represents support from somebody close to the patients, associated with the prognosis only in the CI group.
Conclusion: Our results suggest that both nutritional status and social background including family structure were important to predict the prognosis of CHF among CI patients, while family structure was not among non-CI patients.

P-109

Oral anticoagulant therapy and decline of kidney function in elderly patients with non-valvular atrial fibrillation: real world evidence data

Abstract Area: Cardiovascular medicine

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Non Valvular Atrial fibrillation (NVAF), the most frequent cardiac arrhythmia found in clinical practice, is an independent predictor of cardiovascular mortality and morbidity. This arrhythmia has a strong impact on the patient's quality of life; hospitalization is frequent both for the acute management of the arrhythmia and for possible complications such as stroke or worsening of a previous heart failure; it is associated with twice death rate in comparison with the healthy population. Over the next few decades, we will see a major increase in the prevalence of NVAF; the older age groups will be more affected reaching a prevalence of 4.8% between 70 and 79 years and 8.8% between 80 and 89 years. The incidence and prevalence increase in proportion to age and comorbidity burden especially in elderly patients in whom oral anticoagulant therapy (OAT) is difficult to manage, and it is often underused for limitations of efficacy and safety presented by vitamin K antagonists (AVK), however non-vitamin k antagonist oral anticoagulats (NOAC) are effective as AVKs with better safety profile. NOAC ensuring a lower incidence of major bleeding, limited pharmacological interactions and better therapeutic compliance of frail and older patients. NOAC do not require monitoring of the INR and they should be use at fixed doses that are established according to renal function, clinical conditions and the risk of individual bleeding; these features make them particularly manageable in more complex patients. NVAF and Chronic Kidney Disease (CKD) are mutually connected and often coexist in the elderly patient. NVAF is a risk factor for the progression of CKD, the prevalence and incidence of AF increase with decrease in renal function, CKD also increases the risk of bleeding and thromboembolism, making risk stratification and treatment very difficult. All available NOAC are partially eliminated by the kidneys therefore, renal function inevitably influences our therapeutic strategies. The aim of this work was to evaluate, in a large elderly population of NVAF patients with important comorbidities, the difference on renal function decline between AVK and NOAC users. We enrolled 411 Caucasian patients aged $\geq$ 70 years, affected by NVAF with important comorbidities, 135 patients receiving VKA and 276 receiving NOAC. All subjects underwent a medical history and physical examination at baseline; all were suffering from paroxysmal, persistent or permanent NVAF, documented electrocardiographically. Patients underwent clinical-instrumental and laboratory evaluation for a follow-up of 6.9 ± 2.5 years. Patients with severe hepatic (Child-Pugh C) or renal impairment (eGFR < 15 ml/min/1.73 m2) were excluded from this study. Rapid decline in renal function was defined as annual loss $\geq$ 5 mL/min/1.73 m2 of eGFR. Data were expressed as mean and standard deviation or as median and interquartile range (IQR) when appropriate. At baseline the mean age of the population was $76.4 + - 5.8$ years, the prevalence of arterial hypertension (AH) was 89.8%, type 2 diabetes mellitus (T2DM) 39.9%, COPD 39.6%, heart failure (HF) 25.5%, and chronic ischemic heart disease 38.4%. Baseline eGFR was 62.9 (49.1–80.3) mL/min/1.73m2, haemoglobin (Hb) 13.5 (12.7–14.1) g/dL, systolic blood pressure (SBP) 136 (122–148) and diastolic blood pressure (DBP) 76 (70–87) mmHg. Two groups were comparable for sex, smoking and T2DM prevalence. The NOAC group had a higher prevalence of HF ($p = 0.0028$), COPD ($p = 0.0017$), AH ($p = 0.0004$). Whole population showed a ΔeGFR between follow-up and baseline of − 13.2 ml/min/1.73 m2 (IQR − 28.3/− 6.8) with ΔeGFR/year − 1.96 ml/min/1.73m2 (IQR − 3.4/− 1.24). During an average follow-up of 6.9 ± 2.5 years there were statistically significantly differences between VKA and NOAC in eGFR ($p < 0.001$), creatinine ($p < 0.0001$), blood glucose ($p < 0.0001$), SBP ($p < 0.0001$), HB ($p < 0.0001$), number of renal events/year 35/135 (25.9%) in AVK group vs 36/276 (13.0%) in NOAC group, ($p = 0.001$). In NOAC group, a linear correlation analysis was performed between eGFR and different covariates expressed as Δ variation between baseline and follow-up. ΔeGFR was significantly directly correlated with ΔHb ($r = 0.142$, $p = 0.044$), and inversely with ΔDBP ($r = - 0.230$, $p < 0.0001$), ΔSBD ($r = - 0.221$, $p < 0.0001$) and ΔBMI ($r = - 0.139$, $p = 0.029$). From stepwise model, ΔHb was the main predictor of ΔeGFR, accounting for 18.0% of its variation, while ΔDBP, ΔSBP and ΔBMI added 5.3%, 3.6% and 2.0% respectively for a total of 28.9%. The present study confirms a better safety profile of NOAC compared to AVKs on the decline of renal function in elderly and multimorbid population, even though patients receiving NOAC were older and showed a greater burden of comorbidities that negatively affect renal function such as arterial hypertension, COPD, heart failure; and at baseline a significantly lower eGFR value than the AVK group.

P-110

Effect of sacubitril/valsartan on endothelial dysfunction and arterial stiffness in elderly patients with chronic heart failure

Abstract Area: Cardiovascular medicine

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Heart failure (HF) is associated to endothelial dysfunction, a pathological condition characterized by imbalance between the production of vasoconstrictor and vasodilator factors, increase in the production of cytokines, down-regulation of eNOS, platelets activation and increased oxidative stress. Furthermore, endothelial dysfunction promotes the increase of arterial stiffness, augmenting myocardial damage. Sacubitril/Valsartan (sac/val) is used in the treatment of HF reduced ejection fraction (HFrEF) and has been proven effective in reducing cardiovascular (CV) disease progression and all-cause mortality in HFrEF patients. The aim of the study was to evaluate the effect of sac/val on endothelial dysfunction and arterial stiffness in patients with HFrEF, at baseline and after 6 months of treatment. Moreover, we evaluated the effects of sac/val on oxidative stress levels and platelets activation. We enrolled 100 Caucasian patients (mean age 70.1 ± 7.1), suffering from HFrEF. Inclusion criteria were EF < 35, functional class NYHA II or III. All clinical evaluation and laboratory tests were performed at baseline and after 6 months of treatment. The serum values of the markers of oxidative stress (8-isoprostane, NOX-2) and platelets activation (Sp-selectin, GPVI) were assessed with ELISA sandwich. Endothelial function was estimated with the measurement of the reactive hyperemia index (RHI); arterial stiffness (AS) was evaluated with the measurement of carotid-femoral pulse wave velocity (PWV), augmentation pressure (AP) and augmentation index (AI). Continuous variables were expressed as mean ± standard deviation (SD) (normally distributed data) or as median and interquartile range (IQR) (non-normally distributed data). For all continuous variables, comparisons between baseline (T0) and post-treatment values (T6) were performed using paired Student's t test. All variables which deviate from the normal distribution were log-transformed (ln) before to be introduced into paired Student's t test. A linear regression analysis was performed to assess the relationship between variation in arterial stiffness (PWV) and endothelial function (RHI) indices, expressed as Δ of variation between baseline and follow-up (ΔT0–6) and the variation of metabolic, inflammatory, oxidative stress and platelets activation covariates that significantly improved after the treatment (expressed as ΔT0–6). Of the 100 outpatients evaluated, 80.85% were males, 21.28% active smokers. NYHA class II was represented in 39.13% and NYHA class III in 60.87% of patients. The mean dose of sac/val was 180.5 ± 110 mg without serious adverse events. At 6 months, data showed a significant improvement in in hemodynamic and clinical parameters such as heart rate (HR) ($p < 0.0001$), NT-ProBNP ($p < 0.0001$), fasting plasma glucose (FPG) ($p < 0.0001$). Furthermore, there was a significant reduction in oxidative stress biomarkers such as 8-isoprostane ($p < 0.0001$), Nox-2 ($p < 0.0001$), and platelets activity biomarkers such as sP-selectin ($p < 0.0001$) and GPVI ($p < 0.0001$). Regarding the inflammatory profile, there was a statistically significant reduction in c-reactive protein (CRP) ($p < 0.0001$), IL-6 ($p < 0.0001$) and TNF-α ($p < 0.0001$), indicating an improvement in the inflammatory state, after 6 months treatment with sac/val. Moreover, we observed a significant improvement in arterial stiffness parameters such as PWV ($p < 0.0001$), AI ($p < 0.0001$), AP ($p < 0.0001$) and in endothelial function indices such as RHI ($p < 0.0001$). The linear correlation analysis showed that ΔPWV was directly correlated with ΔHOMA ($p = 0.037$), ΔIL-6 ($p = 0.034$), ΔTNF-α ($p = 0.001$), Δ8-isoprostane ($p = 0.016$), ΔNox-2 ($p = 0.01$), ΔGP6 ($p = 0.018$), ΔSp-selectin ($p = 0.023$); ΔRHI was inversely correlated with ΔHOMA ($p = 0.003$), ΔIL-6 ($p = 0.004$), ΔTNF-α ($p = 0.023$), ΔCRP ($p = 0.011$), Δ8-isoprostane ($p = 0.012$), ΔNox-2 ($p = 0.01$), ΔGP6 ($p = 0.014$), ΔSp-selectin ($p = 0.015$). From stepwise multivariate linear regression model, ΔTNF-α was the stronger predictor of ΔPWV, justifying 48.5% of its variation and ΔSp-selectin was the major predictor of ΔRHI explaining 23.2% of its variation. In conclusion, results obtained from our study demonstrated that 6 month treatment with sac/val, in patients with HFrEF, improved endothelial dysfunction and arterial stiffness, due to reduced levels of oxidative stress, platelet activation and inflammation, without adverse effects.

P-111

Description of the results of elderly patients with atrial fibrillation in guadalajara after one year of follow-up

Abstract Area: Cardiovascular medicine

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Introduction: Patients over 75 years of age receive anticoagulation less compared to other age groups. These present a very heterogeneous baseline situation that requires individualized decision-making.
Objective: analyze the evolution after one year of follow up, of a group of anticoagulated patients due to non-valvular atrial fibrillation (NVAF).
Method: Retrospective study. Consecutively included patients admitted for NVAF in the Acute Geriatrics Unit of the Guadalajara Hospital between January-September 2018. Collected through electronic history: sex, age, Barthel, Global Deteriorate Scale, anticoagulant drug, reasons for not anticoagulating, thrombotic events and hemorrhagic, death.
Results: Patients included: 138. Women 62.3%. Median age (interquartile range), 91(88–94) years. Charlson 2(0–4). Serious dependency 30.4%, independent 23.9%. Without dementia 52.2%. 60.1% anticoagulated. At discharge, anticoagulation withdrawal at 10.1%, the most prevalent reasons being major bleeding (5.1%) and severe dementia (6.5%). 5.8% of patients were discharged de novo anticoagulated. 37% of patients died during admission. Of the 87 patients alive at discharge, 85 (2.2% losses) were followed up for one year, with 22 (25.2%) having died. 59.6% continued anticoagulated. No association was found between mortality and sex, age, comorbidity, dependency, or cognitive status. No association was found with being anticoagulated. During follow-up, 19% suffered a stroke, 58% ($p < 0.001$) being anticoagulated, all of them with acenocoumarol. 26.9% had a major or minor hemorrhage, 76.4% were anticoagulated ($p < 0.001$).
Conclusions: No association was found between mortality and any of the parameters collected.- More than half of the patients who suffered a thrombotic episode during follow-up were anticoagulated, all of them with acenocoumarol. We must consider the benefit of acenocoumarol in this patient profile, with a high rate of comorbidity, polypharmacy, and high thrombotic and hemorrhagic risk.- These data are controversial in the literature, so we must go deeper into their study to obtain evidence of the true benefit of anticoagulant therapy in older patients.

P-112

Cardiovascular profile of senior citizens in a typical sub-urb of Africa: a prospective cohort pilot survey

Abstract Area: Cardiovascular medicine

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Introduction: Little efforts are in place to address the current conundrum of population ageing in Africa. Ageing Initiative in sub-Saharan Africa (AISA) aims at identifying and intervene the biological, clinical, demographic and public health challenges associated with ageing population. Dar es Salaam Longitudinal Programme on Ageing serves as a pilot programme to assess cardiovascular profiles of $\geq$ 65 on a typical sub-urb of Dar es Salaam city, Tanzania.
Methods: We conducted a prospective cohort survey of $\geq$ 65 years residents of Ubungo in Dar es Salaam, Tanzania. Data on demographic, anthropometric, systolic-diastolic BP, resting ECGs, comorbidity/drugs and family history were followed once every 3 months. Incidence of cardiovascular events were the main outcome measures. Data were analysed using a generalised linear model. Unless otherwise stated, α-level of 5% was used to limit type 1 error. Written informed consent was sought from each participant before baseline screening.
Results: We analysed 65190 person-days (62% female) of follow-up by 1st May 2022. Median age of participants was 67.1 (IQR: 61–73) years. Median systolic and diastolic BP were 144 (IQR: 138–151) and 87 (IQR: 84–90) mmHg respectively. Incidence of pre-hypertension and hypertension were 992/1000 and 623/1000 person-days respectively. All-cause mortality was 3/1000 person-days. Left Ventricular hypertrophy (76%) and J-wave patterns (57%) were the main resting ECG findings. Age (RR: 1.2, 95% C.I: 1.06–1.9), BMI (RR: 2.6, 95% C.I.: 1.9–3.3) and gender (RR: 1.1, 95% C.I.: 1.00–1.48) were significant predictors of hypertension. Majority (91.3%) had co-morbidities (Median = 4, IQR: 3–5). Obesity (67%), Ischaemic Heart Disease (48.0%) and cataract (40.5%) were the main comorbid conditions.
Conclusion: Pre-hypertension and hypertension were most prevalent in this study population. J-wave pattern was significant in this study population. Majority of study participants were unknown hypertensives.

P-113

Association between discontinuation of anticholinergic drugs and risk of major adverse cardiovascular events in geriatric outpatients

Abstract Area: Cardiovascular medicine

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Background: Anticholinergic drugs are associated with risk of cardiovascular disease. The effect of discontinuing anticholinergic drugs on this risk is unknown. We investigated the association between discontinuation of anticholinergic drugs and risk of major adverse cardiovascular events (MACE) in Danish geriatric falls clinics where medication review is routinely performed.
Methods: All patients over 65 years from Danish geriatric outpatient clinics from 2008 to 2018 using Danish registries were included. Who excluded patients who did not receive anticholinergic drugs at baseline or had prior MACE (defined as myocardial infarction, cardiac revascularization, stroke, or cardiovascular death). We calculated anticholinergic drug scale (ADS) scores from prescribed anticholinergic drugs 6 months before and after the geriatric outpatient course. Patients were followed from 6 months after the outpatient course until MACE, death from other causes, loss to follow-up due to emigration or end of study at 31st of January 2019.
Results: We included 14,262 patients with a mean age of 82.5 (SD 7.4) years. The patients mean follow-up time was 2.7 (SD 1.8) years. Mean ADS score at baseline was 2.5 (SD 2.0) with a mean reduction of 1 (SD 1.4) after the outpatient course and 1,881 patients had MACE during follow-up. Compared to no reduction in ADS, adjusted hazard ratios for reductions of 1, 2 or $>$ 3 were 0.92 (95% CI: 0.83–1.02), 0.77 (95% CI: 0.65–0.90), and 0.80 (95% CI: 0.67–0.96) respectively.
Conclusion: There was dose-response association between greater reduction in ADS and lower risk of MACE in outpatients from Danish geriatric fall clinics.

P-114

Pharmacist-led InterVentiOn for aTriAl fibriLlation in long-term care: the PIVOTALL study

Abstract Area: Cardiovascular medicine

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Introduction: The Atrial Fibrillation (AF) Better Care (ABC: Avoid stroke; Better symptom management; Cardiovascular comorbidity management) pathway is the gold-standard approach to AF care, but it is not known how easy it is to implement in people living in long-term care (LTC).
Methods: Individually randomised pilot and feasibility study of a pharmacist-led medicines optimisation based on the ABC pathway, in older (aged $\geq$ 65 years) LTC residents with AF was compared with usual care.
Results: Between 13 October 2020 and 31 November 2021, 21 residents were recruited and 11 (mean age [SD] 85.0 [6.5] years, 63.6% female) were randomised to receive a pharmacist-led medicines optimisation. Only 3/11 residents (27.0%) were fully adherent to all three components of the ABC pathway. Adherence was higher to 'A' (9/11 residents, 81.8%) and 'B' (9/11 residents, 81.8%) components compared to 'C' (3/11 residents, 27.3%). Four ABC-specific medicines recommendations were made for three residents, and two were implemented by residents' GPs. Overall ABC adherence rates did not change after the pharmacist medication review, but adherence to 'A' increased (10/11 residents). It was inappropriate to make ABC recommendations for other residents in the context of co-morbidities and medication-related adverse effects.

Conclusion: It was feasible to use the ABC pathway as a framework for a pharmacist medication review. A ceiling-effect was observed whereby most residents' medications were already optimised as much as possible according to the ABC pathway. Low rates of adherence were a result of active decisions not to treat after assessment of the net risk-benefit.

P-115

Relationships between vitamin D and different clinical and laboratory parameters in very elderly patients with coronary artery disease

Abstract Area: Cardiovascular medicine

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Aim: To determine vitamin D blood concentration and analyze its relationships with different clinical and laboratory parameters in very elderly patients with coronary artery disease (CAD).
Methods: This work was cross-sectional study performed in the War Veterans Hospital. The study enrolled 155 patients (113 women and 42 men) aged 76–97 years (mean age 86.8 ± 5.1 years) hospitalized with CAD. 25-Hydroxycalciferol (25(OH)D) level was determined using the immunochemiluminescence assay. 25(OH)D concentration < 10 ng/mL was considered as severe vitamin deficiency, 10–19—deficiency, 20–29—insufficiency, ≥ 30 ng/mL—the normal level.
Results: The mean 25(OH)D concentration was 14.7 + 10.9 ng/mL, varying from 1.48 to 80.0 ng/mL. Only 6.5% of patients had normal 25(OH)D level, 12.4%—insufficiency, 43.1%—deficiency, 37.9%—severe vitamin deficiency. Men tended to have higher levels of vitamin D (17.3 and 13.7 ng/mL, respectively, $p = 0.06$). Significant negative correlations were registered between 25(OH)D level and age of patients ($r = -0.19$, $p = 0.01$); in centenarians 25(OH)D concentration was significantly lower than in patients younger than 90 years (15.8 and 12.9 ng/mL, respectively, $p = 0.004$). Significant direct relationships were revealed between 25(OH)D and Barthel Index of activities of daily living ($r = 0.22$, $p = 0.005$) and Lawton scale of instrumental activities ($r = 0.21$, $p = 0.009$), as well as handgrip strength ($r = 0.25$, $p = 0.009$). Positive correlations were found between 25(OH)D and blood uric acid ($r = 0.27$, $p = 0.008$); in patients with hyperuricemia mean 25(OH)D level was 17.7 ng/mL, in patients with normal uric acid − 11.7 ng/mL ($p = 0.007$). Significant direct relationship was observed between 25(OH)D and hemoglobin ($r = 0.32$, $p = 0.00007$), in patients with anemia mean 25(OH)D concentration was 13.2 ng/mL, in patients with normal erythrocyte count − 16.1 ng/mL ($p = 0.0002$). Also negative correlation was found between 25(OH)D and interleukin-6 blood level ($r = -0.23$, $p = 0.05$). No significant relationships were found between 25(OH)D concentration and bone mineral density in all skeletal regions ($p = 0.2$–0.98). Negative correlations were registered between 25(OH)D level and the Morse fall scale ($r = -0.31$, $p = 0.001$); in patients with 25(OH)D deficiency the mean value of Morse fall scale was 32.8 points, in patients with severe deficiency − 46.5 points ($p = 0.0002$). Positive relationships were found between 25(OH)D and clock drawing test ($r = 0.2$, $p = 0.02$), negative—with depression scale values ($r = -0.20$, $p = 0.02$). Patients with stroke in history tended to have lower levels of 25(OH)D (12.6 and 15.1 ng/mL, respectively, $p = 0.07$). Significant differences in 25(OH)D concentration in groups of patients with myocardial infarction in history, heart failure, atrial fibrillation, diabetes mellitus and obesity were not found.
Conclusion: The study results indicate presence of various relationships between 25(OH)D blood concentration and different clinical and laboratory parameters in very elderly patients with CAD.

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Physical frailty in elderly patients with chronic heart failure

Abstract Area: Cardiovascular medicine

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Introduction: Frailty is defined as the decrease in the physiological reserve needed by the organism in order to give the necessary response to internal and external stress factors and is an important geriatric syndrome. The frequency of frailty increases in many diseases in the elderly. 50% of patients with heart failure are 65 years or older, and the incidence of heart failure in those over 65 years of age is 10/1,000. Heart failure and frailty increase morbidity and mortality in the elderly. In this study; The aim of this study was to investigate the relationship between the presence of physical frailty in elderly patients with chronic heart failure, the characteristics of frail patients, different frailty scales and other variables.
Material and method: 101 consecutive heart failure cases selected from patients aged 65 and over who were hospitalized or applied to outpatient clinics were included in the study. Demographic characteristics of the cases, history of falling, known chronic diseases, and drug use were questioned; anthropometric characteristics, hand grip strength (with Jamar hand dynamometry), muscle mass (with BIA), cognitive status (with Mini-Cog and clock drawing tests), nutritional status (with mini nutritional assessment short form[MNA-SF]), quality of life (with EQ-5D); comorbidities (with Charlson comorbidity score), gait and balance (with Tinetti gait and balance scores) were determined. A simplified and modified Fried scale and FRAIL, Edmonton and Study of Osteoporotic Fracture (SOF) frailty scales were used for frailty assessment.
Results: Of the 101 patients included in the study, 47.75% (n = 48) were female and 52.75% (n = 53) were male. Their mean age was 75.76 ± 7.62 years, and their body-mass index (BMI) was 27.48 ± 5.42 kg/m2. Malnutrition was present in 25.7% (n = 26) of the patients and muscle strength was decreased in 74.7% (n = 75). According to the skeletal muscle mass index (SMMI), muscle mass was low in 34.1% (n = 82) of the patients. With these results, 19 patients had confirmed sarcopenia according to the European Working Group on Sarcopenia in Older People (EGSWOP2) criteria. Twenty-five of the patients (24.8%) had a history of falling at least once in the last year. According to the simplified modified Fried scale, 63.4% (n = 64) of the patients were frail; The number of frail patients was 71.3% (n = 72) according to FRAIL criteria, 65.3% (n = 66) according to SOF, 57.4% (n = 58) according to Edmonton. A significant, positive and strong correlation ($r = 0.761$) was found between the simplified modified Fried criteria and the FRAIL screening test. Significant, positive and strong correlations (r value of 0.794 and 0.700, respectively) were found between the simplified modified Fried scale and the SOF and Edmonton scales. Frail patients

are older, have lower handgrip strength, lower ejection fraction (EF), higher pulmonary artery pressure (PAP), higher N-terminal proactive B-type natriuretic peptide (Nt-Pro BNP) levels, lower upper arm diameters, lower activities of daily living (ADL) and instrumental activities of daily living (IADL) scores (ie, more dependent than non-fragile patient), EQ- 5D scores (i.e. worse overall quality of life), sarcopenia screening test (SARC-F) scores (more common sarcopenia), lower MNA-SF scores (more malnutrition or risk), higher Charlson comorbidity scores (there are more comorbid diseases), Tinetti walking and balance scores are lower (gait and balance are more impaired), Mini-Cog and clock drawing scores are lower (cognitive loss is more). In the logistic regression analysis model, the presence of confirmed sarcopenia, Tinetti balance score, and MNA-SF score were found to significantly affect frailty.
Conclusion: The frailty rate in elderly individuals with chronic heart failure is higher than the population average. The simplified modified Fried scale is a useful tool for assessing frailty in heart failure patients, and it correlates strongly with the FRAIL, SOF, and Edmonton scales. Muscle strength is lower and sarcopenia is more common in fragile heart failure patients; worse quality of life; gait and balance are more impaired; malnutrition and malnutrition risk, comorbid diseases and cognitive losses are higher. Presence of sarcopenia, balance disorder and malnutrition increases the risk of frailty.

P-117

Sex differences in prescribing cholesterol lowering drugs in a geriatric population

Abstract Area: Cardiovascular medicine

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Introduction: More than half of the decline in age-adjusted rate of atherosclerotic disease may be ascribed to development of preventive cardiology in the past decades, including the widespread use of lipid-lowering drugs (LLD's). Women are less likely than men to use LLD's when meeting clinical criteria, and when they use LLD's, women are less likely than men to achieve treatment targets. However, it is unknown whether these differences are also present in geriatric patients.
Methods: We analyzed a clinical dataset from the Amsterdam Ageing Cohort, a longitudinal cohort of patients visiting the geriatric outpatient department. All patients underwent a comprehensive geriatric assessment. We performed a sex-specific analysis of the use lipid-lowering therapy, and evaluated blood cholesterol levels in men and women with and without statins.
Results: In total, 1050 patients were included: the mean (SD) age was 80 (75–85) and 51% were female. Men and women were similar in terms of age (80 vs. 81) and cognitive function (MMSE 26 in both sexes). Men were prescribed LLD more often than women (45% vs. 34%, $p < 0.01$), regardless the presence or absence of cardiovascular disease. Men were also more often on-target (LDL < 2.6 mmol/L) than women (67% vs. 52%). When analyzing LLD-users separately, these differences persisted.
Conclusions: Our data illustrate that older women use LLD less often than men and less often reach treatment targets. It is imperative to explore what gives rise to these gender related differences in prescribing LLD's, in order to improve health care for both sexes.

P-118

Association between arterial stiffness and frailty, disability, hospitalization and mortality among community-dwelling older adults in Spain

Abstract Area: Cardiovascular medicine

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Introduction: There is scarce evidence on the association between arterial stiffness and prevalence and development of important adverse events (frailty, disability, hospitalization, and mortality) in non-diabetic older adults.
Methods: Data from 978 community-dwelling non-diabetic older adults (mean age 74.5 ± 5.6 years; 56.6% female) from the Toledo Study of Healthy Ageing, a prospective cohort from Spain were assessed. Pulse wave velocity (PWV) (Sphygmocor), frailty [Frailty Phenotype (FP) and Frailty Trait Scale-5 (FTS5)] and disability (Katz Index) were recorded. Frailty and disability were reassessed at 3 median years follow up. Hospitalization and mortality were assessed at 3.7 and 6.3 median years follow-up, respectively. To assess the relationship between age and PWV, a threshold regression and a decision tree was used to identify optimal PWV cut-off points to predict each adverse outcome. Logistic regressions were used for disability and frailty and Cox proportional hazards model for death and hospitalization.
Results: PWV > 11.5 m/s was significantly associated with frailty (FP: odds ratio (OR): 1.69–1.79; FTS5: OR: 1.51–1.61) and disability (OR: 1.51–1.58) cross-sectionally (p-values < 0.05). PWV > 10 m/s was associated with incident frailty according to the FP (OR: 1.38–1.36) and FTS5 (OR: 1.45–1.40) or worsening frailty according to FTS5 score (OR: 1.17–1.21). Having a PWV > 11 m/s was a predictor of death (hazard ratio (HR): 1.28–1.41) and hospitalization (HR 1.26–1.37). For incident (OR: 1.28–1.35) and worsening disability (OR: 1.21–1.28) the PWV threshold was 12.5 m/s.
Key conclusions: Increased arterial stiffness is associated with increased risk of adverse health outcomes including frailty, disability, hospitalization and mortality in non-diabetic older adults.
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P-119

Do inflammaging and vascular aging closely correlate in hypertensives and non-hypertensives of older age?

Abstract Area: Cardiovascular medicine

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Background. The neutrophil-to-lymfocyte ratio (NLR) is a marker for systemic inflammation and oxidative stress. Since inflammation plays a relevant role in vascular aging, it is interesting to explore how NLR might relate to blood pressure profiles. The aim of this study was to investigate whether NLR is associated with blood pressure profiles in hypertensive and non-hypertensive older adults.
Methods: This investigation was performed within the framework of the SCOPE study, an international multicenter cohort observational study including 2461 outpatients aged 75 years and over. NLR was used as inflammation marker, whereas systolic (SBP), diastolic (DBP) and pulse pressure (PP) were used to investigate blood pressure profiles. Mean blood pressure values were investigated across tertiles of NLR. Change in blood pressure levels in 2 years were compared across categories of baseline NLR.
Results: In total, data of 2397 participants was used of which 1854 participants had hypertension. Hypertensives were older (80 vs 79 years), had higher BMI (27.7 vs 25.8 kg/m^2), higher NLR values (2.4 vs 2.1) and higher prevalence of comorbidities. Mean values of blood pressure did not differ across categories of NLR in non-hypertensives. Hypertensives with a high-range NLR had lower SBP and PP compared to those in low-range NLR (mean difference SBP − 2.82 mmHg, p = 0.042 and PP − 2.47 mmHg, p = 0.037). Mean change in blood pressure in 2 years did only slightly differ in non-clinically relevant ranges when compared across tertiles of NLR.
Conclusions: Markers of inflammaging were not associated with unfavourable blood pressure profiles in both hypertensives and non-hypertensives.

P-120

Effect of treatment combining Beta-blocker and Renin Angiotensin Aldosterone System Inhibitor on mortality or rehospitalization in patients hospitalized for heart failure with preserved ejection fraction

Abstract Area: Cardiovascular medicine

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Background: Heart failure (HF) with preserved ejection fraction (HFpEF) is the most common form of HF after 80 years. Currently the treatment of HFpEF remains poorly understood. The objective of this study was to evaluate the effect of a treatment combining a beta-blocker (BB) and Renin-angiotensin-aldosterone system inhibitors (RAASi) in elderly patients hospitalized for HFpEF.
Methods: A prospective study conducted in acute geriatric units. Were included all patients admitted for acute heart failure (AHF) with preserved ejection fraction, aged at least 75 years. The diagnosis was confirmed by a committee of experts, and the patients were followed for one year. Treatments were collected at admission and discharge along with demographic characteristics and medical history. Univariate and multivariate Cox models were used to analyze the relationship between treatment combining BB/RAASi (IEC or ARA2 or Aldactone or Sacubitril/Valsartan) and mortality or rehospitalization at one year.
Results: 125 patients were included, with a mean age of 87.9 years, 75 (60%) women, a median Charlson comorbidity index (CCI) of 8.78 [2.24], 48.8% (n = 61) had neurocognitive disorders, 40.8% (n = 51) were malnourished, 31.2% (n = 39) were fallers, 21.6% (n = 27) had renal failure (cl < 30 ml/min), and 16% (n = 20) lived in an institution. A total of 25.6% (n = 32) received a treatment combining an RAASi and a BB. After one year of follow-up, the presence of dual therapy with RAASi and BB was significantly associated with fewer rehospitalizations for heart failure or death (31% vs 54%, plog-rank = 0.02). These results remain significant after adjusting for age and comorbidities (Charlson index).
Conclusion: This study shows that medical treatment with an RAASi and a BB is associated with a more favorable prognosis at one year in a very elderly population with HFpEF.

P-121

Relevance and feasibility of chest ultrasound in the evaluation of acute dyspnea in the elderly patients

Abstract Area: Cardiovascular medicine

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Background: Acute dyspnea is one of the most common causes of admission in acute geriatric units (AGU), atypical clinical representations as well as the standard diagnostic approach based on radiological and biological results can delay the diagnosis and alter the prognosis. Point-of-care chest ultrasound in elderly patients can shorten the time needed to formulate a diagnosis and adapt therapy.
Methods: Consecutive patients admitted in AGU for acute dyspnea were prospectively included. Chest ultrasound (pulmonary, cardiac and inferior vena cava) was performed upon admission by an ultrasound trained geriatrician blinded to clinical history. The initial ultrasound diagnosis was compared to the final diagnosis confirmed by two experts based on clinical/biological/radiological data, treatment and evolution. Time of performing the chest ultrasound was recorded, Accuracy and concordance of diagnoses were calculated.
Results: 35 patients were included. The mean age was 87.7 years, 60% were over 85 years old and 45% were women. Average time needed to formulate ultrasound diagnosis was 10 min. The main causes of dyspnea were, cardiac decompensation, pneumonia and pleural effusion. "Initial ultrasound diagnoses" and "final diagnoses" showed a good overall concordance with a Kappa index of 0.91 (0.92

for acute heart failure, 0.76 for pneumonia and 0.89 for pleural effusion). Sensitivity and specificity were respectively 100% and 96% for acute heart failure, 86% and 90% for pneumonia and 88% and 100% for pleural effusion.
Conclusion: Chest ultrasound represents a reliable and rapid approach in the diagnostic orientation of elderly patients admitted for acute dyspnea. Training geriatricians in this technique appears essential in AGU.

P-122

Delayed/prolonged orthostatic hypotension: associated with cerebral small vessel disease in a memory clinic population?

Abstract Area: Cardiovascular medicine

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Background: Orthostatic hypotension (OH), an impaired blood pressure (BP) response to postural change, has been associated with cognitive decline and dementia, possibly through cerebral small vessel disease (CSVD). We hypothesized that OH is associated with CSVD, through longer periods of hypoperfusion with delayed/prolonged OH.
Methods: This cross-sectional study included 3971 memory clinic patients (mean age 68yrs, 45% female, 42% subjective complaints, 17% MCI, 41% dementia) from the Amsterdam Ageing Cohort and Amsterdam Dementia Cohort. Early OH (EOH) was defined as a drop in BP of $> = 20$ mmHg systolic and/or $> = 10$ mmHg diastolic only at 1 min after standing, and delayed/prolonged OH (DPOH) at 1 and/or 3 min after standing. Presence of CSVD (white matter hyperintensities (WMH), lacunes, microbleeds) was assessed with MRI or CT brain.
Results: The prevalence of EOH was 9% and of DPOH was 18%. Age- and sex-adjusted logistic regression analyses showed that DPOH, but not EOH, was associated with a higher burden of WMH (OR, 95% CI: 1.25, 1.04–1.51), lacunes (OR, 95% CI 1.28, 1.02–1.62), and microbleeds (OR, 95% CI 1.28, 0.96–1.71). Further adjusting for diabetes, OH-inducing drugs and cognitive impairment slightly attenuated the results: exploratory subgroup analyses showed that this association was more pronounced in patients without cardiovascular disease, without diabetes, or with a normal supine SPB (< 140 mmHg). Effect estimates were similar across subgroups of cognitive diagnosis (SCD, MCI, dementia).
Conclusions: In this large cohort of memory clinic patients, delayed/prolonged OH, but not early OH, was associated with an increased burden of CSVD, particularly in patients with low cardiovascular risk or no cardiovascular disease.

P-123

De novo atrial fibrillation incidence, diagnosis and management: ESC 2020 guidelines

Abstract Area: Cardiovascular medicine

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Introduction: Atrial fibrillation is the most common arrhythmia. Its incidence and prevalence increase with age.
Objectives: Incidence of patients admitted in 2021 diagnosed with de novo atrial fibrillation (AF) according to ESC 2020 guidelines.-Diagnosis and management of patients with de novo AF admitted to our service.
Material and methods: Descriptive, observational, retrospective study of patients admitted from January-December 2021 in our Geriatrics service, diagnosed with de novo AF according to ESC 2020 guidelines. Variables: age, sex, Barthel index, Pfeiffer, comorbidity, CHADSVASc, HAS-BLED.
Results: N = 1507; 392 previous AF, prevalence 22.6%, 52 de novo AF; Incidence 3.4%. Women 67.3%. Mean age 88.3 years (SD 4.33). Mean Bathel index 47.5 (SD 36), Pfeiffer 4.2 errors (SD 3.76). Mean length of stay 11.4 (SD 17.1). Comorbidity: hypertension 65.4%, Heart failure 53.8%, Ischemic heart disease 11.5%, Diabetes 25%. Charlson index mean 2.58 (SD 1.25). CHADSVASC mean 4.38 (SD 1.40). HAS BLED mean 2.27 (SD 1.05). Diagnosis: ECG: 96.2%, Holter 3.8%. 64.4% permanent AF. Frequency control 52.3%; 78.3% Beta-blockers, 17.3% digoxin and 1.3%, calcium antagonists. Anticoagulation; 59.1%. novel oral anticoagulants (NOAC) 80.8%, vitamin K antagonists (VKA) 19.2%.
Conclusions: The incidence of AF in our sample is lower than in other studies, which is related to the fact that patients do not require admission in the first episode.-The diagnosis was mostly obtained by detecting the arrhythmia in the ECG, with permanent AF predominating.-The use of beta-blockers for heart rate control and the NOACs are already the first choice in our daily practice.

P-124

Meta-analysis of sodium glucose cotransporter 2 inhibitors in older people with cardiorenal comorbidities

Abstract Area: Cardiovascular medicine

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Introduction: Sodium glucose cotransporter 2 inhibitors (SGLT2i) have been assessed in cardiorenal outcomes trials that included older people (≥ 65 years) with type 2 diabetes (T2DM), heart failure (HF),

chronic kidney disease (CKD), or any combination of these conditions.
Methods: We did meta-analyses of event-driven randomized controlled trials with SGLT2i inhibitors and focused on subgroup analyses based on participants' age. For older participants, we also conducted subgroup analyses based on type of SGLT2i and type of study (T2DM, HF, or CKD trials). We calculated hazard ratios (HRs) and 95% confidence intervals (CIs) for the outcome of cardiovascular death or hospitalization for heart failure (CVDHHF) and for a composite kidney outcome.
Results: We included 11 trials (4 T2DM cardiovascular outcomes trials, 4 HF trials, and 3 CKD trials) for 5 SGLT2i. In patients $\geq$ 65 years, the HR for CVDHHF was 0.76 (95% CI 0.71–0.82) and in patients $<$ 65 years it was 0.78 (0.71–0.85, p for interaction = 0.77). In patients $\geq$ 65 years, the HR for the composite kidney outcome was 0.60 (95% CI 0.50–0.71) and in patients $<$ 65 years it was 0.62 (0.56–0.69, p for interaction = 0.70). In older participants, the favorable effects of SGLT2i on both outcomes did not seem to be affected by type of SGLT2i or type of study (p for interaction $<$ 0.05).
Key conclusions: SGLT2i appear to have consistent salutary cardiorenal effects in older people who have either T2DM, HF, CKD, or any combination of the three conditions.

P-125

Admission haemoglobin and comorbidity in older heart failure inpatients

Abstract Area: Cardiovascular medicine

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Introduction: Anaemia is frequently observed in older heart failure (HF) patients and it is an independent prognostic predictor of hospitalization, morbidity and cardiovascular and total mortality. Comorbidity is also common in older HF patients, and may contribute to increased morbidity and mortality. Many chronic diseases and comorbid conditions contribute to anaemia
Aims: 1.To determine the relationship between admission Hb and the level of comorbidities in older heart failure inpatients. 2. To explore the effect of frailty state on the above relationship.
Methods: A retrospective observational analysis was carried out on consecutive older patients admitted with heart failure to a UK District General Hospital. Data was manually extracted from anonymized electronic patient records. Patients 60 years and older were included. Patients with incomplete data were excluded. Charlson's Comorbidity Index (CCI) was used to compute comorbidity while the Rockwood Clinical Frailty Scale (CFS) was used to assess for frailty. The admission Hb (g/l) was done as part of routine blood tests. The IBM 28 software was used for statistical analysis. Descriptive statistics were used for baseline characteristics. Pearson's correlation co-efficient and linear regression was used to assess correlation.
Results: 117 patients was analysed; 56 males and 61 females. Mean age was 81.2 years (SD 1.63). Mean admission Hb was 120 g/l (SD 19.4) and mean CCI was 6.97 (SD 1.63). There was statistically significant inverse correlation between admission Hb and CCI in all patients ($r = -.200$; $p = .03$). There was no statistically significant correlation between admission Hb and frailty as assessed by CFS ($r = -.067$; $p = 0.48$). A potential explanation is that CCI include chronic diseases that can contribute to anaemia, however CFS is a scale of the functional abilities; it scores the physical activity, ability to manage activities of daily living, and dependency.
Conclusion: There was statistically significant inverse relationship between admission Haemoglobin and comorbidities in older heart failure inpatients. However there was no statistically significant relationship between admission Haemoglobin and frailty in these patients.

P-126

Geriatric contribution to heart failure care: a retrospective review of patient records

Abstract Area: Cardiovascular medicine

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Introduction: Although heart failure (HF) is a very common condition among geriatric patients, a previous study indicates that a majority of them are insufficiently investigated and not treated according to guidelines at admission to a geriatric ward. The aim of this study was to assess the geriatric contribution to the HF care.
Method: Data were retrospectively collected from 134 individuals treated for HF as main diagnosis in wards specialized in geriatric medicine in Stockholm, Sweden. Data on Natriuretic peptide type B (NT-pro-BNP) and echocardiography (ECHO), as well as length of care episode, drug treatment, and referral content were collected.
Results: During the investigated geriatric care episode, 20% of the patients were analyzed with NT-pro-BNP and 1,5% investigated with ECHO. There was a significant increase in number of patients treated with furosemide, from 55 to 83% ($p < 0.001$) and with spironolactone, 20% to 28%, ($p = 0.033$), but no other significant drug changes. There was a significant wash out of information in the referrals to primary care compared to those at admission. Information on etiology dropped from 31% to 5.8% ($p < 0.001$) and information on ejection fraction (EF) dropped from 20% to 3.5% ($p < 0.001$).
Key conclusions: The geriatric contribution to investigations was modest. No net changes in drug treatment were made, with the exception of spironolactone and furosemide. The wash out of information about the patients in referrals from geriatrics to primary care is worrying. More collaboration between cardiologists, geriatricians and primary care physicians may improve the health situation among geriatric HF patients.

P-127

QT interval prolongation and 1-year mortality in older adults admitted to the acute Geriatrics Department

Abstract Area: Cardiovascular medicine

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Introduction: The association between QT interval prolongation and 1-year mortality in older adults admitted to the acute Geriatrics department has never been studied.

Methods: A retrospective cohort study. Medical charts were reviewed of all consecutive older adults admitted to one acute Geriatrics department in tertiary medical center during 15 months. Age, gender, chronic co-morbidities, functional status, corrected QT (QTc) interval length upon admission according to the Bazett's formula, and 1-year all-cause mortality rates were recorded. QTc interval ratio was calculated by dividing the actual QTc interval by the pathological QTc interval (450 ms in males, 470 ms in females), and then it was divided into quartiles—the upper three quartiles (study group) were compared to the lower quartile (control group) representing a cutoff of 414 ms in males and 432 ms in females.
Results: Included were 526 patients: 334 (63.5%) females, mean age 84.0 ± 7.0 years. Mean admission QTc interval length was 446.6 ± 34.2 ms, and 388 (73.7%) patients were included in the study group. Overall, 147 (27.9%) patients died within one year: 120 (30.9%) in the study group and 27 (19.6%) in the control group (Kaplan-Meier Log-rank $p = 0.009$). Cox regression analysis showed an association between the upper three quartiles of the QTc interval and 1-year mortality (HR 1.60, 95% CI 1.03–2.48, $p = 0.034$) independent of age, gender, chronic co-morbidities, and functional status.
Conclusions: QT interval prolongation is associated with 1-year mortality in older adults admitted to the acute Geriatrics department. Moreover, lower cutoffs should be used in this population in order to define QT interval prolongation.

P-128

Referrals to palliative care for cardiovascular patients: report of a single-centre experience over 10 years

Abstract Area: Cardiovascular medicine

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BackgroundConsensus guidelines advocate early integration of palliative care into the care for cardiovascular patients, especially those with heart failure. However, palliative care involvement in the care of cardiovascular patients remains suboptimal, whereby only a small proportion of patients are referred to palliative care specialists, and often too late in the disease course. There is a need to scrutinize the current situation and describe the profile, circumstances of death, and time of referral to palliative care of cardiovascular patients, with a view to improving palliative care provision for patients with cardiovascular disease.
Methods: This retrospective study included all patients with cardiovascular disease who were referred to the mobile palliative care team of a single, large University Hospital in France between 2010 and 2020. All data were extracted from the medical hospital files. We recorded vital status, age at the time of referral and at death, the time from referral to palliative care and death, as well as the clinical profile of the patients. Patients could have more than one diagnosis.
Results: A total of 148 patients were identified; full data were available for 144 (97.3%). Of these, 136 (94.4%) died, while 8 (5.6%) are still alive. The mean age at the time of death was 75 ± 14 years. The median time between referral to palliative care and death was 9 days (interquartiles, 2, 41.5). In terms of underlying diseases, 111 (77%) had heart failure, 11 (7.6%) had hypertrophic cardiomyopathy, 58 (40.2%) had ischemic heart disease, 8 (5.5%) had pulmonary hypertension, 55 (38.2%) had valvular heart disease, 39 (27%) had diabetes, 37 (25.7%) had chronic kidney disease, 17 (11.8%) had chronic obstructive pulmonary disease. In addition, 78 (54%) had at least one documented episode of atrial fibrillation, 27 (18.7%) had had a stroke. Place of death was available for 119 patients (82.6%): 17 (14.3%) died at home, 73 (61.4%) died in the Cardiology department of our hospital, 16 (13.4%) died in the palliative care unit, 7 (5.9%) died in another ward of our hospital and 6 died in another hospital (5%). Only 4 patients (2.7%) had documented advance directives.
Conclusion: This study shows that palliative care is still widely under-used in cardiology patients, and is often initiated very close to the time of death. A large proportion of patients still die in the hospital setting. Further, prospective studies are warranted to investigate whether these dispositions corresponds to patients' wishes, and whether earlier initiation of palliative care could improve quality of life for cardiology patients with end-stage disease.

P-129

Prognostic impact of Growth Differentiation Factor-15 (GDF-15) in patients referred for transcatheter aortic valve implantation

Abstract Area: Cardiovascular medicine

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Background and Aim: GDF-15 captures distinct aspects of cardiovascular risk, bleeding risk and frailty, which are not represented by clinical risk predictors and other biomarkers. Whether a relationship exists between GDF-15 and cognitive dysfunction (CD) remains unclear. This study aimed to investigate the relationship between CD and GDF-15 in a population of patients referred for TAVI.
Methods: Complete geriatric assessment was performed prior to the procedure in all patients referred to our centre for TAVI. Assessments included cognitive evaluation using the MoCA test, and evaluation of autonomy (Katz's activities of daily living (ADL) and Lawton's instrumental ADL (IADL)). GDF-15 was measured just before TAVI procedure. ANOVA was used GDF-15 levels across categories of CD and ROC curves were constructed to identify the threshold of GDF-15 that best predicts rehospitalization or death at 1 year. Survival curves were generated using the Kaplan–Meier method and compared with the log- rank test.
Results: GDF-15 dosage and complete geriatric evaluation were performed in 69 consecutive patients referred for TAVI: 46% males, mean age 83.5 ± 4.8 years. The mean MoCA score before TAVI was 21 ± 4.6: CD was excluded in 32 (46.4%) and detected in 37 (53.6%) patients. Mean GDF-15 before TAVI was 2001 ± 162 pg/ml. There was no relation between GDF-15 level and either pre-TAVI cognitive dysfunction or autonomy scores. A pre-TAVI GDF-15 level above the ROC-identified threshold of 1420 pg/ml was found to be a significant predictor of events (rehospitalization or death) at 1 year ($p = 0.0006$), contrary to cognitive dysfunction and impaired autonomy scores, which had no impact on prognosis.
Conclusion: Among patients referred for TAVI, a GDF-15 level above a threshold of 1420 pg/ml was associated with rehospitalization or death at 1 year. Conversely, we observed no association between GDF-15 levels and cognitive dysfunction adjuster for pre-existing CD or autonomy impairments.

P-130

Appropriateness of drug indications in older adults with multimorbidity and atrial fibrillation: a population-based study

Abstract Area: Cardiovascular medicine

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Introduction: Older adults with multimorbidity and atrial fibrillation (AF) are often polymedicated with an increased risk of drug related problems. This study aimed to assess the appropriateness of drug indications in a Swedish population-based sample of older adults ($\geq$ 65 years) with multimorbidity and AF.
Methodology: The British National formulary was used to link the investigated drug classes (n = 176) to their indications, assessed through a list of 60 homogenous categories of chronic diseases [1]. The ATC classification system was used to systematically describe drugs lacking an indication. This algorithm was applied to the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K) dataset.
Results: We analysed data of 309 AF patients with multimorbidity of whom 295 took at least one of the investigated drugs. In 63.4% (187/295) of the population, all prescribed drugs could be linked to at least one indication. No indication was evident in 1.9% (5/262) of the participants taking cardiovascular drugs, as well as in 1.9% (3/159) and 5.1% (2/39) of the participants taking diuretics (C03) and lipid modifying agents (C10AA), respectively. In all participants (n = 242) taking antithrombotics (B01AC, B01AA, B01AB), an indication was present. Drugs for the central nervous system (CNS) were prescribed without an indication in 66.9% (89/133) of the participants and 73.8% (62/84) and 32.3% (10/31) of the participants taking benzodiazepines (N05C, N05BA) and antidepressants (N06AA, N06AB), respectively.
Conclusion: Cardiovascular and antithrombotic drugs are appropriately prescribed in older adults with multimorbidity and AF. The majority of patients receiving CNS drugs has no registered indication for them.
Reference:
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P-131

Growth/Differentiation Factor 15 but not inflammation biomarkers are associated with higher blood pressure variability in older adults

Abstract Area: Cardiovascular medicine

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Background. Increased Blood Pressure (BP) Variability (BPV) may represent an alteration in BP physiological homeostatic patterns. Most physiopathological mechanisms underlying BPV are implicated in aging. Vascular aging is associated with chronic low-grade inflammation occurring in late life, known as "inflammaging", and the hallmark "mitochondrial dysfunction" associated to stress due to age-related disorders, which in turn might contribute to higher BPV and risk of cardiovascular disease.
Objective: We aimed to determine whether plasma levels of the pleiotropic stress-related mitokine Growth/Differentiation Factor 15 (GDF-15) and two inflammatory biomarkers, Interleukin 6 (IL-6) and Tumor necrosis factor receptor 1 (TNFR-1), are associated with visit-to-visit BPV in a population of community-dwelling older adults.
Methods: The study population consisted of 1,096 participants participants [median age 75 (72–78) years; 699 females, 63.7%] selected among community-dwelling participants aged $\geq$ 70 years from the MAPT study. Plasma blood sample was collected 12 months after enrolment and BP was assessed up to seven times over a subsequent 4-year period. Systolic BPV (SBPV) and diastolic BPV (DBPV) were determined through several indicators including the coefficient of variation (CV%) and taking into account BP change over time, the order of measurements and formulas independent of mean BP levels.
Results: Higher values of GDF-15 were significantly associated with increased SBPV (all indicators) after adjustment for demographics, body mass index, MAPT randomization group, baseline systolic BP, antihypertensive drugs, diabetes mellitus, cardiovascular and non-cardiovascular comorbidities [adjusted 1-SD increase in GDF-15: β (SE) = 0.07 (0.04), $p < 0.044$, for CV%]. GDF-15 levels were not associated with DBPV. No significant associations were found between IL-6 and BPV, whereas TNFR1 was only partially related to DBPV.
Conclusion: Unlike inflammation biomarkers, higher GDF-15 levels were associated with greater SBPV. Our findings support the age-related process of mitochondrial dysfunction underlying BP instability, suggesting that BPV might be a potential marker of aging.

P-132

Utility of pocus in predicting heart failure in-hospital worsening in acutely decompensated oldest-old patients

Abstract Area: Cardiovascular medicine

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Background: Decompensation trajectory check is a basic step to assess the clinical course and to plan future therapy in hospitalized patients with acute heart failure (HF). The ACC defined three main in-hospital trajectories: 1) improving towards target; 2) stalled after initial improvement; 3) worsening. Due to the atypical presentation and clinical complexity, trajectory check can be challenging in oldest-

old patients with acute HF. Point of care ultrasound (POCUS) has been proven to be helpful in clinical decision-making of patients with dyspnea, yet no study has attempted to verify its effectiveness in predicting determinants of HF in-hospital worsening.
Methods: We consecutively enrolled patients aged 75 or older hospitalized with acutely decompensated HF in our tertiary care hospital. All the patients underwent complete clinical examination, blood tests and POCUS including lung ultrasound, focus cardiac ultrasound, pleural effusion score (PEFS), inferior vena cava (IVC) assessment.
Results: Out of 128 patients hospitalized with acutely decompensated HF enrolled in the study (mean [SD], 88 [5.9] years), 40 experienced acute HF in-hospital worsening. No differences were found among patients with HF worsening and controls in terms of age, gender and left ventricular ejection fraction. By multivariate logistic analysis, total PEFS (aOR = 1.17 CI95%: 1.003–1.375, p = 0.046) and IVC collapsibility (aOR = 0.89 CI95%: 0.810–0.978, p = 0.015) emerged as independent predictors of acute HF worsening after extensive adjustment for potential confounders.
Conclusion: PEFS and reduced IVC collapsibility evaluated by POCUS qualified as strong independent predictors of acute HF in-hospital worsening.

P-133

Edoxaban in older patients with non-valvular atrial fibrillation: efficacy and safety

Abstract Area: Cardiovascular medicine

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Introduction: Atrial fibrillation is a common arrhythmia in older adults. Antithrombotic treatment reduces the risk of stroke. We aimed to evaluate the prevalence of thrombotic, embolic and bleeding complications in older patients with edoxaban.
Methods: A retrospective descriptive study of patients aged ≥ 80 years with non-valvular atrial fibrillation who started edoxaban in 2019. Sociodemographic data, comorbidities, chronic medications before drug initiation and follow-up data were collected through the electronic medical record and electronic prescription for 12 months.
Results: 101 patients (59.4% women, mean age 86.2 ± 4.1 years) were included. The mean number of prescribed drugs was 8.5. 81.2% had polypharmacy (≥ 5 drugs) and 34.7% had extreme polypharmacy (≥ 10 drugs). Clinically relevant interactions were found in 32.7%, with an increased risk of bleeding in all of them. 77.2% of patients visited the emergency department during the first year of treatment and 46,5% were admitted, all of them with high thrombotic risk (CHA2DS2-VASc 5-7) and bleeding risk (HAS-BLED 2-4). The reason for admission in 23.4% was a thrombotic (45.5%) or bleeding (54.5%) event, mostly major bleeding. Having a high bleeding risk was significantly associated with the event (p < 0.05).
Conclusions: Almost all patients starting treatment with edoxaban already had polypharmacy, with drug interactions that increase the risk of bleeding in more than a third of them. Most of them visited the emergency department during the first year of treatment. A quarter of admissions were related to thrombotic and bleeding events. Having a high bleeding risk was significantly associated with the event.

P-134

Multidisciplinary team meetings delay the time to carotid endarterectomy in patients with stroke and transient ischaemic attack

Abstract Area: Cardiovascular medicine

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Carotid artery stenosis is a leading cause of stroke. European Stroke Organisation recommends carotid endarterectomy (CEA) within two weeks of the ischaemic event in patients with 50% to 99% stenosis[1]. Anecdotal department evidence suggested that CEAs are delayed. Multidisciplinary team meetings (MDTMs) offer optimal care for selected patients but are postulated as a reason for the delay. This audit aims to reduce the delay to CEAs in patients with carotid artery stenosis. We performed a retrospective audit evaluating CEAs delivered between 1/10/2021 to 31/3/2022. Critical steps in care are recorded with dates, including the time from symptom to imaging, vascular referral, clinic appointment and operation. The median number of days between each step was collated and analysed. Sixteen patients were identified. 50% of CEAs were performed within two weeks. All patients had a median delay of 14 days from symptom to operation. Patients referred to MDTMs had a median delay of 15.5 days, while patients who were directly booked in for vascular clinic appointments without MDTMs had a median of 7 days. This audit shows that MDTMs delay the time to CEAs. Therefore, patients with imaging-confirmed stenosis and fit for surgery should be booked into the vascular clinic without MDTMs. This audit has led to the agreement of a formalised pathway with a set target number of days between each step to reduce delay in more complex patients requiring MDTM. A prospective audit assessing the effectiveness of the new pathway is ongoing. 1. Bonati LH, Kakkos S, Berkefeld J, et al. European Stroke Organisation guideline on endarterectomy and stenting for carotid artery stenosis. European Stroke Journal. 2021;6(2):I-XLVII. https://doi.org/10.1177/23969873211012121

P-135

Outcomes in older patients with atrial fibrillation who discontinue anticoagulant treatment

Abstract Area: Cardiovascular medicine

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Introduction: Oral anticoagulants (OACs) prescribed for stroke prevention in older people with atrial fibrillation (AF) may be stopped for a variety of reasons. This study aimed to evaluate outcomes when OACs were discontinued compared with the time period that OACs were prescribed, in people aged ≥ 75 years in UK general practice.
Methods: A cohort of patients aged ≥ 75 years with a diagnosis of AF was extracted from the Clinical Practice Research Datalink

(CPRD). Patients could enter the study on the date of their first prescription for an OAC between 1/1/2013 and 27/12/2017. Patients were censored on the date of the outcome, death, or leaving the general practice. Exposure to OACs was measured using prescription mapping. Crude and adjusted hazard rates of ischaemic and unspecified stroke, major bleeds, myocardial infarction and death were calculated using a Cox proportional hazards model with OAC prescribing as a time varying covariate.
Results: The risks of ischaemic and unspecified stroke and death were increased three-fold in unexposed periods (Hazard ratio (HR) 3.03, 95% CI 2.37–3.89; HR 3.36, 95% CI 3.10–3.66 respectively). Unexposed periods were also associated with a two-fold increase in the risk of myocardial infarction (HR 1.92, 95% CI 1.40–2.65). There was no significant difference in the risk of major bleeding (HR 1.07, 95% CI 0.85–1.36).
Conclusions: This study is the first to evaluate outcomes in older people treated with OACs who discontinue treatment. It highlights the risks associated with stopping treatment and this should be factored into decisions weighing up the benefits and risks.

P-136

Cardiovascular disease and LDL cholesterol control in geriatric patients followed in an outpatient clinic

Abstract Area: Cardiovascular medicine

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Introduction: Cardiovascular disease (CVD) is one of the main causes of morbidity and mortality. SCORE2-OP measures 10-year risk of death or hospitalization due to a cardiovascular event in patients over 70 years. The CVD risk benefits from the reduction of its risk factors, such as dyslipidemia in the elderly. Risks and benefits should be considered carefully.
Objective: Evaluate the LDL cholesterol control of the patients followed in the Multidisciplinary Geriatric Outpatient Clinic (MOC) and the benefit in increasing the treatment according to SCORE2-OP.
Methods: Descriptive study with evaluation of clinical files from 2019–2021 patients followed in the MOC. Exclusion criteria: > 90 years, Low BP, Low Cholesterol levels. Using the SCORE2-OP, four risk groups were considered: Very high (VH), High (H), Moderate (M) and Low (L) cardiovascular mortality risk at 10 years. LDL cholesterol levels were managed according to ESC guidelines.
Results: 122 were included in the 4 groups, L:28, M:42, H:41 and VH:11 patients. Dyslipidemia was present in L35%, M45.2%, H48.7%, VH 36.4%. Statins was used in L:14%, M:33%, H:41%, 0%VH. Targeted LDL cholesterol was present in L:60.7%, M:47.6% H:24.4%, 0% VH. With LDL control the 10-year risk of mortality due to CVD and hospitalization could be reduced by 1.1%.
Discussion: Achieving target LDL levels was inversely proportional to the CVD risk. Anyhow controlling LDL could only reduce 1.1% the 10-year risk of hospitalization and death. It is difficult to determine if there is real benefit in initiating or maintaining cholesterol control therapy with statins in elderly.

P-137

Measuring cerebral oxygenation (NIRS) to monitor orthostatic hypotension

Abstract Area: Cardiovascular medicine

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Background: Orthostatic hypotension (OH) is highly prevalent in older adults. OH is defined as a blood pressure (BP) drop $\geq$ 20 mmHg systolic and/or 10 mmHg diastolic, within 3 min after standing. OH is associated with symptoms like dizziness, falls, lower physical and cognitive function, cardiovascular disease and mortality. Currently, OH is diagnosed with single-time-point cuff BP measurements that are not representative for the repeated posture changes that occur in life. These drawbacks may be overcome by use of a non-invasive wearable near-infrared spectroscopy (NIRS) device that uses near-infrared light to measure cerebral oxygenation continuously for longer periods of time. Aim: To validate cerebral oxygenation measured with NIRS as a proxy for BP changes during and after standing up.
Methods: Cross-sectional study, including 10 younger (18–35 years) and 30 older adults ($\geq$ 65 years) with normal and impaired BP responses upon standing. They performed supine-stand transitions, while BP (volume-clamp photoplethysmography) and cerebral oxygenation were measured continuously. Correlations between BP and cerebral oxygenation curves were calculated.
Results: Preliminary results show good correlations between BP and NIRS curves, especially in the early phase after standing up (first 30 s). Moreover, distinctive patterns in oxygenation response after standing up were visible between participants with and without OH, and younger and older participants.
Conclusion: Results of this study support the further development of NIRS-based devices to study OH. Our next step is to evaluate this in daily life situations at home.

P-138

N-terminal pro brain natriuretic peptide reference values in community-dwelling older adults

Abstract Area: Cardiovascular medicine

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Introduction: Available upper reference levels (URL) (97.5% quantiles) in older adults for N-terminal pro brain natriuretic peptide (NT-proBNP), an established biomarker for heart failure (HF), are

mainly based on small samples. We aimed to identify sex- and age-specific NT-proBNP URL in those aged ≥ 65 years[1].
Methods: Overall 2459 participants of the population-based cohorts the Activity and Function in the Elderly Study (n = 1450) and the Study of Health in Pomerania (n = 1009) built the study population. Based on established NT-proBNP predictors a reference population without history of diabetes, cardiovascular or pulmonary diseases, with systolic blood pressure (BP) < 140 mmHg, diastolic BP ≥ 60 and ≤ 90 mmHg, hemoglobin in men ≥ 14 and ≤ 18 g/dl and in women ≥ 12 and ≤ 16 g/dl, GFR ≥ 60 mL/min/1.73m2, CRP < 5 mg/L, BMI ≥ 18 and ≤ 33 kg/m2, and hs-cTnI < 40 ng/L was identified.
Results: The reference sample includes 441 participants (median age 70 years, 41.0% men). We observed an age-dependent increment of NT-proBNP with higher values in women compared to men. URL equal to 663, 824, 592, 697 ng/L in men, and 343, 463, 2641, 1276 ng/L in women for ages 65–69, 70–74, 75–79, and 80 + , respectively. Notably, 165 participants (37.4%) had NT-proBNP > 125 ng/L.
Key conclusions: This reference sample of asymptomatic older adults showed an age-related NT-proBNP increment with URL markedly higher than the European Society of Cardiology recommended cut-off of 125 ng/L for HF diagnosis in ambulatory settings. Our analysis attempt to provide a frame for the further investigation of age-specific NT-proBNP cut-offs in older adults. [1] Braisch U, Koenig W, Rothenbacher D, Denkinger M, Friedrich N, Felix SB, Ittermann T, Dörr M, Dallmeier D. N-terminal pro brain natriuretic peptide reference values in community-dwelling older adults. ESC Heart Fail. 2022 Jun;9(3):1703–1712

P-139

How are patients with severe aortic stenosis and cognitive impairment? Knowing these patients to help in decision making process

Abstract Area: Cardiovascular medicine

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Introduction: Objective: to know how the elderly patients we assess in our Cardiogeriatric área with severe aortic stenosis (SAS) and cognitive impairment (CI) are comparing them with those who do not have CI.
Methods: Prospective observational study. Included patients ≥ 75 years with SAS, referred to our Cardiogeriatric área from Cardiology in the decisions making process during 2 years. Sociodemographic, clinical, geriatric assessment, frailty, treatment and mortality variables were collected. CI as a dichotomous variable and degree of impairment by ReisbergGDSscale.
Results: 48 patients, mean age 85.4(± 3.9), 67.4% women. Mean Charlson score: 2.9(± 1.9). 58.7% had symptoms of SAS.61% Barthel ≥ 90, 32.6% depression, and 30.4% CI (57.2% ≥ GDS5). Comparing patients with CI versus those without, we find statistically significant differences in means of: Barthel (57.8 ± 31.4 vs 88.5 ± 17.4, p = 0.001), SPPB (3.8 ± 2.7 vs 5.9 ± 2.4, p = 0.02) and walking speed (0.3 ± 0.1 vs 0.5 ± 0.1 m/s, p = 0.02). They are more frail by Frail (Frail ≥ 3: 35.7%vs12.5%,p = 0.03) and by ClinicalFrailtyScale (CFS ≥ 5: 71.4%vs18.8%,p = 0.001). Patients with CI were treated conservatively in 71.4%, Transcater Aortic Valve Implantation in 21.4% and in 7% final decision has not yet been made. We did not find differences with those who did not present CI or in relation to impairment degree. Patients with CI died more (42.9%vs9.4%,p = 0.008), without finding differences in terms of treatment or impairment degree.
Conclusions: Patients with CI and SAS that we assess in Cardiogeriatrics have worse functional status and worse punctuation in frailty scales than those who do not have it. According to our results, patients with CI, of any degree, die more during follow-up regardless of the type of therapeutic procedure carried out.

P-140

Anticoagulated versus non-anticoagulated patients in de novo atrial fibrillation, what are the main differences between each treatment group?

Abstract Area: Cardiovascular medicine

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Introduction: Atrial fibrillation (AF) is the most common arrhythmia in our environment. Anticoagulation against thromboembolic phenomena is a key factor in its treatment.
Objetive: The aim of this study was to determine the percentage of anticoagulated patients with de novo AF versus conservative treatment and their profile.
Material and methods: Analytical, observational, retrospective study of patients admitted in 2021 diagnosed with de novo AF. Variables: age, sex, Barhel index, SPMSQ, Charlson index, CHADS2-VASc, HASBLED, comorbidity, mortality.
Results: N = 1507 patients, 392 with AF, 340 previous AF, prevalence 22.6%, 52 de novo AF; Incidence 3.4%. Women 67.3%. Mean age 88.3 years (SD 4.33). SPMSQ 4.2 errors (SD 3.76). Comorbidity: HT 65.4% Heart failure 53.8% Ischemic heart disease 11.5%, Diabetes 25%. Charlson index mean 2.58 (SD 1.25). CHADSVASC mean 4.38 (SD 1.40). HAS BLED mean 2.27 (SD 1.05). Anticoagulated 59.1% (direct acting ACOS 80.8%, VKA 19.2%), conservative treatment 40.9%. Echocardiogram performed 46.8% patients. Echocardiogram in anticoagulated 70.8%, non-anticoagulated 16.6% (p = 0.003). Mean Bathel index anticoagulated 58.6 (SD 29.8), non-anticoagulated 38.1 (SD 37.2) (p = 0.05). Mortality on admission 17.3%, mortality at 1 year 36.6%, 24% anticoagulated, 33.3% non-anticoagulated (p = 0.046).
Conclusions: Anticoagulation treatment was initiated in more than half of the patients, most with direct-acting anticoagulants. Anticoagulated patients were associated with better functional status. Echocardiogram was performed in the majority of patients in whom it was decided to anticoagulate versus those who did not. Mortality at 1 year was higher in non-anticoagulated patients, which could be explained by the fact that these patients were more dependent and had more comorbidities.

P-141

AVK overdoses in patients with venous thrombosis disease

Abstract Area: Cardiovascular medicine

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The decision to institute oral anticoagulation is frequent in the elderly. Despite the demonstration of the efficacy of anti-vitamin K treatments provided by numerous therapeutic trials, there is an under-prescription of this drug class in geriatric practice. The aim of our work is to evaluate the frequency of AVK overdoses with or without hemorrhagic accidents in patients with venous thrombosis disease and treated with AVKs and to identify the risk factors for this type of complication, related to the terrain or the treatment. in order to determine the profile of patients in whom vigilance must be observed.
Method: Our study is retrospective, case–control type. It is carried out in the internal medicine department of LA RABTA hospital in Tunis during the period from January 2000 to April 2022 on patients aged 65 and over, with venous thrombosis and treated with AVK; It comprises two parts: A descriptive partstudying the characteristics of the entire population that was the subject of the study and A comparative part whose objective is to determine the risk factors for the occurrence of AVK overdose with or without haemorrhage and which consists in comparing the overdose group (+) with anoverdose group (-) on clinical and biological parameters in order to classify the population according to Beyth classification, to identify subjects at high potential risk of developing an AVK overdose, as well as parameters for the conduct of AVK treatment.
Results: We collected 249 files. 81 patients had an AVK overdose (32.5%), of which 20 had a haemorrhage (8%), the mean age of the population studied was 73. ± 7., the sex ratio was 1.16. 18% of patients are poly-pathological, and 26.5% are poly-medicated, 44.9% are cardiopathic, hypo-albuminemia isobserved in 38.9% of cases: 1/5 of patients is at high risk of bleeding according to Beyth classification. Regarding the overdose group (+), the average age was 73. ± 6. years, the sex ratiowas 1.4, 15% of patients are poly-pathological, of which 54% are cardiopathic, they are poly- medicated in 30% of cases. Hypo-albuminemia is seen in 65.7% of cases. The mean duration of treatment was 7.6 months. Cases of overdose occurred during the first three months of treatment in 86% of cases. The average INR of the overdose group is 9.71, the INR of the hemorrhagic group is 7.36. Heart disease, the risk of bleeding according to Beyth and the degree of hypocoagulability were in our study risk factors for the occurrence of bleeding under anti-vitamin K.
Conclusion: The frequency of thromboembolic pathologies and their severity and the benefit provided by anticoagulant treatment require an individual and periodic assessment of the risk/benefit ratio.

P-142

Cardiovascular disease risk in patients followed in a geriatric outpatient clinic

Abstract Area: Cardiovascular medicine

Florinda Ribeiro[1], Marília Fernandes[1], Rita Alves[1], Ana Sebastião[1], Ricardo Silva[1], Maria Saldanha[1], Carla Barbosa[1], Manuela Campos[1], Heidi Gruner[1]

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Introduction: Cardiovascular disease (CVD) is one of the main causes of morbidity and mortality. Age and frailty have been associated with increased CVD risk. SCORE2-OP measures the 5 and 10-year risk of death (5yD/10yD) or hospitalization (5yH/10yH) due to a cardiovascular event in patients > 70 years.
Objective: Correlate CVD risk using SCORE2-OP according to the presence of frailty.
Methods: Retrospective study using clinical files (2019–2022) of Geriatric Outpatient Consultation. Two groups were considered: with frailty (F) and without frailty (nF), according to PRISMA-7 score (> = 3 and < 3). Groups were characterized by age, gender, Lawton & Brody scale, handgrip strength, malnutrition (Mini Nutritional Assessment score < 8), BMI (Kg/m^2), hypertension, diabetes, dyslipidemia and CV risk (SCORE2-OP).
Results: 100 patients, 54 nF and 46 F. Mean age was 80.1/83.4 years, with 52.9%/55.2% females. The mean Lawton & Brody score was 6.7/3.9 points and handgrip strength 17.5/15.8 kg. Malnutrition was present in 12/21 patients, BMI 27.3/35.85 kg/m^2 , hypertension in 62.7/73.9%, diabetes in 19.6/34.8%, and dyslipidemia in 33.3/58.7% patients. SCORE2-OP determined 5yH of 21.0/17.2%, a 10yH of 23.5/25.5%, 5yD of 10.2/13.5%, and 10yD of 27.1/33.1%. The CV event risk at 10 years, scored low in 25.5/21.7% patients, moderate in 25.5/30.4%, high in 19.6/54.3%, and very-high in 1.9/13% patients. Discussion: Frailty was associated with older age, female gender, lower Lawton & Brody and handgrip strength. Hypertension, diabetes, dyslipidemia and higher CVD risk were more prevalent in frail patients. CVD risk should be addressed, bearing in mind quality and life expectancy, besides geriatric syndromes.

P-143

Impact of frailty on anticoagulation prescription and survival after 1-year follow in older adults with atrial fibrillation

Abstract Area: Cardiovascular medicine

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Introduction: The aging of the world population increases the prevalence of important issues such as frailty and non-valvular atrial fibrillation (NVAF). Prescription of oral anticoagulants should be considered: vitamin K antagonists (VKAs) or direct oral anticoagulants (DOACs). We aim to assess the influence of frailty on Antithrombotic Therapy (AT) and mortality.
Methods: Prospective observational study in 200 patients ≥ 80 years with NVAF admitted between 2019–2021. Demographics, frailty (SPPB),comorbidities, functional/cognitive status, type of anticoagulant and 1-year mortality were collected. Variables were compared using Student's t-test or chi-squared test as appropriate. The Kaplan–Meier were performed.
Results: Mean age 89.23 ± 0.63 years, 65% women, mean Barthel Index 65.23 ± 27.4, severe cognitive impairment 13%. We highlight: valvular heart disease (36%), anemia (31%), stroke (31.5%). The prevalence of frailty is 91.9% (8.1%pre-frail, 57.6%frail, 34.3% disability and none Non-frail). Pre-frail patients received a significantly higher AT (pre-frail 85.7% with AT vs 14.3% without, frail 69.7% vs 30.3%, disability 50% vs 50%; p = 0.10). The prevalence of DOACs is lower in disability patients (pre-frail 50% vs 50%, frail 51.5% vs 48.5%, disability 28.8% vs 71.2%; p = 0.018). There are no differences in the AVK. During the follow-up year, 34.5% died. The Kaplan–Meier survival stratified analysis by AT shows association between disability and mortality in non-anticoagulated patients (pre-frail 3.3% vs frail 49.2% vs disability 47.5%, log-rank Mantel–Cox 12.37, p = 0.02), while in the anticoagulated group there is no statistically significant difference.
Conclusion: Frailty has an impact on the selection of the antithrombotic therapy. Disability subjects have a higher mortality after 1-year follow-up and this was observed in the non-anticoagulated group.

P-144

¿Does frailty influence the clinical evolution and therapeutic prescription of older patients with atrial fibrillation?

Abstract Area: Cardiovascular medicine

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Introduction: The aging of the world population increases the prevalence of important issues such asfrailty and non-valvular atrial fibrillation (NVAF). Our aim is to evaluate the influence offrailty on Antithrombotic Therapy (AT).
Methods: Prospective observational study in 200 patients ≥ 80 years with NVAF admittedbetween 2019–2021. Demographics, frailty (SPPB), comorbidities, functional/cognitivestatus, AT. Variables were compared using Student's t-test/chi-squared, asappropriate. Finally, using multivariable analyses.
Results: Mean age 89.23 ± 0.63 years, 65% women, mean Barthel Index (BI) 65.23 ± 27.4. Wehighlight: valvular heart disease (36%), ischemic heart disease (21%), anemia (31%),stroke (31.5%). The prevalence of frailty is 91.9% 8.1% of patients are classified as: pre-frail, 57.6%, frail, 34.3% disability and none non-frail. Frail participants have higher BI [BI > 60 vs BI < 60: pre-frail 64.3% vs 35.7%, frail 69.7%vs 30.3%, disability 30.5% vs 69.5%; P < 0.001]; and lower cognitive impairment (CI)(pre-frail 64.3% no CI vs 35.7% Mild vs 0% severe/moderate level; frail 81.8% vs 12.12% vs6.1%; disability 49.2% vs 28.8% vs 22%; P < 0.001). At discharge, Pre-frail patients received a significantly higher OACs (pre-frail 85.7%with AT vs 14.3% without, frail 69.7% vs 30.3%, disability 50% vs 50%; p = 0.10). Frailty is not a significant predictor of AT on the multivariate análisis. Disability is theonly independent predictor of AT (BI > 60 73% with OAC vs 27% without; BI < 60: 45% vs54%, OR = 2.12, 95% CI 1.106–4.098; p = 0.024).
Conclusión: Frailty correlates with worse functional status and cognitive impairment and hasimpact on AT selection. However, disability is the only independent predictor ofanticoagulant prescription.

P-145

Does disability influence the clinical evolution and therapeutic prescription of geriatric patients with atrial fibrillation?

Abstract Area: Cardiovascular medicine

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Introduction: Atrial fibrillation (AF) is the most common arrhythmia in the elderly and is a risk factor for stroke. The prescription of oral anticoagulants (OAC) should be considered. Our objective is to evaluate the influence of disability on the prescription of anticoagulants as well as the incidence of mortality.
Methods: Prospective observational study in 200 patients ≥ 80 years with nonvalvular AF (NVAF) admitted between 2019 and 2021. Demographics, comorbidities, functional/cognitive status, type and dose of anticoagulant and 1-year mortality were collected. Continuous or categorical variables were compared using Student's t-test or Mann-Whitney U test, or using chi-squared test, as appropriate. Kaplan-Meier analysis was used to estimate mortality.
Results: Mean age 89.23 ± 0.63 years, 65% women, 95.6% frail, mean Barthel Index (BI) 65.23 ± 27.4, severe cognitive impairment 13%. We highlight: chronic kidney disease (63.5%), valvular heart disease (36%), ischemic heart disease (21%), anemia (31%), stroke (31.5%). Cardioembolic risk (CHA2DS2-VASc 5.74 ± 0.17), bleeding risk (HAS-BLED 2.94 ± 0.6). A total of 90.5% were anticoagulated, with antivitamin K (46.5%), direct acting anticoagulants (35%), low molecular weight heparin (9%) and without OAC (11.5%). Statistical significance was observed between OAC use and lower disability (BI > 60: 36.5% vs BI < 60: 27%,p < 0.001) in whom appropiate dose prescription was also observed (70.6% vs 29.3%,p = 0.015). After 1 year of follow-up, It was observed that dependents had higher mortality [total dependency (60%), severe (51.6%), moderate (23.4%), slight (16.6%) and independent (0%); LogRankMantel-Cox 22.13, p < 0.001].
Conclusion: The choice and dosing of OAC in the elderly population may be influenced by disability. There is a higher prevalence of inappropriate doses in people with disabilities, in whom mortality was also higher.

P-146

C-reactive protein, leukocytes and post-stroke cognitive impairment a seven-year follow-up study

Abstract Area: Cardiovascular medicine

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Introduction: Individuals with higher systemic inflammatory levels are more likely to develop cognitive impairment, and inflammation may contribute to post-stroke cognitive impairment. In this seven-year follow-up study, we assessed the association between markers of systemic inflammation and cognitive impairment in stroke survivors.
Methods: All patients with a first-ever stroke or transient ischemic attack (TIA) admitted to the stroke unit of Bærum Hospital, Norway, were recruited in 2007/2008 and followed for seven years. C-reactive protein (CRP) and leukocytes, as a marker of systemic inflammation, was measured at admission and CRP again ay the seven years follow up examination. Cognitive impairment was diagnosed based on clinical and cognitive assessments, and radiological markers in accordance with the ICD-10 criteria.
Results: Of the 227 subjects recruited, 115 participants had a seven year follow-up. Of these, mean age at stroke/TIA was 68.4 ± 10.8, 46% women, 77% with ischemic, and 14% with hemorrhage stroke. Median leukocytes at stroke onset was 7.6 × 109/L (4.3–28.6 × 109/L), and median CRP was 2 mg/L (1–91 mg/L) and 3 mg/L (3–134 mg/L) at admission and at seven years, respectively. Seven years post-stroke 61% had cognitive impairment (36% with mild cognitive impairment and 25% with dementia). The majority (65%) was classified as mixed, while 13% was classified as neurodegenerative etiology. In univariate logistic regression model neither leukocytes (OR 1.03, P = 0.70) nor CRP were (CRP at admission OR 1.01, p = 0.53; CRP after seven years OR 1.06, P = 0.22) associated with cognitive impairment.
Conclusions: CRP and leukocytes was not associated with post stroke cognitive impairment.

P-147

6-month mortality and associated risk factors in an elderly population admitted for heart failure (HF)

Abstract Area: Cardiovascular medicine

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Objective: Study 6-month mortality in patients admitted for HF in an Acute Geriatric Unit (AGU) and analyze associated risk factors.
Methods: Prospective longitudinal study. Patients aged 85 years or older, admitted for HF in AGU over a 3-month period were included.
Results: 236 patients were included (age 90 ± 3.9, women 66.1%, institutionalized 22.9%). Mean scores: Barthel index (IB) previous month 68.2 ± 29.4, Short Physical Performance Battery (SPPB) 2.63 ± 2.7, Pfeiffer 3.8 ± 2.8 and Mini Nutritional Assessment Short Form (MNA-SF) 8.5 ± 2.6. 6-month mortality prevalence 35%. Variables associated with mortality: IB previous month (62.2 ± 29.7 deceased vs 71.1 ± 29 non-deceased; $p < 0.05$), IB at admission (42.4 ± 29.7 vs 52.2 ± 27, 6; $p < 0.05$), Lawton (1.5 ± 2 vs 2.2 ± 2.2; $p < 0.05$), SPPB (2.1 ± 2.3 vs 2.9 ± 2.8; $p < 0.05$), Pfeiffer (4.6 ± 2.8 vs 3.4 ± 2.7; $p < 0.05$), MNA-SF (7.8 ± 2.8 vs 8.8 ± 2.5; $p < 0.05$), NT-proBNP (11612.2 ± 12263.8 vs 7814.7 ± 12139.4; $p < 0.05$), creatinine (1.6 ± 0.8 vs 1.3 ± 0.6; $p < 0.05$), albumin (35.1 ± 4.2 vs 37.2 ± 3.8; $p < 0.05$), number of drugs (8.2 ± 3.3 vs 9.1 ± 3.4; $p < 0.05$). An association was found between mortality and dementia (22.2% vs 13.2%; $p = 0.05$), stroke (31.7% vs 15.9%; $p < 0.05$) and dysphagia (44.4% vs 29.7%; $p < 0.05$).
Conclusions: For our study population, patients with lower IB and worse results in Pfeiffer, Lawton, SPPB and MNA-SF present higher 6-month mortality. Higher prevalence was observed in patients with dementia, dysphagia and stroke.

P-148

Can readmission during the first 6 months after discharge be predicted in an elderly population with heart failurE (HF)?

Abstract Area: Cardiovascular medicine

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Objective: To study risk factors associated with readmission during the first 6 months after discharge in patients admitted for HF to a Acute Geriatric Unit (AGU).
Methods: Prospective, longitudinal study. Patients aged 85 years or older, admitted for HF in an AGU in a 3-month period were included.
Results: 206 patients were included (age 89.9 ± 3.9, women 67.5%). They had mean Barthel Index (BI) scores in the previous month of 70.4 ± 28.6 and Pfeiffer scores of 3.7 ± 2.8. The prevalence of readmission at 6 months in the study population was 53.7%. As factors associated with readmission, significant differences were found in: previous month BI (66.4 ± 27.4 readmitted vs. 74.7 ± 29.3 not readmitted; $p < 0.05$), creatinine (1.5 ± 0.7 vs. 1.3 ± 0.5; $p < 0.05$) and iron (45 ± 28.4 vs. 55.6 ± 36.1; $p < 0.05$). Associations were also found between readmissions and chronic obstructive pulmonary disease (COPD) (23.6% vs 11.6%; $p < 0.05$), hypertensive heart disease (27.3% vs 23.2%; $p < 0.05$), ischaemic heart disease (25.5% vs 22.1%; $p < 0.05$), valvular heart disease (26.4% vs 11.6%; $p < 0.05$), diuretics (88.2% vs 77.9%; $p < 0.05$) and statins (22.7% vs 41.1%; $p < 0.05$).
Conclusions: In our population, worse BI scores, worse renal function and higher iron deficiency are the variables that could help predict readmission at 6 months. Also the presence of COPD, the type of heart disease and the use of diuretics and statins.

P-149

Specific features and complications of arterial hypotension in older people

Abstract Area: Cardiovascular medicine

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Introduction: Older people often present arterial hypotension and it has significant consequences: falls, syncope, myocardial infarction, stroke and even death. Study objective was to identify patterns and risk factors of this condition in elderly.
Material and methods: A total of 653 subjects, age-range 50–96 years, were included, divided into two groups, both presenting arterial hypotension: 332 adults (50–64 years) and 320 elderly (70–96 years).
Results: Three types of arterial hypotension have been identified in older people: orthostatic hypotension, post-prandial, post-exercise hypotension. In our sample, most cases had orthostatic hypotension, other variants had less than 4% prevalence. Parkinson disease was more often seen in older patients ($p < 0.05$). Type 2 diabetes mellitus and chronic renal disease were also more prevalent in elderly ($p < 0.05$). Smoking was more prevalent in adult males. Three groups of medicines were involved: psychoactive, anti-parkinsonian, vasodilator drugs. Age of menopause younger than 45 years was more prevalent in elderly women with arterial hypotension (chi square = 9.762, $p < 0.05$). Anemia was significantly more prevalent in elderly ($p < 0.001$). Stroke and myocardial infarction were significantly more prevalent in elderly patients ($p < 0.01$). Vertigo and syncope occurred as complications of arterial hypotension more often in elderly ($p < 0.01$), as well as falls, fractures, and ischemic heart disease. Orthostatic hypotension was identified in elderly more than twice in adults. Headache and asthenia occurred more often in elderly ($p < 0.05$).
Conclusions: Recognizing arterial hypotension, its forms and addressing some of its most important risk factors, could improve standing and prevent falls and other complications in older people.

P-150

What kind of patients that we evaluate in cardiogeriatrics with severe aortic stenosis die during the follow-up?

Abstract Area: Cardiovascular medicine

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Introduction: The objective of the present study is to know the characteristics of elderly patients with severe aortic stenosis evaluated in Cardiogeriatrics who die during the follow-up.
Methods: Prospective observational study for 2 years. All patients $\geq$ 75 years with severe aortic stenosis referred to Cardiogeriatrics from Cardiology for help in decision making were included. Sociodemographic, clinical, comprehensive geriatric assessment, frailty, and treatment variables were collected. Mortality was collected as a yes/no variable from the first assesment in Cardiogeriatrics until the end of 2-years period.
Results: 48 patients, mean age 85.4($\pm$ 3.9) years, 67.4% women. Mean Charlson score: 2.9($\pm$ 1.9). 58.7% had symptoms related to aortic stenosis. 61% had Barthel $\geq$ 90, mean FAC 4.2($\pm$ 1.2), mean gait speed 0.5 $\pm$ 0.2 m/s, prevalence of frailty by Frail 19.6%, Fried 52.5% and by CFS 34.8%. 30.4% had cognitive impairment (57.2% $\geq$ GDS5). Mortality in 2-years follow-up was 19%. Comparing the patients who died vs who did not, in a significant way, patients who died presented more cognitive impairment (66.7%vs21.6%,$p = 0.008$), had lower mean Barthel score (46.1 $\pm$ 29.8 vs 87.3 $\pm$ 18.3, $p = 0.003$) and in FAC scale (3.4 $\pm$ 1.5 vs 4.4 $\pm$ 1.1, $p = 0.02$). They have lower gait speed (0.2 $\pm$ 0.1 vs 0.5 $\pm$ 0.1 m/s, $p = 0.003$) and are more frail by Frail (2.5 $\pm$ 1.3 vs 1.1 $\pm$ 1.1, $p = 0.002$), Fried (3.17 $\pm$ 0.4 vs 2.2 $\pm$ 1.0, $p = 0.04$) and CFS (5.8 $\pm$ 1.7 vs 4.9 $\pm$ 1.2, $p = 0.001$). We did not found differences in mortality according to the type of treatment carried out (medical treatment, TAVI, valve replacement).
Conclusions: According to the results of our study, mortality in patients with severe aortic stenosis was associated with cognitive impairment, worse functional status, and worse score on several scales that measure frailty. However, we did not find differences according to the type of treatment carried out.

P-151

Atrial fibrillation and clinical frailty are associated in older patients with severe aortic stenosis

Abstract Area: Cardiovascular medicine

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Background: It has been suggested that patients with atrial fibrillation (AF) are sicker patients with poorer cardiovascular health thereby explaining higher morbidity and mortality following Transcatheter Aortic Valve Replacement (TAVR). This study aimed at investigating whether clinical frailty is associated to AF independently of cardiovascular co-morbidities.
Methods: Retrospective study of consecutive older patients ($\geq$ 75 years) with comprehensive cardiac and geriatric assessments at our university hospital before a TAVR (2012–2019). Data were collected to allow the calculation of several scores: CHADS2, MNA-SF and clinical frailty scale (CFS). 2-year mortality was studied with Kaplan-Meier. Associations between AF pre-existing to TAVR, and frailty (CFS $\geq$ 5) were addressed using uni- and multivariable logistic regression analyses.
Results: Of the 345 patients (mean age 86 $\pm$ 4.4 years, 54% women), 129 presented with AF (37%) during the pre-TAVI assessment. Those patients with AF died more frequently within two years after TAVR (OR: 1.85, $p = 0.014$, Log-rang $p = 0.017$). In univariate analyses, AF showed a strong statistical association ($p < 0.01$) with pulmonary hypertension (OR 3.49), pacemaker (OR 2.49), congestive heart failure (OR 2.17), CHADS2 score (OR 1.46, per unit), $\geq$ 5 daily drugs (OR 2.84), frailty (OR 1.90) and albuminemia (OR 0.91, per

g/L). In multivariate analysis, AF remained significantly associated ($p < 0.05$) with ischemic disease (OR 0.58), CHADS2 score (OR 1.46, per unit) and clinical frailty (OR 1.74).
Conclusion: Clinical frailty was associated to AF in older patients with severe aortic valve stenosis independently of cardiovascular co-morbidities, and may thereby participate in explaining the association between AF and mortality following TAVR.

P-152

Value of the frailty tools versus surgical risk scores for prediction outcomes in patients with severe aortic stenosis who underwent transcatheter aortic valve implantation

Abstract Area: Cardiovascular medicine

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Background: Transcatheter aortic valve implantation (TAVI) is an increasingly widespread procedure in geriatric population with symptomatic severe aortic stenosis (SSAS). EUROSCORE II (ES II) and the Society of Thoracic Surgery score (STS) are the recommended risk models to predict postoperative mortality in cardiac surgery, however, they were not designed to be used for these patients. The main limitation in the implementation of these models is that they do not take into account comprehensive geriatric assessment neither frailty. Aim: To compare frailty detection tools and conventional surgical risk score ES-II to predict complications in patients with SSAS undergoing TAVI. Methodology: Prospective study: July-2016-September-2021. Patients with SSAS, evaluated in Cardio-Geriatric appointments who underwent TAVI. Measurements: Functional status: [Barthel Index (BI); Functional Ambulation Category (FAC)]; cognitive status: [Reisberg's Global Deterioration Scale (GDS)]. Nutritional evaluation: body mass index (BMI), Mini-nutritional-assessment (MNA-SF)]. ES-II: low-risk ≤ 4; intermediate-risk > 4 and ≤ 9; high-risk > 9. Frailty: gait speed < 0.8 m/seconds; grip-strength < 23 kg in men, < 13 kg in women; [Short-Physical-Performance-Battery (SPPB)<10] and PARTNER-HULP-index > 4.
Results: 179 patients undergoing TAVI. Mean age: 81.16 (6.56 years). 91(50.8%) were female. Functional status: BI: 95.4(6.4); FAC: 4.83(0.4); cognitive status: GDS: 0.14(0.39). Nutritional evaluation: BMI: 29. (5.62). ES-II mean: 3.77%(3.49). They were classified as frail by different instruments: SPPB: 97(54.2%); gait-speed: 109(60.9%), PARTNER-HULP: 44(24.6%) and grip-strength in men: + 9(10.2%), women: 15(16.5%). The complications found were: infections: 29(16.5%); hemorrhage: 32(18.2%), stroke: 2(1.1%), pacemaker: 32(18.2%), renal-failure: 31(17.6%), vascular complications: 44(25%). Frailty was associated with presenting infections, renal failure, vascular complications and bleeding after the procedure, while ES-II with developing renal failure during admission, with a statistically significant difference.
Conclusions: The detection of frailty by different tools, has a greater predictive capacity of developing post-TAVI complications than a conventional surgical risk index.

P-153

Clinical frailty is insufficient to predict 2-year mortality in older patients undergoing transcatheter aortic valve replacement

Abstract Area: Cardiovascular medicine

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Background. Decision making on transcatheter aortic valve replacement (TAVI) is challenging in older patients. The predictive value for mortality of the Clinical Frailty Scale (CFS) is unclear. This study analyzed risk factors of 2-year mortality in older patients undergoing TAVI.
Methods: Retrospective cohort study of consecutive older patients (≥ 75 years) with a comprehensive geriatric assessment (CGA) who underwent TAVI at our university hospital between 2012 and 2019. The CFS was derived from the CGA: not frail (1–4), mildly frail[5], moderately frail[6]or severely frail[7]. Predictors of two-year mortality were determined using multi-variable logistic regression, with several independent variables either scores (e.g. Euroscore.2, NYHA, Charlson, Lawton, Katz, MNA-SF, BMI) or co-morbidities (e.g. dementia, falls, diabetes, atrial fibrillation, congestive heart failure, severe renal failure).
Results: The 345 patients (median age 87 years, 54% women) were not frail (31.6%), mildly frail (37.1%) and moderately/severely frail (31.3%). A trend was observed in 2-year mortality rates between frailty classes i.e. non-frail (23%), mildly frail (24%) and moderately/severely frail (30%). In multivariable analysis, two-year mortality rate was not associated with CFS but with four variables, namely, age (OR 1.08 per year, $p = 0.02$), atrial fibrillation (OR 2.34, $p = 0.003$), hemoglobin (OR 0.84, $p = 0.037$) and time-period (2017–2019 vs. 2012–2016: OR 0.46, $p = 0.005$).
Conclusion: The CFS is insufficient to predict 2-year mortality in older patients undergoing a TAVI. Clinical frailty should therefore not preclude a TAVI in these patients. The strong association between atrial fibrillation and mortality should be further studied in this population.

P-154

Multimodal prehabilitation of patients with abdominal aortic aneurysm subsidiary to surgery. Start-up of a geriatrics appointment

Abstract Area: Cardiovascular medicine

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Background: Patients with peripheral vascular pathology such as abdominal-aortic-aneurysm (AAA) are increasingly older. This situation implies complex management and a greater probability of unfavorable.

Results: Prehabilitation emerges as a tool through which, through a multicomponent intervention, patients who will undergo complex interventions are prepared with the aim of finding better post-intervention.
Results: Aim: to describe the activity carried out in a prehabilitation appointment multicomponent for patients with AAA with scheduled surgical. Methodology: Design: prospective study from November-2020 through November-2021. Participants: Patients with AAA, evaluated in the Geriatrics appointment. Measurements: Functional status[Barthel-Index (BI); Functional-Ambulation-Category (FAC)]; cognitive status[Reisberg-Global-Deterioration-Scale (GDS)], nutritional assessment[Body-Mass-Index (BMI), Mini-nutritional-assessment (MNA-SF)]. Frailty: gait-speed<0.8 m/sec; grip-strength<23 kg in men or <13 kg in women; Short-Physical-Performance-Battery (SPPB)<10; Frail-scale (FS) $\geq$ 3; Frailty-Index (IF-VIG) > 0.2; Clinical-Frailty-Scale (Rockwood) > 4. Analytical data: Hemoglobin, glomerular filtration rate, total proteins, albumin and vitamin-D. The interventions carried out were: prescription of muscle-strengthening-exercises (MSE); supplementation with Vitamin-D (SVD); iron supplementation (IS), cognitive stimulation (CS), delirium prevention (DP), smoking-cessation (SC) and respiratory rehabilitation (RR).
Results: Ten patients were included. Mean age: 73.70 years (SD: 8.91), 80% were male. Functional status: BI: 93.50(11.31), FAC: 4.8(0.42), cognitive status GDS: 1.70(1.05). Nutritional evaluation: BMI: 30.50(3,88), MNA-SF: 50% normal and 50% risk of malnutrition. Analytical data: 100% total proteins and albumin normal, 30% anemia, 70% vitamin-D deficiency and 50% had a glomerular filtration rate below 60 ml/min/1.73m2. Frail: 50% according to SPPB; 40% to gait-speed, 20% to grip strength, 40% to IF-VGI, 20% to the FS and 20% to Clinical-Frailty-Scale (Rockwood). The most frequent interventions were: 100%:prescription of MSE; 80% SVD 30%:CS and DP, 20%:SC and IS and 10%:RR.
Conclusions: Patients with AAA are frail depending on the scale used. They benefit from prehabilitation with a multicomponent intervention with the aim of improving the results post-surgery.

P-155

Old foes rise again

Abstract Area: Cardiovascular medicine

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74-year-old man with various comorbidities, namely type 2 diabetes mellitus, dyslipidemia, diabetic nephropathy, ischaemic heart disease, atrial fibrillation and prostate adenocarcinoma under surveillance. Admitted for a lower respiratory tract infection causing sepsis, under empirical antibiotic therapy with gradual clinical improvement. At the end of the treatment, he presented fever resurgence and refusal to eat. Oropharyngeal ulcers and intense odinophagia with heartburn were of note. The patient underwent upper digestive endoscopy that showed multiple ulcerated lesions from the tongue to the distal oesophagus. The immuno-histochemistry examination of the biopsies performed showed multinucleated cells with enlarged nuclei with pseudo inclusions. Serologies showed anti-Herpes Simplex 1 positive IgG. Negative HIV status. Intravenous acyclovir was started with clinical improvement.

P-156

The prevalence and importancecharacteristics of frailty in patients with heart failure, according to the presence or absence of wild-type transthyretin cardiac amyloidosis: a cross sectional study

Abstract Area: Cardiovascular medicine

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Background: Wild-type transthyretin amyloid cardiomyopathy (ATTRwt CM) is a common, underdiagnosed cause of heart failure (HF) in the elderly. Concurrent extracardiac amyloid infiltration might be responsible for a specific frailty phenotype. The objective of the present study was to assess the prevalence and characteristics of frailty in HF patients with vs. without ATTRwt CM.
Methods: In a prospective cross-sectional study, we included HF patients with and without ATTRwt CM (the HF + ATTRwt + and HF + ATTRwt- groups, respectively) referred to the Department of Cardiology at Henri-Mondor University Hospital (Paris area, France) for a multidimensional assessment between 2018 and 2021 using frailty multidimensional geriatric tools. Logistic regression models were used to compare the groups.
Results: We included 123 HF patients (68 HF + ATTRwt + and 55 HF + ATTRwt-), the median [interquartile range] age was 82 [76–85], there were 107 men (87%), and 34% had left ventricular systolic dysfunction. The proportion of very frail patients (according to the Short Emergency Geriatric Assessment questionnaire) was higher (albeit not significantly) in the HF + ATTRwt + group than in the HF + ATTRwt- group ($p = 0.09$). Relative to the HF + ATTRwt- group, patients in the HF + ATTRwt + group were more likely to have shrinking ($p = 0.03$), balance disorders ($p = 0.03$), memory complaints ($p = 0.05$) and overactive bladder ($p = 0.03$), independently of age, sex, NYHA stage, and diabetes status.
Conclusion: ATTRwt CM is associated with a high prevalence of frailty and a specific frailty phenotype.

P-157

Clinical utility of echocardiography in patients aged 85 or older

Abstract Area: Cardiovascular medicine

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Introduction: Atypical presentation is well known for cardiovascular diseases in elderly patients. The main aim of this study is to assess the utility of echocardiography in clinical decisions in patients aged 85 or older.

Methodology: This is a retrospective, descriptive, observational study in patients aged 85 or older, who underwent echocardiography between January 2019 and December 2020 at the HUV. Demographic and clinical data, echocardiography results, attitude post-echo and time to death after echocardiogram were assessed. Frailty was analysed by IF-VIG.
Results: One hundred patients, aged between 85 and 100, submitted to echocardiography were included at this study. 52% were women. Mean Barthel index for the overall patients was 87. When assessed for frailty 23% of patients were no frail, 38 had mild frailty, 36 moderate frailty and 3% had severe frailty. Echocardiogram was requested because of heart failure in 30% of patients and NST-ACS in 9%. With respect to valvular diseases, the most relevant results were severe mitral regurgitation (9%) and severe aortic stenosis (6%). The 29% of the patients had depressed ejection fraction of the left ventricle. The echocardiographic results were used as diagnostic support in 23% of cases. In 33% of patients the echocardiogram reported additional information and in 24% was useful in terms of changing therapeutic intensity. In 21% of patients there was no clinical utility for the test. Within 6 months of the echocardiogram, 32% of patients had died. Mortality was highest among patients with moderate or advanced frailty.
Conclusions: The practice of echocardiography in elderly patients is useful and influences decision-making, so we consider it a practice of clinical value. Frailty is related to mortality in the selected group of patients. For this reason, we recommend measuring frailty in this population.

P-158

Comprehensive Geriatric Assessment in patients who are candidates for Transcatheter Aortic Valve Implantation

Abstract Area: Cardiovascular medicine

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Introduction: Aortic stenosis is the most common valvular heart disease and its incidence has been rising in elderly people.
Methods: We conducted a prospective descriptive study. Analyzed functionality, comorbility, frailty, cognitive and nutritional status of patients that are candidates for Transcatheter Aortic Valvular Implant (TAVI). We studied mortality in those who underwent surgery.
Results: Analyzed a total of 91 patients' mean age of 84 $\pm$ 4.5 years, 49% female. 81.3% indicated for TAVI and 43.9% underwent surgery. Only half of the unfit patients were dependent for Basics Activities of Daily Living and 44% were partially dependent with a barthel index between 65–85. 88% were dependent for Instrumental Activities of Daily. 68% were at risk of malnutrition. 75% had a moderate likelihood of short-term mortality. Mild with a mean VIG frailty index of 0.21 $\pm$ 0.1. Almost half of the sample has cognitive impairment with a Pfeiffer > 2 errors. Time delay between assessment and intervention was 16 months $\pm$ 6 months. Among the intervened patients, 92.5% survived one year and 87.5% two years. A statistically significant relationship was observed between patients who underwent surgery and mortality with a $p < 0.001$.
Key conclusions: Comprehensive geriatric assessment is a useful tool to the correct selection of patients who could be candidates for TAVI, demonstrating high survival at one and two years in our sample. There is a delay between assessment and intervention of our patients, so it's important to take into account the the morbidity and frailty of our patients change over time.

P-159

Cognitive status is better in older adults under colchicine treatment; a case–control study

Abstract Area: Cognition and dementia

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Introduction: Although many studies have investigated the potential role of anti-inflammatory treatments in treating and preventing cognitive disorders, the effects of colchicine on cognition are not well known. We aimed to investigate the effects of colchicine on cognitive functions in a geriatric population diagnosed with gout or osteoarthritis by comparing it to non-colchicine users.
Methods: A total of 138 geriatric patients (67 colchicine users and 71 colchicine non-users) were enrolled after applying the exclusion criteria. Within comprehensive geriatric assessment (CGA), cognitive status assessment via Mini-Mental State Examination test (MMSE), Quick Mild Cognitive Impairment Screening test (Qmci), clock drowning test, trail making test, forward and backward digit span test were performed.
Results: Median age was 68 (65–72), and there were 56 male (40.6%) and 82 female (59.4%) patients. The scores of Clock Drawing Test, Backward Digit Span Test, MMSE-Total, MMSE-Attention, MMSE-Motor Function, Qmci-Total Score, Qmci-Clock drawing, and Qmci-Logical Memory were significantly higher in the colchicine user group ($p < 0.005$), showing better cognitive function. Adjusted model analyses results also showed that colchicine usage is independently correlated with higher Qmci-Total Score and Qmci-Logical Memory Score (For Qmci total score $\beta = 7.87$ 95% CI $= 5.48$–10.27, $p = < 0.0001$, and for Qmci Logical memory score $\beta = 3.52$, 95% CI $= 2.12$–4.91, $p = < 0.0001$).
Conclusion: To the best of our knowledge, this is the first study revealing that colchicine usage for different indications is associated with a better cognitive performance in older adults. Further investigations with a prospective, larger-sampled and randomized design are needed to show the causal relationship between colchicine and cognition.

P-160

Designing studies to assess microbiome, and gut inflammation among older adults with cognitive decline—Florida's Microbiome in aging Gut-Brain (MiaGB) Consortium

Abstract Area: Cognition and dementia

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Florida is home to one of the largest elderly populations in the United States of America. Age is a key risk factor for Alzheimer's disease (AD) related dementia (ADRD); therefore, its prevalence is very high in Florida. There is no effective treatment for AD, and while some early interventions help to prevent and delay AD, early risk detection remains a challenge. We have demonstrated that the gut microbiome signature in older adults with mild cognitive impairment (MCI), an early stage of AD, and ADRD differs significantly from healthy. With funding awarded by the Florida Department of Health, we have established multi-site studies across Florida as part of our Microbiome in Aging Gut and Brain study statewide consortium and will test a hypothesis that unique microbiome signature can differentiate older adults suffering cognitive decline and ADRD from their healthy counterparts; predict disease progression; and inflammation mediates microbiota effects on cognitive decline and ADRD. Outcomes will contribute to understanding the role of unique microbiome characteristics, inflammation, and risk of cognitive decline.

P-161

Completion of perioperative AMTS assessments in a Tertiary Orthopaedic Centre

Abstract Area: Cognition and dementia

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Background: The AAGBI 2019 guidelines on Perioperative Care of People with Dementia state that patients aged 65 + undergoing surgery should have a cognitive assessment during their inpatient stay. The aim is to facilitate identification of cognitive impairment and improve outcomes in patients undergoing surgery. In this study, we are seeking to determine if introducing an on-site orthogeriatric medical team improves use of AMTS assessments in patients aged 65 + .
Methods: We performed retrospective data collection by analysing patient records. We analysed data from patients aged 65 + admitted for 72 + hours to the Nuffield Orthopaedic Centre, Oxford for an orthopaedic operation. We analysed 1 months' worth of records pre-(July) and post-introduction (December) of an orthogeriatric team.
Results: 83 patients fulfilled the criteria (64 elective, 19 emergency) in July and 80 in December (48 elective, 32 emergency). Introduction of an orthogeriatric team improved completion of AMTS assessments by 17% (48%–65%). The proportion of patients with delirium who had an AMTS increased by 10% (90%–100%) and with dementia by 50% (50%–100%). The median scores were 10 in both cohorts. The score range was 2–10 in July and 0–10 in December. Of patients who had a periprosthetic fracture, bone health management was implemented in 60% of patients in July and 100% in December.
Conclusions: Although this is a single-centre study, these findings show that implementation of an on-site orthogeriatric team improves rates of AMTS completion and implementation of bone health management in patients with periprosthetic fractures. However, there is still further room for improvement.

P-162

Kinds of knowledge used by nurses caring for older adults with dementia in Nursing Homes. A phenomenological study

Abstract Area: Cognition and dementia

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Introduction: Knowing the older patient with dementia is an important element of compassionate care focused on the therapeutic relationship with the patient. The current study aimed at describing the kinds of knowledge used by qualified nurses and unqualified professional caregivers caring for older people with dementia in nursing homes from their own perspective.
Methods: A phenomenological qualitative study in a convenience sample of 11 nurses and nurse assistants working in nursing homes was carried out in order to explore the kinds of knowledge they use. Semi-structured, in depth interviews were carried out using the "critical incidence" technique while interpretative phenomenological analysis (IPA) was used for the analysis of qualitative data.
Results: Main themes that emerged were "knowing the patient" "time battle" "learning from experienced colleagues" "entering patient's reality", "knowing little but important things about the patient" and "distraction". Time constraints seemed to inhibit acquisition of personal knowledge through development of a personal relationship with the patients and discussion with them. Dealing with behavioral problems was performed through knowledge acquired by experience, distraction and discussion with more experienced nurses as well as by experimentation and in a lesser degree through scientific knowledge gained by formal education or personal continuing education.
Key conclusions: Limited use of scientific nursing knowledge in the care of older adults with dementia, and time constraints which prevent a personal therapeutic knowledge of the patient should be taken into account both in the educational preparation of gerontological nurses as well as in the management of long- term care facilities.

P-163

Phenomenological study of stigma and burnout experienced by nurses caring for older adults with dementia in Nursing Homes

Abstract Area: Cognition and dementia

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Introduction: Professionals with a close contact with patients with dementia such as gerontological nurses may involuntarily exacerbate stigma surrounding dementia resulting in poor quality of care as well as a decline in their own wellbeing. The current study aims at describing the stigma they place upon patients with dementia and the burnout experienced by qualified nurses and unqualified professional caregivers caring for older people with dementia in nursing homes from their own perspective.
Methods: A phenomenological qualitative study was carried out in a representative convenience sample of 11 nurses and nurse assistants. Semi-structured, in depth interviews were carried out and interpretative phenomenological analysis (IPA) was used for the interpretation of data.
Results: Main themes emerged were: "distancing" "comparing patient's needs to those of a baby" "concealing work problems from friends", "getting emotional" and "low social status". Patients' stigmatization and nurses' self-stigmatisation along with adverse working and organizational conditions, contribute to the development of professional burnout. Burnout manifests by emotional exhaustion with intense psychosomatic problems, lack of sense of personal accomplishments due to a sense of futility in providing care since the final ending is death which is often experienced as well as depersonalization since nurses reported they often felt treating their patients as objects.
Key conclusions: Conclusions drawn from the current study with regard to the contribution of stigma towards the burnout of professional caregivers, can contribute to a better educational preparation of nurses caring for demented older people in order to achieve better understanding and decrease of the stigma surrounding dementia.

P-164

Animal-assisted therapy in the integrated care of older adults with dementia

Abstract Area: Cognition and dementia

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Introduction: Animal-assisted therapy (AAT) is a complementary intervention which focuses on the human–animal bond as part of integrated care, enhancing well-being of older adults.
Aim: This review aims to present an overview of the effect of AAT in older adults with dementia.
Material and methods: A review of the recent literature was conducted in the Google Scholar, PubMed and Scopus databases using the key words "older adults", "dementia", "animal-assisted therapy", "integrated care".
Results: AAT in older adults with dementia has been found to contribute to increased physical activity and nutritional intake leading to a better physical condition and improved memory and communication skills. It may also decrease the sundown syndrome and agitation; It has been reported to help people with dementia in socialization which may lead to a reduction of loneliness. AAT offers companionship which reduces boredom and isolation; it provides a pleasurable experience, induces relaxation and may increase independence and self-esteem. Additionally, AAT has been reported to reduce depression, mood disorders, and medication usage, in older people with dementia. AAT may be an effective complementary therapy for the management of the behavioral and psychological symptoms of dementia.
Key conclusions: Animal-assisted therapy may contribute towards the improvement of the psychosocial well-being and quality of life of older people with dementia as well as the increase in cognitive and bodily function. As such, AAT should be considered a possible standard intervention in caring for older adults with dementia, leading to practice and policy changes in the future.

P-165

Improving the quality of care for patients in long-term care institutions with psychopathological symptoms of dementia

Abstract Area: Cognition and dementia

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A lot of patients in long-term care institutions have severe cognitive impairment with psychobehavioral symptoms: agitation, aggression, delusional disorders, hallucinations, etc. For the treatment of such conditions are usually used typical (haloperidol, chlorprotixen) or atypical neuroleptics (quetiapine, risperidone), antidepressants, barbiturates. Often, in boarding houses, patients are observed by internists or general practitioners who do not have sufficient experience and knowledge in the field of geriatrics and psychiatry, which causes difficulties in selecting therapy for psychobehavioral symptoms of dementia. This increases the number of emergency calls to the medical service, increases the number of hospitalizations, can lead to polypragmasia and worsen the quality and life expectancy of patients in nursing institutions. Among the side effects and adverse events, against the background of receiving psychotropic therapy in elderly patients, it can be noted: extrapyramidal disorders, orthostatic reactions and falls, apathy, drowsiness, dry mouth, cardiological complications, malignant neuroleptic syndrome. There is a need to improve the quality of care for elderly patients with psychobehavioral symptoms of dementia in long-term care institutions, for this you can conduct an audit using a specially designed questionnaire. This questionnaire is easy to use, contains several questions that can be answered in monosyllables: age, the presence of indications for antipsychotic therapy, the presence of contraindications for this therapy, the name of the drug (if any), its dosage, is there a combination of antipsychotic drugs and their dosage, is this therapy scheme effective, are there side effects phenomena against the background of this treatment regimen, whether the correction of the previously selected therapy regimen was carried out in a hospital or directly in a boarding house. The use of this questionnaire will help to better optimize the use of both atypical and typical neuroleptics, reduce the number of adverse events while taking this therapy, as well as develop an optimal scheme of combination therapy. All this will lead to an improvement in the geriatric status of patients in long-term care institutions, reduce the number of hospitalizations and improve the quality of life of patients.

P-166

Speechless: a case of a rare dementia with progressive language alterations

Abstract Area: Cognition and dementia

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Clinical case80-year-old male with language disorders; has a history of smoking, alcohol consumption, prostate cancer in remission and hypertension. He began presenting a slow and effortful speech with a loss of prosody. Two months later, developed difficulty planning and executing IADL. His relatives perceived ideomotor apraxia, requesting support to carry out work related tasks on the computer until, he just turned the computer on and didn't know what to do with it. Two months later, develops progression of language deficit, with decreased verbal fluency and changes in communication. On physical exam he presented generalized rigidity and mild bradykinesia, predominantly on the right hemibody, preserved muscular strength, global hyperreflexia with clonus. Ideomotor apraxia of the upper right extremity was noticed. In addition, he had difficulty getting up from a chair, instability with frequent falls, language disorders with decreased verbal fluency, phonetic paraphrases, and frequent neologisms. MMSE 16 points. Blood test and urinalysis was unremarkable, thyroid test and B12 levels were normal; HIV serology was negative; cerebrospinal fluid showed no abnormalities. Brain volumetry reported asymmetric atrophy with predominant left atrophy of frontal and temporal lobe. Left hippocampus was also diminished. Neuropsychological tests reported alterations in orientation, attention, memory, language, and executive functions. Probable corticobasal syndrome diagnosis, levodopa was initiated for parkinsonism and the patient was referred to physical therapy for fall prevention.

Conclusion: Tauopathies are neurodegenerative disorders characterized by neuronal loss and inclusions of microtubule-binding protein tau. Unfortunately, it is often difficult to distinguish this pathology early, representing a diagnostic challenge [1]1)Armstrong, M. J., Litvan, I., Lang, A. E., Bak, T. H., Bhatia, K. P., Borroni, B., … Weiner, W. J. (2013). Criteria for the diagnosis of corticobasal degeneration. Neurology, 80(5), 496–503. https://doi.org/10.1212/wnl.0b013e31827f0fd1 2)Yoshida, Mari. 2019. "Chameleons and Mimics: Progressive Supranuclear Palsy and Corticobasal Degenera tion." (June): 1–11.3)Cipriani, Gabriele et al. 2020. "Pharmacological Interventions Daily Functioning and Dementia in Corticobasal Degeneration." 14(3): 243–47.

P-167

A patient with Alzheimer's dementia with the antecedent of COVID-19 infection: a case report

Abstract Area: Cognition and dementia

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Introduction: Alzheimer's disease (AD) is the most common neurodegenerative disorder affecting older adults; it corresponds to 50–75% of current cases of dementia [1]. We present the case of a 60-year-old female patient with memory problems. She has a significant hereditary family history of a mother diagnosed with AD. She began with cognitive alterations three years ago, characterized by forgetfulness which have progressively increased in frequency and severity after a COVID-19 infection. On physical examination, the patient was alert, cooperative, and oriented in time and person without abnormalities in the neurological exam. Comprehensive geriatric assessment (CGA): Katz index 6/6 points; Lawton and brody questionnaire 6/7 points; Geriatric Depression Scale (GDS): 1 point; minimental Folstein: 18 points; Montreal Cognitive Assessment (MOCA): 13 points; Clinical Dementia Rating (CDR) scale: 1 point; Hamilton Anxiety Scale: 9 points. Laboratory within normal parameters (Blood count, blood chemistry, lipid profile, thyroid profile, urinalysis, and vitamin B12 levels). The brain's magnetic resonance imaging detected cortical-type brain parenchyma and microangiopathic leukoaraiosis. In addition, neuropsychological tests reported moderate-severe cognitive alterations compatible with AD.

Conclusion: This patient has only a relevant antecedent of COVID-19 infection. The respiratory infection and the SARS-CoV-2 virus can trigger or accelerate the mechanisms of neurodegeneration and the appearance of symptoms related to this process. In addition, isolation measures are believed to worsen cognitive functions in patients with dementia due to social deprivation, lack of interaction with family and friends, and lack of physical activity due to movement restrictions [2].

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P-168

Delirium in the Emergency Department—challenges in improving recognition & management

Abstract Area: Cognition and dementia

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Introduction: Delirium is common and associated with poor outcomes; a 4AT score of $\geq$ 8 predicts a 1-year mortality close to 50% [1–4]. Delirium recognition is often poor including in the Emergency Department (ED). The aim of this project was to improve early recognition of delirium in the ED at North Middlesex Hospital.

Methods: An initial retrospective analysis of ED records in August 2021 demonstrated low incidence of diagnosis of delirium and use of the 4AT tool. Using quality improvement methodology we designed a two-page Delirium Pathway for clinicians to follow to screen and managed delirium in ED, including 4AT, capacity assessment, suggestions on management and how to safety net discharges. Multiple interventions were carried out including teaching sessions, Trust newsletter announcements, emails to senior ED consultants,

publication of the pathway on the intranet and the production of a delirium education video filmed in ED with their participation.
Results: SPC results were disappointing; despite 4AT uptake being 50% after the first month, use of the tool fell away to approximately only 15% use by the end of the project. Delirium diagnosis showed no significant change.
Key conclusions: This project showed that our interventions including a ED specific Delirium Pathway did not alter delirium diagnosis in ED. On reflection the main barriers to improving change were high turnover of staff and increased ED activity due to Covid-19. Recognition and target of these barriers are crucial to ensuring improved recognition and management of delirium at the earliest stage of hospital admission.

P-169

Association of anticholinergic drug burden with cognitive and functional decline over time in dementia with Lewy bodies: 1 year follow-up study

Abstract Area: Cognition and dementia

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Abstract Background: This study aimed to explore the association between medication-associated anticholinergic burden and cognitive and functional alterations in patients with dementia of Lewy bodies (DLB) during 1 year follow–up period.
Methods: This cohort study included patients diagnosed with DLB admitted to a tertiary geriatric outpatient clinic. Demographics, cognition, functional performance, and nutritional status were assessed at baseline, 6 months, and 12 months during follow-up period. The anticholinergic properties of each drug were evaluated using the anticholinergic burden (ACB) scale, and the participants were grouped as ACB (+) and ACB (-).
Results: A total of 112 patients with DLB (mean age 79.3 ± 6.8 years; 50.9% female) were included. Individuals with ACB (+) had lower instrumental activities of daily living (IADL) scores at baseline than those with ACB (-) ($p = 0.014$). The presence of ACB (+) in participants marginally worsened their mental status at the 6-month follow-up ($p = 0.064$). At 12 months, the Barthel index and Lawton-Brody IADL scores significantly decreased in the ACB (+) group, whereas only Lawton-Brody IADL scores worsened in the ACB (-) group (all p's < 0.001). According to the MMSE test, there was significant deterioration in orientation in its subdomains in the ACB (+) group (0–12 month, $p = 0.001$). Multivariable regression models showed no significant effect of ACB on cognitive and functional impairment.
Conclusion: Our study provides evidence that the use of anticholinergic drugs in this vulnerable population may potentially increase the morbidity burden by adversely impacting functional status and orientation in cognition.

P-170

Testamentary Capacity Assessment Tool (TCAT): an update report

Abstract Area: Cognition and dementia

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Introduction: TCAT is a recently developed short instrument (15 min are required for its administration), with good psychometric properties, specialized for the assessment of testamentary capacity (TC) in dementia. It assesses memory, perception of financial parameters and judgment. The present study reports all studies about TCAT.
Methods: Pubmed database as well as unpublished data by the authors of the TCAT have been used.
Results: As of now, there are no other specialized TC assessment instruments with measured psychometric properties in the scientific literature. Unpublished data on amnestic mild cognitive impairment (aMCI) performance using the TCAT show no difference of aMCI in comparison to healthy adults at any part of the tool. Another unpublished study has examined the correlation between the three parts of TCAT and the expert opinion regarding TC in patients with dementia. It has shown that Part C "financial parameters" demonstrates the highest correlation with the expert opinion. Validation and standardization of the TCAT in the Greek population is under way. The preliminary results show that age, and not educational level or gender, predicts the performance in TCAT. Validation and normative data of the TCAT in an Italian population of 323 healthy adults is provided in a recent published study showing that it is useful as an adjuvant instrument for TC assessment in the elderly.
Conclusions: While the TCAT is a useful tool, more studies are needed in different cultures, both in healthy adults and cognitively impaired adults, for its standardized use in forensic and clinical settings.

P-171

Mixed transcortical aphasia: multidisciplinary treatment in the geriatric functional recovery unit

Abstract Area: Cognition and dementia

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An 82-year-old woman with a history of revascularized ischemic heart disease. Her previous functional status included mild cognitive

impairment with episodic memory impairment. Modified Barthel Index 90/100. Independent ambulation at home. Debuted with disorientation and repetitive conversation of 24 h of evolution. In his examination at admission, he had alteration of the nomination (he correctly nominated 1/10 objects). Normofluent although there were abundant stereotyped phrases; occasional paraphasia. Preserved repetition. Comprehension of simple commands preserved (language impairment compatible with mixed transcortical aphasia). Recent episodic memory altered (0/3, no improvement with semantic cues). Brain CT showed lacunar infarction in the thalamus of the right hemisphere associated with ischemic pathology of small vessels. The patient was diagnosed with right thalamic stroke with mixed transcortical aphasia with language, difficulty in naming, maintaining repetition, pointing and explaining the usefulness of objects, paraphasias and jargaphasias, perseverations. Language is not only a means of communication, but also a tool of thought. Mixed transcortical aphasia is characterized by preservation of repetition and impairment of expression and comprehension with echolalia and no ability to name images. The patient is not able to understand or express correctly, but can repeat. Aphasias require the intervention of a multidisciplinary team. Two stages of recovery have been distinguished: stage 1 (early recovery), due to decreased edema and decreased diaschisis effect, and stage 2 (late) with factors responsible for recovery: language relearning and/or language reorganization in the brain (Kertesz, 1988). Recovery from aphasia is influenced by the location of the lesion and the type of aphasia. Therapy is individually tailored, taking into account immediate problems, abilities and needs. In addition to lesion regression, improvement of aphasias can be explained by functional transfer to other left hemisphere structures, especially perilesional, and by the contribution of the right hemisphere. Initial phonology may be the linguistic component most indicative of recovery at one year; other factors associated with good results were high Barthel index, high educational level and hemorrhagic stroke.

P-172

Resilience of older people with cognitive decline and their support networks

Abstract Area: Cognition and dementia

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Introduction: The concept of resilience, i.e. the capacity of a system to bounce back after a stressor, is gaining interest across many fields of science, policy and practice. To date, resilience research in people with cognitive decline has predominantly addressed the early stages of decline. We propose that: [1]resilience is a relevant concept in all stages of cognitive decline; and[2]a socioecological, multisystem perspective on resilience is required to advance understanding of, and care and support for people with cognitive decline and their support networks.
Methods: We substantiate our position with literature and examples.
Results: Resilience helps to understand differences in response to risk factors of (further) cognitive decline and informs personalised prevention. In a curative context, interventions to strengthen resilience aim to boost recovery from cognitive decline. In care for people with dementia, resilience focused interventions can strengthen coping mechanisms to maintain functioning of the individual and their support network. A good example of improving resilience in the social and policy context is the introduction of age-friendly cities and dementia-friendly communities. Good care for people with cognitive decline requires a resilient health and social care system. Given the interdependency of resilience at micro-, meso- and macro-levels, an integrative socioecological perspective is required.
Key conclusions: Applying the concept of resilience in the field of cognitive decline opens new horizons for research to improve understanding, predicting, intervening on health and social care needs for the increasing population with cognitive decline.

P-173

Plasma leptin is associated with brain amyloid deposition and Alzheimer's disease diagnosis in cognitively impaired patients from a tertiary memory clinic

Abstract Area: Cognition and dementia

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Background: Metabolic dysfunction and dysregulation of leptin signaling have been related to Alzheimer's Disease (AD)'s pathophysiology. The objectives of this study were to examine the associations between plasma leptin concentration and the cerebrospinal fluid (CSF) beta amyloid (Aβ) and tau biomarkers, or with the stage of cognitive impairment.
Methods: Cross-sectional analysis of data from cognitively impaired participants of a tertiary memory clinic. Plasma leptin levels were compared according to the stage of cognitive impairment and biomarker profile, using the AT(N) classification. Linear regression models were performed to examine the relationship of leptin to CSF biomarkers, with adjustments for age, gender, body mass index (BMI) and APOE ε4 carriership. In a subgroup of A + T + individuals, we compared the evolution of the Mini Mental Status scores over 2 years, according to the participants' tertile of plasma leptin.
Results: We included 1036 participants (age 68.7 ± 9.1, females = 54.1%). A + T + and A + T- profiles were associated with lower leptin levels than amyloid negative subjects ($p < 0.01$). Aβ was significantly associated with lower plasma leptin $\beta = -4.3$ (1.5), $p = 0.005$ unadjusted; and $\beta = -3.4$ (1.6), $p = 0.03$ after adjustment for age, female gender, BMI and APOE ε4. Patients with AD dementia had a difference of leptin of − 7.3 ng/ml 95% CI [− 11.8; − 2.8], $p = 0.0002$, compared to those with other causes of dementia. Leptin was not associated with the slope of cognitive decline.
Conclusion: Plasma leptin levels were associated with CSF Aβ levels and with the diagnosis of AD confirmed by CSF biomarkers, suggesting a molecular interplay between leptin signaling and brain amyloid deposition.

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Blood–brain barriers breakdown as biomarker of cognitive dysfunction

Abstract Area: Cognition and dementia

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Introduction: Vascular dysfunction is frequently observed in neurodegenerative disorders associated with cognitive impairment, dementia and Alzheimer's disease. Increasing evidence points to blood-brain barrier (BBB) disruption as early marker of neurodegenerative disorders [1].
Methods: We review relevant recent data supporting evidence that BBB breakdown acts and should be used in clinical practice as biomarker of cognitive dysfunction.
Results: Loss of cerebrovascular integrity was recently demonstrated to be an early biomarker of human cognitive dysfunction and possibly even an underlying mechanism of age-related cognitive decline. Damage to the BBB may initiate a range of tissue injuries, causing synaptic and neuronal dysfunction and cognitive impairment [2,3]. Growing body of evidence also show that the leading genetic risk factor for Alzheimer's disease, apolipoprotein E4, is linked to BBB breakdown [4]. Magnetic resonance imaging (MRI) techniques are highly suitable for noninvasive BBB integrity assessment (like dynamic contrast-enhanced and dynamic susceptibility contrast MRI-relying on leakage of gadolinium-based contrast agents). Brain capillary damage was also successfully evaluated using a novel cerebrospinal fluid biomarker of BBB-associated capillary mural cell pericyte- a soluble platelet-derived growth factor receptor-β [1,4]. Data show that individuals with early cognitive dysfunction develop brain capillary damage and BBB breakdown in the hippocampus irrespective of Alzheimer's Aβ and/or tau biomarker changes. It was proven that the degree of BBB disruption correlates with the degree of cognitive dysfunction [3,5].
Key conclusions: Where available, methods of assessment of BBB integrity should be used to support the early diagnosis of neurodegenerative disorders, completing the evaluation of cognitive function.
Keywords: Blood-brain barrier, neurodegenerative disorders, cognitive function, cerebrovascular damage.
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P-175

Multidisciplinary approach of dementia care—is this the key to an effective intervention?

Abstract Area: Cognition and dementia

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Introduction: Dementia age-specific incidence rates decreased by an estimated 13% per decade since 1988 both in the United States and Europe, while dementia-free life expectancy and years of survival with dementia have increased [1–3]. The number of cases of dementia is projected to continue to increase over coming decades, urging healthcare systems and organizations to consider as global health priority the interventions necessary to reduce the burden of dementia [3,4].
Methods: Using the relevant keywords we analyzed scientific databases PubMed and Google Scholar for literature published since 2020 to verify the hypothesis of the multidisciplinary approach of dementia care as pillar for an effective intervention.
Results: We identified a total of over 17,200 publications, highlighting the major interest of researchers for this topic. We included in this review the most relevant results from the articles presenting the successful interventions in dementia care, including the assessment for a multidisciplinary team engagement. Multimodal interventions have shown efficiency in delaying rates of cognitive decline, also interdisciplinary dementia management should bring together more medical professionals who manage dementia patients with specialists in social support, caregiving, psychotherapy, physical activity, occupational and alternative therapies [5–8]. It was proven that diagnostic accuracy of the etiological diagnosis and confidence in the diagnosis are significantly higher for a multidisciplinary consensus team compared with a single physician [5,7].
Key conclusions: As no disease-modifying therapies are yet available, the most significant present strategies regard influencing the known modifiable risk factors as well as integrating different disciplines as a holistic treatment process.
Keywords: dementia care, multidisciplinary, burden of disease, effective intervention.
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Person-centred care for people with dementia in acute hospital. A pilot study

Abstract Area: Cognition and dementia

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Introduction: Studies have found that the physical and psychosocial environment in the acute hospital ward might have negative impact on behavioral, psychological and cognitive symptoms for people with dementia. To prevent this, needs related to cognitive impairment must be attended to. The aim of this project is to pilot a model for use of psychosocial care interventions based on person-centred care in an acute hospital ward.
Methods: The model provides a structure which helps the health care personnel analyze challenging situations in care for patients with cognitive impairment, like agitation, and find psychosocial interventions which can help the patient feel safe and make sense of the situation. Participants: 2–4 nurses in a geriatric ward in 2 acute hospitals in Norway are trained to implement the model which will be used in 2 months. Data a)Use of psychotropic medication in the ward the month before and after the pilot studyb)Focus group interviews with the nursing staff on the wards after the pilot study will be analyzed with content analysis: a.Did the model help them identify the patients' needs for person-centred care? b.How did they experience the use of psychosocial interventions?c.How did they experience the implementation process? d.How was the feasibility of the model?
Results and key conclusions: Training and implementation were started in April, focus groups are planned in June and August 2022. Preliminary results will be presented at the conference.

P-177

Cognitive assessment on frail patients—are these being done on admission to hospital?: A Quality Improvement Project

Abstract Area: Cognition and dementia

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Introduction: An increasing number of frail patients are being admitted to hospital each year with cognitive impairment (Dementia/Delirium). Failure to identify delirium is associated with a worse outcome. Doctors fail to assess cognition on admission to hospital. The aim of our QIP was to increase the numbers of frail patients undergoing cognitive assessments (CAs), who were admitted to acute medical and frailty wards. A CA on admission provides a baseline against which subsequent fluctuations in cognition can be benchmarked.
Methods: The admission electronic record of 40 frail patients was reviewed, to provide a baseline data set. Initially we introduced a frailty checklist, encouraging doctors to assess the cognition of frail patients on admission to hospital. Subsequently, posters were displayed on the medical clerking desk in the Emergency Department and on admissions wards. Two Plan-Do-Study-Act (PDSA) cycles were conducted, collecting data from 40 patients during each cycle.
Results: At baseline only 15% (N = 6) of frail patients had a CA completed on admission. After PDSA cycle 1 and 2, this increased to 28% (N = 11) and 38% (N = 15) respectively. The abbreviated mental test score (AMTS) was the most frequently used tool to assess cognition.
Key conclusions: Although we did observe an increasing number of CAs being conducted, as a consequence of workload and time pressures compounded with the frequent change of medical trainees due to training requirements, interventions don't have the long term effect intended. We hope to improve the use of cognitive assessments with further PDSA cycles.

P-178

Subcutaneous olanzapine in eating behaviour disorder in frontotemporal dementia

Abstract Area: Cognition and dementia

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75-year-old male patient with frontotemporal dementia in moderately advanced stage GDS 6, of four years' evolution under neurological follow-up and on treatment with donepezil. Predominance of semantic impairment and psychobehavioural disorders, starting treatment with quetiapine and citalopram. The patient was referred to the palliative care unit due to severe eating disorder and refusal of maintained intake after hospital admission due to severe hypernatraemic dehydration, acute renal failure and acute urinary tract infection. After treatment of the acute processes with clinical and analytical resolution, she presented with aphagia of three weeks' evolution. In agreement with the family, it was decided not to establish enteral nutrition via nasogastric tube or gastrostomy. A study was completed to rule out organic causes, with fibrolaryngoscopy, digestive endoscopy and assessment by the maxillofacial surgeon with no abnormal findings. CT scan of the brain with no new findings. Assessment by psychiatry, initiating 2.5 mg of subcutaneous olanzapine. A wait-and-see attitude was maintained while the effect of the pharmacological interventions was checked, reinforcing non-pharmacological measures. After five weeks, he maintained acceptable intakes and olanzapine could be administered orally. The patient was discharged to a nursing home in coordination with the geriatric

care service of our department. Olanzapine has been shown to have an effect on appetite and weight gain in older adults at doses of 2.5–7.4 mg. Its subcutaneous administration is widely used in palliative care to address eating disorders in patients who are unable to take oral medication.

P-179

The use of assistive technology in persons living with dementia—a systematic review of practice

Abstract Area: Cognition and dementia

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Background: The main objective of this study was to review systematically the empirical support for the use of assistive technology with persons living with dementia as an intervention to improve independence, safety, communication and wellbeing at home and in long term care. Studies included those with current technology being used by persons living with dementia as supportive means of practice with the main focus being directed towards the persons living with dementia rather than the caregiver's well-being. Furthermore, the study also sought to investigate the technology that directly affect the following domains: Behavioural and Psychological Symptoms of Dementia (BPSD), depression, cognitive function, pharmacological intervention, physical wellbeing, activities of daily living (ADL) and overall quality of life. Methodology: A systematic search through multiple databases, including MEDLINE, PsycINFO, CINAHL, IEEEXplore and Cochrane Central Register of Controlled Trials (CENTRAL), was conducted. Only peer-reviewed studies published after the year 2000 were included. The search focused on Assistive Technology (AT) practices and research with persons living with dementia. The reporting quality and vetting of the chosen random controlled trials (RCTs) and cross over study (COS) articles were appraised using the Cochrane RoB_2.0 bias tool and CASP Randomised-Controlled-Trial-Checklist. To minimise bias, four individuals reviewed the papers separately. Meta-analysis was carried out with a fixed-effect model to calculate the pooled effects of BPSD, depression, cognition, pharmacological interventions, Activities of Daily Living (ADLs), quality of life and health and physical well-being. Furthermore, as part of the metaanalysis, the Hughes g correction was also applied to the BPSD, depression, cognitive function, pharmacological interventions, physical well-being, ADL, and overall quality of life. Results were reported following the (PRISMA) guidelines.
Results: Eight studies met the eligibility criteria, which included 821 participants in all. The selected studies varied in content—from robot pets to hearing aids and exergaming. Overall, these interventions positively affected minimising depression ($p = 0.004$), pharmacological interventions ($p = < 0.00001$), improving physical well-being ($p = 0.005$) and quality of life ($p = 0.03$).
Conclusion: Assistive technology interventions could be an effective tool to improve the health and quality of life in persons living with dementia. The results promoted exergaming as an alternative approach to pharmacological interventions. In addition, assistive technologies were found to improve balance, enhance socialisation and introduce a healthier routine for persons living with dementia in the community and long-term care settings.

P-180

Impact of COVID-19 lockdown on physical exercise among participants receiving the Promoting Activity, Independence and Stability in Early Dementia (PrAISED) intervention: a repeated measure study

Abstract Area: Cognition and dementia

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Background. The potential decrease in daily physical activity associated with the COVID-19 pandemic lockdowns may have a negative impact on people living with dementia. Given the limited literature around the effects of home confinement in people living with dementia, this study investigated changes in physical exercise levels of participants in the intervention arm of the Promoting Activity, Independence and Stability in Early Dementia (PrAISED) Randomised Controlled Trial during the first COVID-19 national lockdown. It hypothesised that participants would maintain physical exercise levels.
Methods: A repeated measure (three time points) study involving 30 participants (mean age = 78.0 years, 15 male and 15 female, 22 (73.0%) living with their primary caregiver), from four regions in England receiving the PrAISED intervention. PrAISED is an individually tailored intervention of physical exercises and functional activities. Trained therapists deliver therapy sessions over a period of 52 weeks. Study participants received therapy sessions via phone or video calling during the COVID-19 lockdown. This study investigated self-reported minutes of physical exercise recorded on study calendars for the months of February (i.e., baseline—pre-lockdown), May (i.e., T1—during lockdown), and August (i.e., T2—post-lockdown) 2020.
Results: Participants reported a statistically significant increase in activity levels between February and May (Wilcoxon $Z = -2.0$, $p = 0.0$) and a statistically significant decrease between May and August (Wilcoxon $Z = -2.7$, $p = 0.0$). No significant difference was found in the physical activity levels from pre- to post-lockdown (Wilcoxon $Z = 0.4$, $p = 0.6$).
Conclusion: Despite concerns that the restrictions associated with the COVID-19 pandemic might lead to reductions in physical exercise, participants in receipt of the PrAISED intervention increased their amount of physical exercise during lockdown. Our findings support the potential of remote support for people living with dementia to help them maintain physical exercise levels in circumstances where face-to-face service provision is not possible.

P-181

Pilot study of Analgesia Nociception Index variation in eldery and non communicative population

Abstract Area: Cognition and dementia

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Introduction: Behavioural pain tolls are used in geriatric unit in patient unable to self-report their pain intensity. Different hetero assessment scales, such as the Echelle d'evaluation de la personne agée (ECPA), exist, but include an element of subjectivity linked to the observer. This study measured the validity and performance of an electrophysiological monitoring tool based on the spectral analysis of heart rate variability and the correlation between ECPA. The Analgesia Nociception Index (ANI) which varies from 0 (minimal parasympathetic tone, maximal stress-response and pain) to 100 (maximal parasympathetic tone, minimal stress-response and pain).
Methods: Instant-ANI (ANIi) and the mean-ANI (ANIm) were continuously recorded during the care procedure. These values were compared with the ECPA before and after, reported by the healthcare team.
Results: 19 measurements were performed in 18 patients. We note an increase in the value of ECPA 2 (0; 5) versus 0 (0; 0) during treatment in parallel with a decrease in ANIi 37 (30; 50) versus 64 (54; 93) and ANIm 49 (39; 56) versus 63 (53; 86). After grouping the ANI-ECPA data pairs before and during the treatment, 38 measurements are obtained. We show a significant inverse correlation between ECPA and ANIi ($r = -0.339$; $p = 0.037$). No correlation was demonstrated between ANIm and ECPA ($r = -0.264$; $p = 0.109$).
Conclusion: A statistical correlation was obtained between the values of ANIi and ECPA.
Key words: Pain, geriatric, ANI,

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The longitudinal patterns of psychotropic drug prescriptions for subgroups of community-dwelling older people with dementia: electronic health records based retrospective study

Abstract Area: Cognition and dementia

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Introduction: This study aimed to identify longitudinal patterns of psychotropic drug prescriptions (PDPs) for different subgroups of community-dwelling older people with dementia.
Methods: We used electronic health records from general practitioners (GPs) in the Netherlands. Older people ($N = 1278$) who were firstly diagnosed with dementia between 2013 and 2015, were selected and categorized into four subgroups: still community-dwelling (CD group), ultimately deceased (DE group), ultimately admitted to nursing homes (NH group), and ultimately deregistered for unclear reasons (DeR group). Generalised estimating equations were used to fit two repeat measures logistic regression models to estimate the PDP patterns during a 5-year follow-up and in 0–3 months before institutionalisation or decease.
Results: During the 5-year follow-up, prescriptions of antipsychotics, and antidepressants increased in the NH group, CD group, and DE group, the prescription of hypnotics and sedatives increased only in the DE group, and the prescription of anti-dementia drugs only increased in the CD group. In 0–3 months before institutionalization, antipsychotics prescriptions increased substantially (OR = 2.12 [1.26–3.57]). Before decease, prescriptions of antipsychotics (OR = 1.73 [1.27–2.35]) and hypnotics and sedatives (OR = 2.11 [1.54–2.90]) increased, while anti-dementia drugs prescriptions decreased (OR = 0.42 [0.26–0.69]).
Conclusions: Prescriptions of antipsychotics and antidepressants increased during the trajectory of dementia, which might be due to the rise, or new onset of neuropsychiatric symptoms. However, GPs should be wary of inappropriate continuous prescriptions. The substantial increase in antipsychotic prescriptions might be a signal of upcoming institutionalization or decease. In response, GPs should closely monitor patients' health status and provide timely caregiver support.

P-183

Long-term effects of sacubitril/valsartan treatment on cognitive function and functional autonomy in elderly patients with chronic heart failure

Abstract Area: Cognition and dementia

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Heart failure (HF) is a major cause of morbidity and mortality with a prevalence of $\geq 10\%$ in patients over 70 s and is associated with clinical frailty, a complex geriatric condition related to negative outcomes. About 40% of patients with HF, present cognitive impairment and depressive symptoms that occur in 10% of asymptomatic outpatients and in 40–70% of hospitalized HF patients with NYHA Class III-IV. Sacubitril/Valsartan (sac-val) (LCZ696), neprilysin (NEP) and angiotensin receptor inhibitor, is used in the treatment of HF reduced ejection fraction (HFrEF). Studies conducted in animal models have shown that sacubitril/valsartan could promote the onset of Alzheimer's disease; conversely, there is no clear evidence of unfavorable effects exerted by sacubitril/valsartan on memory and learning in humans. The aim of the present study was to evaluate the effect of sacubitrl/valsartan on clinical conditions, quality of life, echocardiographic parameters and multidimensional geriatric assessment (MGA) in patients with SCCrFE and numerous comorbidities and limitations of basic skills. We enrolled 54 subjects (45 men and 9 women, mean age 76.2 ± 4.9 years) all afferent to the Geriatrics Division at the University Hospital of Catanzaro, suffering from HFrEF. The inclusion criteria were FE $< 35\%$; NYHA class II-III, treatment with ACE inhibitors or sartans for at least 4 weeks. Main exclusion criteria were stage IV K-DOQI identified by estimated glomerular filtration rate (e-GFR) < 30 ml/min/1.73m2, severe hepatic insufficiency (Child-Pugh class C), history of angioedema, potassium > 5.4 mmol/l; systolic blood pressure (SBP) < 100 mmHg. All patients underwent to clinical-instrumental and blood evaluation at baseline and 6 months until 12 months. The Minnesota Living with HF Questionnaire (MLHFQ) has been administered to assess quality of life, cognitive function was assessed with the Mini Mental State Examination (MMSE) and the Short Blessed Test (SBT), mood was assessed with the Geriatric Depression Scale (GDS). Functional skills were tested with the scales of instrumental activities of daily life (IADL) and activities of daily living (ADL), comorbidities were analysed with the Cumulative Illness Rating Scale—Severity Index (CIRS-SI). For paired data comparisons between baseline and follow-up were performed using Student's t test. Simple linear regressions were performed to evaluate the

parameters capable of influencing the MGA and variables reaching statistical significance, were inserted in a stepwise multivariate linear regression model. The mean dose reached of sac-val was 216.1 ± 91.4 without serious adverse events. At 12 months data showed a significant improvement in hemodynamic-clinical parameters: heart rate (HR) ($p < 0.0001$) and respiratory ($p < 0.0001$), improvement of the MLHFQ. Moreover statistically significant reductions were observed in SBP ($p < 0.0001$), diastolic blood pressure (DBP) ($p < 0.0001$), body mass index ($p < 0.0001$), HbA1c ($p < 0.0001$), high-sensitivity C-reactive protein ($p < 0.0001$), uric acid ($p < 0.0001$), NT-proBNP ($p < 0.0001$), and a significant increase in eGFR ($p < 0.0001$). Furthermore we observed significant decreases in left and right diameters and cavities, significant increases in EF ($p < 0.0001$), cardiac index (CI) ($p < 0.0001$) and pulmonary and systemic venous congestion (inferior vena cava $p < 0.0001$). Regarding MGA, there were significant changes in GDS ($p < 0.0001$), SBT ($p < 0.0001$), IADL ($p < 0.0001$), ADL ($p < 0.0001$), while there were no significant changes in CIRS-SI and MMSE which remained stable over time and showed no worsening in patients. The variations in HR and RR explain respectively 29% and 11.2% of the SBT variations. The study showed that in elderly patients with HFrEF, treatment with Sac-Val leads to a reduction in systemic and pulmonary congestion. These improvements conduct to a reduction in depressive symptoms as demonstrated by variations in GDS, improvement in basic skills as demonstrated by variations in IADL, ADL and SPPB. In our study, we did not find any evidence of the alleged harmful influence of sac-val on cognitive function in humans. However, further studies are needed to better define the effect of an optimal treatment of heart failure on cognitive decline.

P-184

Immersive reminiscence therapy in french nursing homes and long-term care units: first comparative results between generic and customized virtual reality scenarios

Abstract Area: Cognition and dementia

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Introduction: The scientific literature shows there is interest in reminiscence therapy and virtual reality (VR). This non-drug intervention is recommended by the World Health Organisation, and studies show it improves the recall of episodic memories and provides pleasure [1]. Our work aims to describe the impact of customized virtual reality on mood disorders in elderly people with cognitive disorders. Method: Multi-centric study (N = 4). 30 participants (≥ 65 years) are randomized in two groups, both with immersive VR conditions (customized versus generic). Material: GoProFusion camera and Oculus Rift 360° headset. In each group, anamnesis was explored and customized videos were shot. Cybersickness was evaluated during a pretest. VR sessions were administered twice a week for 6 weeks. Clinical assessments were done pre– and post-intervention (depression, anxiety, apathy + MMSE).
Results: Inclusion: 24/30 participants (mean age = 91.5; mean MMSE = 16.3). The Wilcoxon test was performed for statistical analysis. Anxiety decreased significantly in the customized group (n = 10), (NPI frequency*gravity $p = 0.027$). In the generic group (n = 14): depression (HDRS $p = 0.012$; NPI frequency*gravity $p = 0.007$), anxiety (NPI frequency $p = 0.041$) and apathy (IA $p = 0.046$) scores decreased significantly. These results will be interpreted at the end of the study after adjusting for variables (mood disorders were more severe in the control group). MMSE scores improved 1.5 point in the customized group, but there was no change in the generic group.
Key conclusions: VR is well tolerated by participants with cognitive disorder (no cybersickness effects). Surprisingly significant impacts on anxiety/depression were found in both groups. [1] Coelho, T., Marques, C., Moreira, D., Soares, M., Portugal, P., Marques, A., … & Fernandes, L. (2020). Promoting reminiscences with virtual reality headsets: A pilot study with people with dementia. International Journal of Environmental Research and Public Health, 17(24), 9301.

P-185

How to reduce psychological and behavioural disorders with non-drug programmes and carer education at home?

Abstract Area: Cognition and dementia

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Introduction: Today in Europe, Alzheimer's disease and other related disorders affect 9 780 678 people. The majority of caregivers are family members, and they can often be overloaded by the burden of caring for their loved one. Their burden is particularly influenced by the behavioural and psychological symptoms of dementia (BPSD) that appear in 90% of patients with dementia. The best way to support BPSD is to provide non-drug approaches combined with psychoeducation.
Method: PsyDoMa was a non-randomised monocentric phase II feasibility study (n = 20 caregivers/patients). Adults over 65 years old who are living with Alzheimer's disease and their carers were involved in this 7-month study. A psychologist visited the home three times per week to administer a customized non-drug intervention. Carers participated in a psychoeducation program (3 modules: information; emotion regulation and communication). A nurse coordinator and an occupational therapist were also part of the program. The French Mederic Alzheimer foundation carried out an external evaluation.
Results: The most common interventions were: cognitive stimulation, reminiscence therapy and relaxation exercises, depending on the therapeutic needs of the patient. While 4 couples over out of the 20 stopped the study, 16/20 psychoeducation programmes were completed and the caregiver's satisfaction rate was 9.6/10. Our main significant results are a decrease in delusion scores for 7/8 patients (12%, $p = 0.03$, McNemar) and a decrease in agitation frequency (decrease of 20% at the end of the study).
Key conclusions: The PsyDoMa project used an innovative approach to support patients and carers that was shown to be effective for BPSD. All the results will be presented at the EUGMS congress.

P-186

Association of depressive disorders and dementia with mortality among older people with hip fracture

Abstract Area: Cognition and dementia

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Introduction: Hip fracture (HF) is a significant cause of mortality among older people Almost half of patients sustaining HFs have dementia, and dementia is associated with depressive disorders (DDs). DDs and dementia are independent predictors of increased mortality risk after HF. OBJECTIVES: To investigate whether dementia with depressive disorders (DwD) affects the mortality risk at 12, 24, and 36 months after hip fracture (HF) among older people.
Methods: Patients with acute HF (n = 404) were included in this retrospective analysis of two randomized controlled trials performed in orthopedic and geriatric departments. Depressive symptoms were assessed using the Geriatric Depression Scale and cognitive function was assessed using the Mini-Mental State Examination. A geriatrician made final diagnoses using the Diagnostic and Statistical Manual of Mental Disorders criteria, with support from assessments and medical records. The 12-, 24- and 36-month mortality after HF was analyzed using logistic regression models.
Results: In analyses adjusted for age, sex, comorbidity, pre-fracture walking ability, and fracture type, patients with DwD had increased mortality risks at 12 [odds ratio (OR) 4.67, 95% confidence interval (CI) 1.75–12.51], 24 (OR 3.61, 95% CI 1.71–7.60), and 36 (OR 4.53, 95% CI 2.24–9.14) months. Similar results were obtained for patients with dementia, but not depressive disorders alone.
Conclusion: DwD is an risk factor for increased mortality at 12, 24, and 36 months after HF among older people. Routinely assessments after HF for cognitive- and depressive disorders could identify patients at risk for increased mortality, and enable early interventions.

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Cadasil a diagnostic challenge in the elderly

Abstract Area: Cognition and dementia

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Introduction: Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy. (CADASIL) is an infrequent pathology that causes cognitive impairment and cerebrovascular accidents. Method: Description of a clinical case attended in hospitalization in our center and follow-up in queries the period from June 2020 to the present.
Results: An 83-year-old male patient with a history of Paget's disease, grade 3 chronic kidney disease and benign prostatic hyperplasia followed for one year in Neurology due to mild cognitive impairment in cranial computerized axial tomography (CT) with infarcts lacunar in bilateral basal ganglia. In 2020 he was admitted for an epileptic seizure confirmed by electroencephalogram (sharp left fronto-temporal waves, with epileptiform characteristics) without relevant analytical alterations, by means of a cranial CT scan, acute intracranial pathology was ruled out and with microbiological tests did not show concomitant infection. Subsequent follow-up in consultations after treatment with levetiracetam, progressive worsening of functionality and greater memory disturbances. In 2021, a CADASIL study began as a result of a diagnosis in his daughter, requesting genetic test that confirmed pathogenic variant in NOTCH3 gene.
Conclusions: CADASIL is a rare hereditary autosomal dominant arteriopathy (prevalence of 0.8–5 per 100.000) that affects a small cerebral artery caused by an alteration of cysteine regulated by NOTCH3 gene. Clinically, it covers a wide spectrum: migraines with aura, cerebral episodes, ischemic disorders, cognitive impairment. The most widely used test is demonstration of pathogenic variant in NOTCH3 gene as was done in this patient, usually in the study of relatives.

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Well-being, multidisciplinary work and a skillful team: essential elements in successful treatment in severe challenging behavior in dementia

Abstract Area: Cognition and dementia

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Introduction: This study aimed to conceptualize successful treatment in persons with dementia and severe challenging behavior (DSCB) by experienced professionals for guiding evaluation of treatment in clinical practice and research.
Methods: This is a concept mapping study, an integrated mixed methods study that visualizes ideas from stakeholders in a concept map [1]. (Consulting) professionals, specialized in the treatment of people with DSCB, participated (October 2019-March 2020). The study consisted of three phases: 1) online brainstorm where participants completed this focus prompt: " I consider the treatment of people with severe challenging behavior in dementia successful if..", 2) individual sorting and rating of the collected statements followed by a data analysis using multidimensional scaling and hierarchical cluster analysis resulting in a concept map, and 3) interpretation of the results.
Results: 82 professionals participated. Three clusters were identified, each divided into sub-clusters: 1) Well-being, consisting of well-being of the person with dementia and, of other persons involved, 2) Multidisciplinary analysis and treatment, consisting of multidisciplinary analysis, process conditions, reducing psychotropic drugs and, person-centered treatment and, 3) Attitude and skills of persons involved, consisting of unambiguous, yet flexibly used behavioral approaches by the team, understanding the behavior, knowing how to respond to the behavior and, open attitude.
Conclusions: Successful treatment in people with DSCB addresses treatment outcomes, e.g., well-being of the person with dementia, but also treatment processes, e.g., multidisciplinary analysis and treatment. 1. Kane, M. and W. M. K. Trochim (2007). Concept mapping for planning and evaluation. Thousand Oaks, Sage Publications.

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Promoting activity, independence and stability in early dementia and mild cognitive impairment (MCI): the PrAISED Randomised Controlled Trial (RCT) of a new therapy intervention

Abstract Area: Cognition and dementia

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Introduction: People living with dementia and MCI progressively lose abilities, through increasing cognitive impairment, co-morbidities, inactivity and acute illnesses and injuries. Rehabilitation therapy might increase resilience and reduce falls.
Methods: We co-produced a therapy intervention, comprising strength, balance and dual-task exercises, functional activity training and community access promotion, delivered over 12 months and underpinned by a behaviour change strategy. We tested the intervention and procedures in a 3-arm, 60-participant feasibility trial, comparing a control group, and the PrAISED intervention delivered with full and reduced (3 months) supervision. We undertook a 5-site multi-centred RCT of the fully supervised intervention compared with control. Participants had a diagnosis of dementia or MCI, and Montreal Cognitive Assessment (MoCA) between 13 and 25. Primary outcome after 12 months was the Disability Assessment in Dementia (DAD), alongside other health status measures.
Results: In the feasibility trial, there was 25% attrition. The high intensity intervention group had a better DAD score (Cohen's d effect size = 0.4, 95% CI − 0.3, 1.2), Berg Balance Scale (d = 1.0, 95% CI 0.1, 1.8) and Timed Up and Go Test (d = − 0.8, 95% CI − 1.5, 0), compared with the control group. In the main trial, we recruited 365 participants, 42% female. Median age was 81 years (range 65–95), MoCA 20 (13–26), DAD 82 (5–100). The COVID-19 pandemic necessitated modifications and delays. Data collection will complete in June 2022.
Conclusions: We will present late-breaking main results of this large scale RCT, which will be available shortly before the EuGMS conference

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Co-designing the process and requirements to use a person centred outcome measure and decision support tool to enhance shared decision-making in dementia care

Abstract Area: Cognition and dementia

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Person-centered outcome measures (PCOMs) can promote better communication between patients and care professionals, enhance shared decision-making, and improve patient outcomes. However, research is needed to understand the process and requirements to use a PCOM to enhance shared decision-making with people living with dementia in their own homes and with family carers. Our aim was to co-design the process and requirements to use the Integrated Palliative Outcome Scale for Dementia (IPOS-Dem) and decision resource tools to enhance shared decision-making with people living withdementia at home, family carers and care professionals. Three co-design workshops were held with family carers and health and social care professionals. The number of participants in each workshop ranged from 8–38, including nurses, palliative care nurses and consultants, and dementia specialists. Findings from our systematic review on how PCOMs enhance shared decision-making in dementia care and patient and public involvement consultation informed the topic areas for the initial workshop. Rapid thematic analysis of facilitator notes between workshops informed the subsequent workshops. Reflexive thematic analysis was conducted after the final workshop. A workflow diagram was developed after the first two workshops to illustrate how the IPOS-Dem and clinical decision resources would enhance shared decision-making. The key process for using the IPOS-Dem and clinical decision resources to enhance shared decision making involves people with dementia and their family carer completing an assessment, discussing symptoms and concerns identified with a practitioner, discussing options for care and treatment, and agreeing on care goals, guided by clinicaldecision resources. Requirements for family carers to use the IPOS-Dem and clinical decision resources include short information and coaching sessions on the IPOS-Dem and clinical decision resources. Using a PCOM and decision support tool to enhance shared decision-making is novel and could improve care for people with dementia at home. The next step is to conduct user testing to understand the experience of using the PCOM and decision resource tool. We will then identify additional requirements to use the intervention and strengthen it.

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Appropriateness of psychotropic medication prescription in patients with dementia on a medical gerontology ward

Abstract Area: Cognition and dementia

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BackgroundThe HSE provide guidelines on appropriate prescribing of psychotropic medication for people with dementia[1]. This audit aims to assess and compare quality of practice on a medical gerontology ward against guidelines, using the INAD-2 audit tool.
Methods: A retrospective audit was completed. All inpatients on a 36-bed medical gerontology ward were included. Data regarding dementia diagnosis and prescribed psychotropic medication was obtained through medical record and drug kardex review.
Results: Of 36 inpatients, 33.0%(12/36) had dementia, the majority (83.3%, n = 10) diagnosed pre-admission. Mean age of was 83 years (69–95) and mean length of hospital stay 103 days (24–232). 16.6% (n = 2) were admitted due to dementia progression. 16.6%(n = 2) had documented responsive behaviours. One-to-one supervision was provided in 41.6%(n = 5). Pre-admission, 83.3%(n = 10) had a psychotropic medication prescribed, including acetylcholinesterase inhibitors (58.3%, n = 7), antidepressants (33.3%, n = 3), antipsychotics (25.0%, n = 3), benzodiazepines (16.7%, n = 2) and night sedation (8.3%, n = 1). During admission, 66.6%(n = 8) had new psychotropic medication prescription, including acetylcholinesterase

inhibitors (25%, n = 3), antipsychotics (25%, n = 3), antidepressants (16.7%, n = 2), and anticonvulsants (16.7%, n = 2). Pre-admission antipsychotics were tapered in 66.7%(n = 2) and all pre-admission benzodiazepines discontinued. Indication for new psychotropic medication was documented in all cases. Effectiveness/side effects were documented in 20%(n = 2) of acetylcholinesterase inhibitors and in 16.7%(n = 1) of antipsychotics.
Conclusion: Majority of inpatients in this group were prescribed psychotropic medications, although non-pharmacological interventions were trialled and benzodiazepines deprescribed. Indications for medication introduction were well-documented but documentation of responsive behaviours and review of medication effectiveness/side effects was limited. Education on appropriate non-pharmacological management, psychotropic prescribing and deprescribing for inpatients with dementia will be provided before re-audit.

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The Trazodone GeroCovid Observational study

Abstract Area: Cognition and dementia

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Introduction: In clinical practice Trazodone, an antidepressant drug, is also used for managing Behavioral and Psychological Symptoms of Dementia (BPSD) due to its hypnotic and anxiolytic effects. We aimed to investigate the clinical characteristics of older people treated with Trazodone compared with those treated with other antidepressants in different care settings.
Methods: This is a cross-sectional study on ≥ 60 year-old persons at risk of or affected with Covid-19, participating to the GeroCovid Observational study. The sample included residents of long-term care facilities (LTCFs), geriatric and dementia-specific outpatients, and inpatients of geriatric acute wards. Groups on the base of assuming trazodone or other antidepressants were built. To characterize trazodone users, descriptive, logistic regression, and cluster analyses were performed.
Results: Of the 3396 included participants, 10.8% used trazodone and 8.5% other antidepressants. Persons on trazodone were older (84.3 ± 6.6 vs 82.5 ± 7.2 years), more affected by dementia (67% vs 49%) and BPSD (35% vs 14%), but less frequently diagnosed with depression (28% vs 54%) than their counterparts. The cluster analysis on trazodone users identified 3 main clusters: cluster 1and 2, composed mainly of disable female home-patients or institutionalized, with multimorbidity (73%), dementia (82%), BPSD (62%), and depression (27%); cluster 3, composed mainly of men, with better physical and clinical conditions, lower prevalence of dementia, BPSD and depression.
Discussion: Trazodone is largely used in frail, functionally dependent and comorbid LTCF residents and outpatients. In the clinical practice, this drug is frequently administered with uncanonical indications such as BPSD, dementia with or without depression.

P-193

Evaluating different models of dementia palliative care service in Ireland and the UK using the RE-AIM framework

Abstract Area: Cognition and dementia

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Introduction: Dementia is incurable, requiring comprehensive, integrated, patient-centred care that incorporates a palliative care (PC) approach. This study aimed to evaluate exemplar community-based dementia PC services, as identified by key stakeholders, in Ireland, Northern Ireland, England and Wales.
Methods: Four services were evaluated using service activity data and semi-structured interviews/focus groups with service providers (n = 29). Data was synthesised under RE-AIM [Reach-Effectiveness-Adoption-Implementation-Maintenance] headings.
Results: Service reach varied significantly in terms of caseload (3–154 active cases) and demand ('under-used' to 'beyond-capacity'). Most services accepted self-referrals; all identified a need for earlier referrals. Co-location with referring services, flexibility, support of dyadic participation, and awareness-raising supported reach. All services reported their activities were effective in providing continuity of (person-centred) care, facilitating advanced care planning, improving service access, and providing 'care-for-the-carer', thus improving quality-of-life, comfort, and independence. Providing complimentary therapies, 24/7 phone support, and bereavement support were perceived effect mediators. All service staff enthusiastically adopted the service model/activities, stretching normal working hours and patterns; outside staff adoption was variable, facilitated by shared governance, training, and incentive programmes. Implementation at patient-level was perceived to be facilitated by a dyadic approach, MDT involvement, open communication, relationship-forming, dedicated staff, and staff support/training. At service-level, initial funding/evolution was ad-hoc, typically 'driven' by a single consultant/nurse, with heavy reliance on volunteers. All services were maintained after initial funding and some increased their activities/reach.
Key conclusions: There is no "ideal model" of community-based Dementia Palliative Care but the learning from these exemplar services will inform a new service model for Ireland (https://pallcare4dementia.com/).

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Use of FDG-PET brain imaging in the diagnosis and management of dementia in a University Hospital

Abstract Area: Cognition and dementia

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Introduction: Subtype diagnosis in dementia aids in prognostication and mangement. Amyloid-beta peptide is intrinsic to the pathogenesis of Alzheimer's disease (AD), forming neuritic plaques which can be imaged in vivo on positron emission tomography (PET) scans. NICE recommends PET imaging if dementia subtype is unclear and AD is suspected. We sought to establish referral patterns for PET brain scans for patients aged 60 and over in a university hospital and to determine whether this imaging modality contributed to a change in diagnosis or treatment.
Methods: Requests for FDG-PET CT brain from 2019–2022 were retrospectively reviewed. Patient demographics, indication for scan, source of referral and whether imaging results led to a change in diagnosis or treatment was extracted from clinical notes and patient information software.
Results: A total of 32 requests were reviewed. We analysed the 25 who were aged over 60. This subgroup had a mean age of 70 (9 females; 36%). All 25 were appropriately referred to assess for dementia subtype. A revision in diagnosis based on imaging was made in 17 (68%) cases. In 9 (30%) cases, results prompted change in dementia-specific pharmacological treatment, including donepezil. A further 6 (24%) had pharmacological treatment for non-cognitive symptoms of dementia adjusted, such as anti-depressants. The majority of referrals had come from neurologists ($n = 15$; 60%) rather than geriatricians. The final diagnosis was AD in 12 (48%) cases.
Conclusion: PET scans are a useful functional imaging modality which can help to differentiate dementia subtypes and influence management.

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Comprehensive geriatric assessment parameters and falls risk in older adults with mild-cognitive impairment

Abstract Area: Cognition and dementia

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Introduction: There is limited data about risk factors for falls in older adults living with Mild Cognitive Impairment (MCI). Therefore, this study was aimed to investigate these risk factors by using Comprehensive geriatric assessment (CGA).
Methods: 1596 patients who had undergone CGA were evaluated, and 187 older patients with MCI were included in the study. The patients' comorbid diseases, polypharmacy status, anticholinergic drug burden, orthostatic hypotension, urinary incontinence, and nocturia were assessed. Mini-Nutritional Assessment, Epworth Sleepiness Scale score, Insomnia Severity Index, SARC-F, Geriatric Depression Scale-15, the Falls Efficacy Scale-International, handgrip muscle strength test, and Insomnia Severity Index were obtained from all patients. Fall risk was evaluated via Performance-Oriented Mobility Assessment and Timed up and Go test.
Results: Of those included (age 77.5 ± 7.6; 73.8% female), 29.4% had falls risk. In multivariable analysis adjusted for age and gender, the association between fall risk and worsened nutritional status [odds ratio (OR) 2.8, 95% confidence interval (CI) 1.2–6.6], sarcopenia (OR 3.0, 95% CI 2.4–.5.8), urinary incontinence (OR 2.6, 95% CI 1.2–6.2), fear of falling (OR 1.8, 95% CI 1.2–2.8), and excessive daytime sleepiness (OR 2.5, 95% CI 1.8–7.3) persisted ($p < 0.05$). The other CGA parameters were not different between MCI patients with fall risk and no fall risk.
Conclusions: There is a significant relationship between fall risk and excessive daytime sleepiness, malnutrition, sarcopenia, urinary incontinence, and fear of falling. Therefore, when examining an older MCI patient with fall risk, these factors should be evaluated and managed. Thus, it will be possible to manage falls more effectively in this populatio

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The glymphatic system and its potential interest in geriatrics

Abstract Area: Cognition and dementia

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Introduction: The glymphatic circulation has been newly proposed and is receiving increasing evidence. The CSF circulating in the subarachnoid space infiltrates the periarterial spaces, enters the parenchyma and creates a flow that carries interstitial wastes away from the brain. The entry and exit are facilitated by AQP4 water channels present at astrocytes' terminal feet. Evidence shows that this system functions mostly during sleep. The interest in geriatrics is based on the hypothesis that it manifests itself in neurodegenerative pathologies. A failure to eliminate certain proteins such as beta amyloid could be linked to neurodegeneration. The possible link between sleep and glymphatics reinforces the interest in geriatrics given the prevalence of sleep disorders in this population.
Methods: Glymphatics exploration can be performed using state-of-the-art techniques. Flow MRI can evaluate neurofluids dynamics and infusion test can characterise the resistance to CSF resorption.
Results: Using these techniques would allow the glymphatic evaluation. Flow MRI could indirectly reveal its dysfunction by assessing the dynamics alteration. This technique could establish a differential diagnosis between normal pressure hydrocephalus and Alzheimer's. Infusion test is already the gold standard of investigation for shunting in hydrocephalus.
Conclusions: Glymphatics discovery is a revolution in circulation of proteins responsible for neurodegeneration. New investigative techniques emerge and it's important to use them when there is a doubt in a cognitively impaired patient who falls and/or has gait disorders. These new discoveries bring the hope of better diagnosing, treating and understanding in order to break through the shell of these pathophysiological conditions.

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Is variability more serious than the disease itself in cognitive decline?

Abstract Area: Cognition and dementia

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Introduction: Major neurocognitive disorders (NCD) represent a significant burden to society. The mechanisms involved in their development are not always well understood. Emerging evidence show that variability in certain physiological parameters may play a role in neurological disorders. Switching from a normal to an abnormal state and back again could be a cause of neurodegeneration. We focused on paroxysmal atrial fibrillation (AF), using the number of daily arrhythmia episodes as a marker of variability. The objectives were to determine whether a large number of daily arrhythmia episodes favoured cognitive decline and major NCD.
Methods: 93 patients with NCD aged 75 years and older underwent a battery of tests and examinations including comprehensive geriatric assessment, neuropsychological tests, MRI and 24-h ECG. We first compared the results of patients with and without AF. Then we focused on patients with AF and made comparisons according to their cognitive impairment and the number of daily arrhythmic episodes.
Results: Results showed no cognitive difference between AF patients and non-AF patients. However, among AF patients, those with more arrhythmic episodes were more likely to have cognitive impairment and major NCD.
Conclusions: Overall, patients with paroxysmal AF do not show greater cognitive impairment than controls. However, among AF patients, those with a large number of arrhythmic episodes are more likely to decline cognitively and to develop NCD. These results support the theory that variability, beyond the mere presence of the disease, has a negative impact on cognition.

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Age-related hearing loss in people with and without Alzheimer's disease

Abstract Area: Cognition and dementia

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Introduction: Age-related hearing loss (ARHL) is associated with risk of cognitive impairment. Less is known on whether ARHL is a risk factor for Alzheimer's disease (AD) and is the diagnosis of ARHL affected by AD diagnosis. We studied the incidence of ARHL in relation to AD diagnosis among persons with AD and compared it with that in people without AD.
Methods: The study included 42,934 community-dwelling persons who received clinically verified AD diagnosis in 2008–2011 in Finland and a 1:1 matched comparison cohort. AD diagnoses were identified from the Special Reimbursement Register. The diagnosis of ARHL was extracted from Care Register for Healthcare and calculated per 100 person-years (PY) for each six-month period from ten years before to five years after AD diagnosis.
Results: The incidence of ARHL during the entire follow-up were 1.25 and 1.30/100 PY in the AD and non-AD group, respectively (hazard ratio, 95% CI 0.96, 0.92–0.99). There was a larger difference in rates after AD diagnosis (0.99 and 1.53/100 PY, hazard ratio, 95% CI 0.63, 0.59–0.67). The incidence increased similarly in both groups before the AD diagnosis. In the AD group the incidence rate of ARHL peaked at the time of AD diagnosis, but steeply declined already one year after the AD diagnosis while in the control group it remained stable.**Key conclusions:** The declining incidence of diagnosed ARHL soon after AD diagnosis implicates that AD diagnosis leads to a neglected awareness for sensory dysfunction. It might also indicate difficulties in differentiating cognitive decline and hearing loss.

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Chronic-patient-with-dementia care strategy: activity and patient's profile

Abstract Area: Cognition and dementia

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Introduction: Population aging is inevitably associated with the need for strategies for addressing chronic processes. Although Primary Care is the main responsible for organizing the care of these patients, in "Hospital Universitario de Navarra" we use the "Chronic Patient Care Strategy" for supporting them through telematics interconsultations. Within this strategy, different specialists are in charge of each topic: dementia, heart failure, COPD, diabetes… In the case of dementia, it's carried out fundamentally from the geriatric service.
Objectives: To describe the activity of telematic interconsultations in "Dementia Strategy" attended by Neurologists and Geriatrics and evaluate its effectiveness. Analyze the profile of patients attended.
Method: Observational analysis of consecutive interconsultations between January and December 2021. Variables analyzed: Sociodemographic characteristics, type of neurocognitive disorder and global impairment scale (GDS), recent admission, main caregiver, and recent drug modification. Deprescription and prescription of psychoactive drugs or other drugs, non-pharmacological measures.
Results: N = 440 patients, 280 women (63.6%), mean age 86.7 (SD 6.4). 83% live at home. Main caregiver: children (29.8%). The most frequent type of dementia was Alzheimer's disease (54.2%) and the GDS 6 (31.2%). 315 patients showed behavioral alterations. Recent admission (24.5%) and drug-modification (37.1%). Deprescription of psychoactive drugs (42.3%)/other drugs (13.9%), new prescriptions (22.5%), non-pharmacological-measures (57.5%), contact with specialized-nurse (53.4%), dementia consultation (21.1%), hospital-admission (11.4%), complementary tests (2.5%), contact with Social Work (8.7%).
Conclusions: Behavior problem was the main reason for interconsultation. Deprescription and non-pharmacological measures were the main therapeutic plans. The continuity of care is essential, becoming especially important the figure of nursing for care recommendations.

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Psychotropic drug treatment for agitated behaviour in dementia: what if the guideline prescribing recommendations are not sufficient? A qualitative study

Abstract Area: Cognition and dementia

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Background. Agitation is a common type of challenging behaviour in dementia with a negative influence on patient's quality of life and a high caregiver burden. Nonpharmacological treatment is preferred and current guidelines recommend restrictive use of psychotropic drugs. However, guideline recommendations do not always suffice. Objective. To explore how physicians decide on psychotropic drug treatment for agitated behaviour in dementia when the guideline prescribing recommendations are not sufficient.
Methods: We conducted five online focus groups with a total of 22 elderly care physicians, five geriatricians and four old-age psychiatrists, in The Netherlands. The focus groups were analysed using inductive thematic analysis.
Results: We identified five main themes. These themes reflect physicians' considerations when deciding on psychotropic drug treatment outside the guideline prescribing recommendations for agitation in dementia: [1]'reanalysis of problem and cause', [2]'hypothesis of underlying cause and treatment goal', [3]'considerations regarding drug choice', [4]'trial and error', and[5]'last resort: sedation'. Transcending these themes, in each of the focus groups physicians stated that there is 'not one size that fits all'.
Conclusion: We provided an extensive overview of physicians' considerations when deciding on psychotropic drug treatment outside the guideline prescribing recommendations for agitation in dementia. Hypotheses of underlying causes of agitation and treatment goals can guide psychotropic drug treatment. By using less strict diagnostic criteria for underlying psychiatric disorders, guidelines for these psychiatric disorders may apply.

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Rehabilitation of facial emotion recognition in Alzheimer's disease and study of the consequences on behavioural disorders and family caregiver's burden: a long-term follow-up study

Abstract Area: Cognition and dementia

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Introduction: Facial emotion recognition (FER) is impaired in Alzheimer's disease (AD). This impairment leads to behavioral disorders and family caregiver's burden. A preliminary study, Eye-TAR (MA), showed positive impacts of a FER rehabilitation program, with a decrease of behavioral disorders and caregiver's burden. These positive impacts were maintained at 1-month post-intervention. Our current study, Eye-TAR (MA) Follow-up, explore the long-term impact of the FER rehabilitation program by assessing at 2 years.
Methods: All participants from the preliminary study were recalled (who received a FER rehabilitation program named Training of Affect Recognition (TAR)(n = 4), or a cognitive stimulation program (n = 4)). FER was evaluated by Ekman faces library. The caregivers completed the Neuropsychiatric Inventory (NPI) for behavioral disorders and the Zarit burden interview for the level of the burden.
Results: TAR group was fully included (n = 4). Cognitive stimulation group was partially included: only 1 patient and 3 caregivers could be evaluated (due to 1 death, and 2 not assessable state). All patients showed a deterioration in FER performance with an increase in NPI, whatever the group. Only cognitive stimulation group showed a decrease in Zarit. However, all participants of the TAR group continued to live in their homes, while all other participants were institutionalized due to behavioral disorders.
Conclusions: Our results show that FER can be improved in AD. The beneficial effects observed on behavior at 1 month and beyond are promising but need to be valid with a larger sample.
Keywords: Facial Emotion Recognition, Alzheimer's Disease, Rehabilitation

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Engaging with caregivers in developing educational material for people living with dementia

Abstract Area: Cognition and dementia

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Introduction: There are 400 thousand people living with dementia (PLWD) in Egypt, and this number is expected to rise. Most of the care for PLWD is delivered by family members. Providing information on managing behavioural challenges in dementia is crucial to maintaining the well-being of patients and families. The objective of this qualitative study is to seek feedback on a video training program from a group of caregivers.
Methods: We produced an 18-min simulation video of six common scenarios of challenging interactions between PLWD and their carers (anger, low mood, wandering, repetitive behaviour, refusing support with activities of daily living, and sleep disturbance). This video was shown to 12 carers, followed by semi -structured interviews; two caregivers in person, three over the phone, and seven virtual. Interviews were transcribed and analysed using a thematic framework analysis.
Results: Feedback included positive comments and suggestions to enhance the quality of the video. Respondents commented that the video was effective in highlighting important qualities of carers such as patience, keeping calm and in control, listening with interest, accepting change in the personality of PLWD, and being mindful to signs of low mood such as poor sleep. It was suggested that separate videos should be developed to represent various stages of dementia, and to deliver the advice and recommendations using friendlier terms. The emotional needs of carers were not adequately represented in the video.
Conclusions: An educational and support video can be a useful resource addressing common challenges affecting PLWD and their carers.

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Vascular cognitive impairment: when memory loss is not the biggest challenge

Abstract Area: Cognition and dementia

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Introduction: People with cognitive impairment and their informal caregivers sometimes experience unmet care needs. Earlier studies have predominantly focused on people with Alzheimer's disease. People with vascular cognitive impairment (VCI) and their caregivers might experience distinct needs, due to differences in symptomatology and disease course. Therefore, we set out to identify the care experiences, needs and wishes of people with VCI and their informal caregivers.
Methods: We conducted a qualitative interview study. People with a VCI diagnosis and their informal caregivers were recruited through the outpatient geriatric memory clinic of the Amsterdam UMC. We purposefully sampled on important characteristics, inclusion ended when saturation was reached. Eighteen interviews (people with VCI n = 9, caregivers n = 9) were audiotaped and transcribed verbatim. We analysed the data using inductive thematic analysis.
Results: We identified five themes in the reported experiences, needs and wishes. These themes were[1]Image of VCI & information need—with subtheme (1A) Dementia: a memory problem?, [2]Being respected as a person, [3]Differing concerns about the future, [4]The roles of the caregiver and[5]Ideal professional healthcare.
Key conclusions: Care needs of people with VCI and their informal caregivers partially overlapped with care needs reported in studies regarding other causes of cognitive impairment. However, care needs were influenced by the relative lack of knowledge about VCI as well as symptoms characteristic to VCI. Tailored information, consideration of neuropsychiatric symptoms and resolute healthcare professionals could improve care and guidance for people with VCI as well as their caregivers.

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Translation, cross-cultural adaptation and clinical validation of rapid cognitive screening test in Turkish to screen most common types of dementia and mild cognitive impairment

Abstract Area: Cognition and dementia

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Objective: The Rapid Cognitive Screen (RCS) is a brief, easy to administer score screening tool for cognitive dysfunction which can be very useful for cognitive screening in busy clinical settings. We aimed to cross-culturally adaptate and validate RCS in Turkish.
Method: The translation and cultural adaptation process was carried out in 5 stages; (i) two initial translations from English to Turkish, (ii) combination of these 2 translations, (iii) backward translations, (iv) an expert committee that consisted of 3 geriatricians and two neurologists, one Turkish lecturer reviewed to compare backward translations with the English test and (v) pretest. The inter-rater reliability and test-retest reliability performed. To diagnose each type of dementia, gold standard diagnostic criteria specifically defined for each dementia were used. Performances of RCS test for dementia and mild cognitive impairment (MCI) were analyzed by using sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV). The receiver operating characteristic (ROC) analysis was performed to determine the area under the curve (AUC) with 95% confidence intervals (CI).
Results: The Turkish RCS was translated with minor difficulties. A total of 172 community-dwelling older participants from geriatric and neurology clinics, aged 60 and older (65.7% females) were included. The mean age was 75.4 ± 8.5 years. Among participants 37.2% were considered as cognitively normal, 25.6% with MCI and 37.2% with dementia. The sensitivity, specificity, PPV, and NPV of RCS (cut-off point of 4) for dementia were 89.06%, 92.56%, 87.7%, and 93.5%, respectively. The sensitivity, specificity, PPV and NPV of RCS (cut-off point of 8) for MCI were 77.27%, 51.56%, 52.3%, and 76.7%, respectively. The RCS predicted dementia (AUC = 0.972 95% CI: 0.935 0.991) and MCI (AUC = 0.720%, 95% CI: 0.626–0.802).
Conclusion: The cross-cultural adaptation was achieved successfully. The Turkish RCS was found to be a reliable and valid test for screening of cognitive dysfunction.

P-206

Prevalence of oral anticoagulants and cardiovascular drugs use among persons with and without Parkinson's disease

Abstract Area: Cognition and dementia

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Introduction: We investigated prevalence of oral anticoagulants (OACs) and Cardiovascular drugs (CVDs) use among persons with and without Parkinson's disease (PD) in relation to PD diagnosis.
Methods: Register-based Finnish Parkinson's disease (FINPARK) cohort includes 17 689 Finnish people with PD diagnosed between 2001–2015. Prevalence of OACs and CVDs use was calculated every six months with six-month evaluation period, from five years before to five years after clinically verified diagnosis and compared to the matched cohort without PD.
Results: During the follow-up, the prevalence of CVDs use increased from 51 to 65% in persons with PD, and from 48 to 68% among those without PD, and prevalence of OACs use from 8 to 18% among those with PD and from 7 to 18% among persons without PD. Beta-blockers were the most commonly used CVDs, and warfarin the most commonly used OAC. Prevalence of both medications increased during the follow-up time in persons without PD. Among those with PD, prevalence of OACs increased during the follow-up, while the prevalence of CVDs use plateaued at the time of PD diagnosis leading to lower prevalence of CVDs at the end of the follow-up.

Conclusions: Decline in CVDs among persons with PD may be due to autonomic nerve system dysfunction causing orthostatic hypotension. Persons with PD had slightly higher prevalence of OACs use compared to persons without PD throughout the study period, this might be concerning as PD increases the risk of falling.

P-207

An overview of critical care admissions of people with dementia in England: Who is admitted and what happens afterwards?

Abstract Area: Cognition and dementia

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Introduction: Critical care admissions (CCAs) of people with dementia, especially those nearing end-of-life may not be beneficial, and we do not know how common these admissions are. We aimed to describe people with dementia who had a CCA and trends using novel data linkage.
Methods: Retrospective cohort study using mental healthcare data of people with dementia in South London and Maudsley Hospital, UK (2007–2019), linked with hospital data to identify those who had $\geq$ 1 CCAs. We extracted sociodemographic, illness and admission-related data. Outcomes were number of CCAs per year, length of stay, place of death, one-year survival rate after CCA. We described variables (median (Q1-Q3) & frequencies (%)) and examined temporal trends (adjusted multivariable regression modelling).
Results: Of 19,787 people with dementia, 726(3.7%) had $\geq$ 1 CCAs. Of these, most were White (n = 485,66.8%), women (n = 374,51.6%), and median age was 81 (75–86) years on the CCA; 44.9%(n = 326) had moderate cognitive problems; 52.3% (n = 380) had $\geq$ 5 comorbidities. 175 (24.1%) died in the hospital, median 10 (3–19) days after CCA. 551 (75.9%) were discharged alive (median 10 (4–21) days after CCA). Of the 551 discharged alive, 345 survived a year after the CCA (62.6% of those discharged alive, 47.5% of those receiving CCA. Over one third (34.9%. n = 359) of CCAs occurred in the last year of life. No temporal trend was detected in number of CCAs.
Conclusions: Few people with dementia had a CCA. Of those who did, 47.5% survived for one year. Access to detailed critical care data would improve understanding of care quality and service design.

P-208

Ideal cardiovascular health and transitions across cognitive states in older adults

Abstract Area: Cognition and dementia

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Introduction: American Heart Association (AHA) introduced Life's Simple 7 (LS7) to define and promote ideal cardiovascular health (CVH) [1]. We aimed to investigate the association of LS7 with progression from normal cognition to pathological aging (cognitive impairment, no dementia (CIND) and dementia) in older adults.
Methods: This population-based cohort study included 2622 dementia-free participants from the Swedish National Study on Aging and Care in Kungsholmen, regularly examined over 15 years. The LS7 factors were defined following AHA's recommendations and scored as 0–2. The individual scores were summed up and categorized into poor (0–6), intermediate (7–8), and ideal CVH (9–14). Dementia and CIND were diagnosed following international criteria. We analysed LS7 in relation to cognitive states with multi-state models in two separate age groups the younger old (< 78 years) and the oldest old ($\geq$ 78 years).
Results: Compared with poor CVH, intermediate (multivariable-adjusted hazard ratio: 0.75; 95% CI: 0.57–1.00) and ideal (HR:0.75; 95% CI: 0.57–1.00) CVH were related to lower CIND risk in the younger old. Ideal CVH (0.25 (0.10–0.62)) was also related to lower dementia risk in the younger old. LS7-defined CVH was not related with transitions across cognitive states in the oldest old.
Conclusions: Maintaining LS7-defined ideal CVH seems relevant in the younger old ages, but not in the oldest old when considering the potential protective effect against cognitive decline and dementia.
Reference:
1. Lloyd-Jones DM, Hong Y, Labarthe D, et al. Defining and setting national goals for cardiovascular health promotion and disease reduction: the American Heart Association's strategic Impact Goal through 2020 and beyond. Circulation. 2010 Feb2;121(4):586–613

P-209

The effects of COVID-19 lockdown on neuropsychiatric symptoms in patients with dementia or mild cognitive impairment: a systematic review and meta-analysis

Abstract Area: Cognition and dementia

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Introduction: The COVID-19 pandemic may have a disproportionate impact on people with dementia/mild cognitive impairment (MCI) due to isolation and loss of services. The aim of this systematic review was to investigate the effects of the COVID-19 lockdown on neuropsychiatric symptoms (NPS) in people living with dementia/MCI. Method: Two authors searched major electronic databases from inception to June 2021 for observational studies investigating COVID-19 and NPS in people with dementia/MCI. Summary estimates of mean differences in NPS scores pre- versus post-COVID-19 were calculated using a random-effects model, weighting cases using inverse variance. Study quality and risk of bias were assessed by the Newcastle-Ottawa Scale.

Results: From 2730 citations, 21 studies including 7139 patients (60.0% female, mean age 75.6 ± 7.9 years, 4.0% MCI) with dementia were evaluated in the review. Five studies found no changes in NPS, but in all other studies, an increase in at least one NPS or the pre-pandemic Neuropsychiatric Inventory (NPI) score was found. The most common aggravated NPS were depression, anxiety, agitation, irritability, and apathy during lockdown, but 66.7% of the studies had a high bias. Seven studies including 420 patients (22.1% MCI) yielded enough data to be included in the meta-analysis. The mean follow-up time was 5.9 ± 1.5 weeks. The pooled increase in NPI score before compared to during COVID-19 was 3.85 (95% CI: 0.43–7.27; P = 0.03; I2 = 82.4%). All studies had high risk of bias. These results were characterized by high heterogeneity, but there was no presence of publication bias.
Key conclusions: There is an increase in the worsening of NPS in people living with dementia/MCI during lockdown in the COVID pandemic. Future comparative studies are needed to elucidate whether a similar deterioration might occur in people without dementia/MCI.

P-210

Recent hospitalization and risk of antidepressant initiation in people with Parkinson's disease

Abstract Area: Cognition and dementia

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Introduction: People with Parkinson's disease (PD) are more likely to be hospitalized and initiate antidepressant use compared to people without PD, but it is not known if hospitalization increases the risk of antidepressant initiation. We studied whether recent hospitalization was associated with antidepressant initiation in people with PD.
Methods: The study based on the nationwide register-based FINPARK cohort which includes community-dwelling Finnish residents diagnosed with PD between years 1996 and 2015 (N = 22,189). A nested case–control study was conducted, and initiation of antidepressant use after PD diagnosis was identified from prescription register with 1-year washout period. A matched non-initiator was identified for each initiator according to age, sex, and time since PD diagnosis (N = 5,492 matched case–control pairs). Information on hospitalization within the 14 day-period preceding the antidepressant initiation was collected from the Care Register for Health Care.
Results: The mean age at antidepressant initiation was 73.5 years with median time since PD diagnosis 2.9 years. Selective serotonin reuptake inhibitors (48.1%) and mirtazapine (35.7%) were the most commonly initiated antidepressants. Initiators were more likely to have recent hospitalization than non-initiators (48.3% and 14.3%, respectively) and have longer hospitalizations. PD was the most common main discharge diagnosis among both initiators (54.6%) and non-initiators (28.8%). Discharge diagnoses of mental and behavioral disorders and dementia were more common among initiators.
Conclusions: Recent hospitalization was associated with antidepressant initiation probably due to non-motor symptoms of PD such as depression. It seems that motor and non-motor symptoms of PD are the leading cause for hospitalization.

P-211

Does hospitalisation increase the risk of antipsychotic initiation in persons with Parkinson's disease?

Abstract Area: Cognition and dementia

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Introduction: Antipsychotic use is common in persons with Parkinson's disease (PD), although it can lead to the worsening of symptoms. Clozapine and quetiapine are the only antipsychotics recommended in PD treatment guidelines. Information on factors associated with antipsychotic initiation is needed. Hospitalizations are more common in people with PD and may be associated with antipsychotic initiation. We investigated whether recent hospitalization is associated with antipsychotic initiation in persons with PD, and whether discharge diagnoses differ between initiators and noninitiators.
Methods: Nested case–control study in the nationwide register-based Finnish Study on Parkinson's disease (FINPARK), including 22,189 community dwellers with clinically verified PD diagnosed during 1996–2015. The cases were 5,088 persons who initiated antipsychotics after PD diagnosis, identified with one-year washout period. The controls were 5,088 age-, sex-, and time from PD diagnosis-matched noninitiators. Recent hospitalization was defined as discharge in the two-week period preceding the matching date (antipsychotic initiation). Associations were investigated with conditional logistic regression.
Results: Quetiapine was the most commonly initiated antipsychotic (72% of initiators), followed by risperidone (15%). Clozapine was rarely used (1.1%). Recent hospitalization was strongly associated with antipsychotic initiation (61.2% of initiators and 14.9% of controls, OR 9.42, 95% CI 8.33–10.65). PD was the most common discharge diagnosis category in cases and controls (51.2% and 33.0% of hospitalized cases and controls, respectively), followed by mental and behavioural disorders (9.3%) and dementia (9.0%) among initiators.
Conclusions: Our findings suggest that in persons with PD, antipsychotics are commonly initiated during or after hospitalization.

P-212

Predicting Alzheimer's disease from cognitive footprints in mid and late life: how much can register data and machine learning help

Abstract Area: Cognition and dementia

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Background We evaluated whether machine learning models fitted with mid- and late-life risk factor data from administrative registers can predict Alzheimer's disease (AD) with sufficient accuracy.

Methods: The Finnish MEDALZ (Medication use and Alzheimer's disease) study is a case–control study nested within population of Finland in 2005–2011. Altogether 56,751 cases with incident AD (≥ 65 years old at diagnosis and born after 1922) and their 1:1 age-, sex-, and region-matched controls were included (63.5% women; mean age 79.1 years). Logistic regression models were used to examine the association between AD and a range of established and exploratory risk factors at different age periods (45–54, 55–64, 65+). Predictive accuracies of conventional logistic regressions were compared with six machine learning models (Naïve bayes, Decision tree, Random Forest, MLP, XGBoost, and LightGBM).
Results: Of risk factors diagnosed at age 45–54 years, only diabetes associated with AD (adjusted OR, 95% CI 1.25, 1.11–1.41). Of those recorded at age 55–64 years, the strongest associations were observed with head injuries (1.32, 1.19–1.48), antidepressant use (1.30, 1.22–1.38) and depression (1.19, 1.03–1.37). Similarly, head injuries (1.31, 1.23–1.40), antipsychotic use (1.27,1.19–1.35) and depression (1.21, 1.11–1.32) recorded at age 65 + associated with AD. In this age group, also nutritional deficiencies (1.19, 1.10–1.29) were associated. The predictive accuracies of machine models and conventional logistic models were low.
Conclusions: Although the associations of established risk factors were observed, the predictive accuracies were low implying that these kind of data are not sufficient for identifying persons in an increased risk of AD.

P-213

Deprescription of antipsychotics in long term care patients

Abstract Area: Cognition and dementia

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Antipsychotics are used for the control of behavioural and psychological symptoms of dementia (BPSD). Due to the common side effects such as an increased risk of cerebrovascular adverse events, current guidelines [1,2] recommend deprescribing for patients treated for at least three months and whose symptoms are stabilized. This study aims to identify patients with deprescribing criteria and assess the clinical situation after six months, evaluating several geriatric syndromes: cognitive impairment, functional decline, pressure ulcers (PU) and anticholinergic burden.
Methods: A prospective, multicentre, and non-comparative intervention study will be carried out in 3 long-term care (LTC) facilities managed by a hospital pharmacy service in Alicante. For the assessment of the clinical situation, the following evaluation tests will be used: MEC (Lobo Mini Cognitive Examination) and GDS (Global Deterioration Scale), Barthel Index, Tinetti Scale, Norton Scale and the Anticholinergic Burden Calculator tool. In addition, the impact of the deprescription process will be measured by evaluating the scales mentioned above, before and six months after starting the process. The data will be obtained from the Pharmacy Service's records and analysed with the SPSS statistical programme.
Applicability: This study will allow us to evaluate the impact of antipsychotic deprescription, detecting whether there are differences in the patient's clinical situation that may be associated with adverse reactions related to antipsychotics.
Key conclusions: Deprescription in stabilized patients probably generates cognitive and functional benefits and does not worsen BPSD.1. Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, Raman-Wilms L, Rojas-Fernandez C, Sinha S, Thompson W, Welch V, Wiens A. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. Can Fam Physician. 2018 Jan;64(1):17–27. PMID: 29358245; PMCID: PMC5962971.2. Declercq T, Petrovic M, Azermai M, Vander Stichele R, De Sutter AI, van Driel ML, Christiaens T. Withdrawal versus continuation of chronic antipsychotic drugs for behavioural and psychological symptoms in older people with dementia. Cochrane Database Syst Rev. 2013 Mar 28;(3):CD007726. https://doi.org/10.1002/14651858.CD007726.pub2. PMID: 23543555.

P-214

A multi-disciplinary approach to offering community-based cognitive interventions to people with early-stage dementia in Ireland

Abstract Area: Cognition and dementia

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Introduction: Cognitive Stimulation Therapy (CST) and Cognitive Rehabilitation (CR) are two interventions with a substantial evidence-base, showing improvements in outcomes including cognitive function, goal attainment, and quality of life (QoL) for people living with a diagnosis of dementia (PLwD); although neither are yet part of mainstream service delivery in Ireland.
Methods: Two pilot studies were undertaken in collaboration with Trinity College Dublin (TCD) and the Alzheimer Society of Ireland (ASI) to examine the feasibility and impact of community-based CST and CR for PLwD. Study 1 incorporated a mixed methods design and examined the impact of CST on cognitive function, satisfaction with cognitive performance and confidence for 20 participants (quantitative), and the acceptability of CST as rated by PLwD and ASI staff (qualitative). Study 2 incorporated a single-subject multiple baseline design and examined the impact of CR on goal performance and cognitive function of 3 participants.
Results: Study 1 demonstrated pre-post intervention improvements in satisfaction with cognitive performance and confidence but not cognitive function. Qualitative interviews demonstrated a high level of acceptability of CST. Study 2 demonstrated a functional relationship between CR and goal attainment for all three participants, and post-intervention improvements in cognition for two participants.
Key conclusions: CST and CR can be offered with fidelity to community dwelling adults in Ireland. Collaboration between ASI staff, academics, OTs and other key stakeholders will play a key role in the scaling up of intervention delivery. Upcoming research will identify barriers and facilitators to more widespread implementation of CST for Irish PLwD.

P-215

Legal protection in older cognitive people: analysis of the observational French National Alzheimer Database

Abstract Area: Cognition and dementia

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Background: Alzheimer's disease and related disorders are a major public health problem representing 1.2 million patients in France. No French study has assessed the factors associated with the legal protection (LP) of these patients. In 2009, an epidemiological monitoring tool was created, the French National Alzheimer Database (FNAD). Based on these data, we characterized the factors associated with the 1st LP mention.
Methods: FNDA allows a prospective collection of epidemiological data since 2009 during a consultation (CS) in French memory clinics. Derived from an extraction of the FNDA in October 2020, our sample was selected on the type of CS and level 1 diagnosis. Factors collected at the 1st CS, associated with the 1st LP mention, were identified by a multivariate logistic regression with a step-by-step backward selection procedure based on AIC minimization from variables with a univariate p-value < 0.02. Findings: Our sample consisted of 795953 patients, mean age 78 years. The prevalence of LP was 4.09% (CI95%: 4.05%–4.14%). Of these patients, 71% had one CS and 29% at least two CS during the follow-up. Approximately 7 out of 10 patients with a LP mention had major cognitive disorder with dementia at the 1st CS compared to 5 out of 10 patients without a LP mention. Factors associated with 1st mention of LP in patients with multiple CS were: major cognitive disorder with dementia (aOR = 5.99 IC95%: 4.77–7.64); living alone (aOR = 3.52 IC95%: 3.29–5.76); and living in a nursing home (aOR = 3.68 IC95%: 3.33–4.06). Interpretation: Our study confirms the low number of LP and the importance of social interaction in the LP initiation.

P-216

Ambiguous loss in caregivers of person with dementia: a dimension forgot

Abstract Area: Cognition and dementia

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Introduction: Ambiguous loss (AL) is a relational disorder caused by the lack of facts surrounding the loss of a loved one [1]. The type two of AL, occurs when there is psychological absence with physical presence, such as in people with dementia (PwD) and represent an emotional problem related to caregiver stress and burden [1]. As a result of the stress generated, boundary ambiguity (BA) emerges as a barrier to the stress management, destroying its capacity for resilience. This study aimed to analyse the relationships among BA, sociodemographic characteristics and stress perception of caregivers of PwD.
Methods: A cross-sectional, descriptive and correlational study was conducted. The sample consisted of 88 family caregivers of PwD. The survey included questions related to sociodemographic variables and caregivers' careers, the Boundary Ambiguity Scale (BAS) and Stress Perceptions Scale. In the statistical analysis, non-parametric tests were used and the significance level was $p < 0.05$.
Results: The majority of the participants were female (75%), with a mean age of 62.84 years and a low level of formal education (0–4 years: 42%; 5–12 years: 44.3%). Most lived close to PwD (79.5%), were unemployed (61.4%) and received no support with care (59.1%). The BAS mean was 2.9 (maximum of 4). Older spouse caregivers with fewer years of formal education and who were living with PwD experienced greater AL. High AL levels also correlated with increased stress ($rs = 0.578$, $p < 0.01$).
Key conclusions: Caregivers' proximity to PwD and advanced age led to increased BA, confusion and hopelessness. Therefore, it is important to recognise this ambiguity and help caregivers cope with the related feelings.

P-217

Phosphodiesterase-5 Inhibitors are not associated with better cognitive and biomarkers profile in subjects at risk of Alzheimer's disease

Abstract Area: Cognition and dementia

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Introduction: recent studies suggest that phosphodiesterase-5 Inhibitors (PDE5-Is) may have a role in preventing cognitive impairment in Alzheimer's disease (AD) and reducing tau hyperphosphorylation [1,2]. To investigate the potential neuroprotective effect of PDE5-Is, we analysed data from the Alzheimer's Disease Neuroimaging Initiative (ADNI) database.
Methods: we searched for male subjects in treatment with PDE5-Is for erectile dysfunction and age-matched controls. We conducted a statistical analysis to evaluate differences in terms of MMSE, ADAS-Cog, hippocampal volume, and brain amyloid PET imaging.
Results: we identified 97 subjects who were taking PDE5Is at baseline, 1 female subject was excluded. In the case group (PDE5-Is + ve), 45 had no cognitive impairment, 44 had mild cognitive impairment (MCI) and 7 had AD; in the control group (PDE5-Is -ve), 18 had no cognitive impairment, 56 had MCI and 23 had AD. We found significantly more subjects without cognitive impairment in treatment with PDE5-Is, and significantly more AD patients not taking PDE5Is. There were not statistically significant differences between PDE5-Is + ve and PDE5-Is -ve subjects in terms of MMSE, ADAS-Cog, hippocampal volume and amyloid PET imaging. A logistic regression analysis showed diagnostic category as the only predictor of amyloid PET imaging positivity at baseline, whereas age, education and PDE5Is were not predictors.
Conclusions: this case–control study did not confirm a neuroprotective role of PDE5-Is in MCI or AD, and further research is needed. Fang J et al. Nat Aging. 2021; 1: 1175–1188.Orejana L Neurobiology of Aging 33 (2012) 625.e11– 625.e20

P-218

Incidence of cataract surgeries in relation to diagnosis of Parkinson's disease

Abstract Area: Cognition and dementia

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Introduction: We have investigated whether the diagnosis of Parkinson's disease (PD) affects the incidence of cataract surgeries.
Methods: Data from nationwide register-based Finnish Study on Parkinson's Disease, which includes 22189 persons with clinically confirmed PD diagnoses, was used. Data were extracted from several nationwide healthcare registers. This study included 17546 persons with PD and 114817 comparison persons.
Results: The incidence of cataract surgeries was 20.4/1000 and 18.7/1000 person-years for persons with or without PD, respectively. Before PD diagnosis, rate of surgeries was higher in persons with PD (incidence 16.5 vs 13.7 /1000PY, IRR, 95% CI 1.21, 1.16–1.26). After PD diagnosis there was no difference in the incidence rate. Persons who had undergone cataract surgery were older and had more eye diseases and other comorbidities compared to those without surgery.
Key conclusions: Diagnosis of PD does not decrease the incidence of cataract surgeries. Conversely, the incidence may be increased prior to PD diagnosis, probably due to other eye diseases and prodromal symptoms of PD.

P-219

Initial dementia and mortality at 3 years. Influence of frailty

Abstract Area: Cognition and dementia

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Introduction: The Frail-VIG index (IF-VGI) is based on geriatric assessment and presents a good discriminative capacity for the degree of frailty. Cognitive impairment increases the risk of frailty. The purpose of this study was to assess the degree of frailty in patients with cognitive impairment and the relationship with mortality over the time.
Methods: Prospective, observational, longitudinal study. We included 101 consecutive patients referred for cognitive impairment to Outpatient Geriatric Unit from September to December 2018. Followed up to 3 years. Mini-mental Examination of Folstein (MMSE), GDS and Barthel Index were evaluated at baseline. Participants were classified in 3 groups based on the GDS (< 3 No cognitive impairment; 3–4 Mild cognitive impairment/Initial dementia and ≥ 5 Moderate dementia). Also they were classified in groups based on their Frail-VIG score (< 0.20 No frail; > 0.20–0.36 Mild frail; and > 0.36 Moderate-to Severe frail). Mortality was evaluated in the following 3 years.
Results: 101 patients, 67% women. Mean age 84.9 ± 5.2 Barthel > 90 in 43%; GDS < 3:7(6.9%); GDS 3–4: 84(83%); GDS ≥ 5:10 (11%.). In the GDS 3–4 group, IF-VIG < 0.20: 18 patients, of them 5 (27%) died, IF-VIG 0.20–0.36: 55 patients, of them 14 (25.4%) died, IF-VIG > 0.36: 11patients, of them 9 (81%) died. Mortality at 3 years, in the GDS 3–4 group, was statistically related ($p < 0.001$) between mild frail and moderate-severe frail, but not related ($p > 0.5$) between no frail and frail.
Conclusion: In patients with mild cognitive impairment/initial dementia, mortality at 3 years depends significantly on the degree of frailty, with higher mortality in moderate-severe fragile compared to mild frail.

P-220

Treatment of posttraumatic stress disorder in people with dementia. A structured literature review

Abstract Area: Cognition and dementia

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Introduction: Posttraumatic stress disorder (PTSD) is associated with cognitive dysfunctions and is an independent risk factor for dementia. However, little is known about the effectiveness of PTSD treatment for people with dementia. The primary aim of the current study is to review previous studies on the treatment of PTSD in people with dementia.
Method: A structured literature review was performed using a PRISMA analysis in PubMed, Embase, PsycINFO and CINAHL. Two independent researchers screened titles and abstracts. The inclusion criteria were: PTSD symptoms present, diagnosis of dementia, PTSD treatment form described and effects of the treatment mentioned.
Results: We included nine articles, all case reports. The discussed treatment options are eye movement desensitization and reprocessing (EMDR) ($n = 3$), prolonged exposure ($n = 1$), cognitive behavioral therapy ($n = 1$) and pharmacological treatment ($n = 4$). All articles reported a positive effect of the intervention on PTSD symptoms or neuropsychiatric symptoms. Evidence for positive effects of EMDR was described in two articles of sufficient quality published in 2018 and 2019. EMDR on-the-spot was described with positive effect in one article in which three cases were discussed. The quality of included papers ranged from insufficient to sufficient.
Conclusion: This review shows that people with PTSD and dementia can benefit from PTSD treatment. The evidence regarding EMDR treatment is strongest as it is most researched, shows positive results and the studies are of sufficient quality. Further research in the form of a randomized controlled trial is required to study the effectivity of different treatment interventions in this population.

P-222

Healthcare use before Alzheimer's disease and related diseases (ADRD) identification and future healthcare trajectory

Abstract Area: Cognition and dementia

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Introduction: Healthcare use before Alzheimer's Disease and Related Diseases (ADRD) identification may be associated with future favorable healthcare trajectory after ADRD diagnosis. We identified determinants associated with future favorable healthcare trajectories (HT), notably healthcare use before ADRD identification.
Methods: The FRADEM cohort, based on the French health insurance database, gathers all incident subjects with ADRD in France. The favorable (or not) HT were determined in the 2012-FRADEM cohort (n = 36,990), based on healthcare use during a 5-year period following ADRD identification. Healthcare use (such as drugs, outpatient visits, hospitalization, institutionalization) before ADRD identification ([− 18; − 6] months) was studied. Multilevel analyses, stratified by ag group (65–74, 75–84, 85 and older), taking into account geographical differences in healthcare supply, to identify factors associated with future favorable HT.
Results: Being a woman, using preventive and specialist care before ADRD identification increased the risk of future favorable HT. Institutionalization, extreme age, comorbidities, medical transportation and no reimbursed drug during the year before ADRD identification decreased this risk. Considering age groups, antipsychotic dispensing before ADRD identification decreased the risk of future favorable HT among 65–74 and 75–84 years subjects. Emergency room visits, unplanned hospitalization and medical devices for mobility and independency aids before ADRD identification decreased the probability of future favorable HT among 75–84 and 85 and older subjects. Sensitivity analyses yielded stable results.
Key conclusions: Care coordination with preventive and specialist care before ADRD identification increased the risk of future favorable HT, whereas healthcare use related to preexisting functional dependency before ADRD decreased this risk.

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Developing a group exercise offer for home-dwelling persons with dementia, organized with support from volunteers

Abstract Area: Cognition and dementia

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Introduction: Home-dwelling older adults with cognitive impairment typically take part in few activities outside their homes. In this project, a new group exercise offer for people with cognitive decline or dementia was developed and implemented in three municipalities in Norway. The content was a modified version of the "Strong and Steady" concept, with organisation and attendance supported by volunteers (instructors and activity friends). This study aimed to evaluate participants' experiences of this newly developed exercise offer, organised with support from volunteers.
Methods: This was a qualitative study. Semi-structured focus group interviews of twelve participants were conducted in three municipalities at the end of a 12-week exercise period. We completed the project during the pandemic, with final interviews conducted in September 2021. We audio-recorded and transcribed the interviews, and analysed data using thematic analysis.
Results: Overall, our participants were very satisfied with the new group exercise offer. Support provided and the creation of a social arena were highly valued by the participants. Support provided by individuals, were highlighted as crucial in all aspects of engaging in such offers. Participants described the group members as family and friends, perhaps because this new offer outside their home was so valuable for them.
Key conclusion: Developing new offers should focus on support in all elements, so that older adults with cognitive impairment can attend activities outside their homes. Properly organised exercise offers are warranted and can enable attendance in meaningful activities, facilitating socially and physically active engagement.

P-224

Estimating premorbid intelligence in people living with dementia: a systematic review

Abstract Area: Cognition and dementia

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Introduction: Accurate estimates of premorbid intelligence are critical for evaluating the presence and severity of cognitive decline in dementia. Despite the widespread use of premorbid intelligence measures in clinical practice, however, the psychometric properties of available instruments have not been systematically evaluated. This review set out to evaluate the validity of instruments for measuring premorbid intelligence in people with dementia.
Methods: The EMBASE, PsychINFO, Medline, CINAHL, and AMED databases were searched for observational studies in people with dementia where the primary outcomes of interest were inter-rater reliability, test-retest reliability, and validity of premorbid intelligence assessments. The search was limited to articles published from the first available date to May 2019.
Results: 13 eligible studies describing 19 different instruments were identified. The majority of instruments (n = 14) consisted of language-based measures, with versions of the National Adult Reading Test (NART) being most commonly investigated. Preliminary evidence suggested comparable performance of patients with mild dementia and healthy controls on word reading tasks in English, Portuguese, Swedish, and Japanese. In moderate dementia, however, the performance was significantly impaired on most verbal tasks.

There was a lack of reliability and validity testing of available instruments.
Conclusions: There are a wide range of tools available for estimating premorbid intelligence in dementia, with cautious support for the use of word-reading-tasks across different languages in individuals with mild dementia. Further longitudinal research and assessments of nonverbal measures are necessary to validate these instruments and enhance diagnostic procedures for people with more significant impairment.

P-225

Palliative care in nursing home residents with young-onset dementia: an understudied topic

Abstract Area: Cognition and dementia

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Background: Comfort is frequently the main goal of care for nursing home residents with dementia in the Netherlands, but there are no data on care goals or other palliative care issues about residents with young-onset dementia (YOD).
Methods: Physicians, family and nurses completed comprehensive questionnaires on sociodemographics, dementia-related characteristics, and variables related to palliative care including advance care planning.
Results: The residents' (N = 185) mean age was 64, half (50.3%) was female. Swallowing problems (11.4%) were more common than weight loss, cachexia, and dehydration. In 43.2% of cases, the physician would not be surprised if the patient died within a year. Pain and agitation were often reported by nurses (30.3% and 40.5%, respectively) and physicians (18.6% and 42.0%, respectively). The mean End-of-Life in Dementia-Scales-Symptom Management score according to family was 31.9 (SD 8.5). Psychoactive medication was prescribed more often (73.3%) than pain medication (29.5%). The mean quality of life in late-stage dementia score was 24.0 (SD 7.9) as assessed by family. Written advance directives (5.4%) or documentation of the former general practitioner on treatment preferences (27.2%) were unavailable for most residents. The global care goals agreed upon between physicians and family most often focused on comfort (74.0%). Proportions of do-not-treat orders were higher than do-treat orders for all types of treatments except for hospitalization and hypodermoclysis.
Conclusion: Symptoms and pharmacological symptom management were common. Documents on advance care planning drawn up before admission were only in a minority present. Most YOD-residents had comfort care goals and do-not-treat orders despite their relatively young age.

P-226

Incidence and risk factors of pneumonia in persons with and without Alzheimer's disease

Abstract Area: Cognition and dementia

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Introduction: People with dementia have a higher hospitalization rate for bacterial pneumonia than people without dementia. The objective of this study was to investigate the incidence of pneumonia and associated risk factors in community-dwelling persons with and without Alzheimer's disease (AD) as there are not any previous studies on the subject.
Methods: The retrospective register-based Medication Use and Alzheimer's disease (MEDALZ) cohort is based on Finnish nationwide healthcare and population registers and includes all community dwellers who received a clinical diagnosis of AD between 2005 to 2011. The study comprised 69,350 persons with AD and 69,350 matched comparison persons without AD. Studied comorbidities were asthma/COPD, diabetes, any cardiovascular disease, stroke, and chronic renal or liver disease. In addition, we included data on the utilization of benzodiazepines, antidepressants, antipsychotics, antiepileptics, opioids, biological medicinal products, oral glucocorticoids, and proton pump inhibitors.
Results: During the follow-up, 25% of the AD cohort and 15.8% of the non-AD cohort were hospitalized due to pneumonia. Previous pneumonia was a strong risk factor for pneumonia in both cohorts. All comorbidities and medication use excluding biological medicine use were associated with a higher risk of pneumonia in the non-AD cohort. In the AD cohort, other strong risk factors for pneumonia were male sex, oral glucocorticoid use, asthma/COPD and antiepileptic use.
Key conclusions: Pneumonia is a serious, potentially life-threatening disease, and risk factors for pneumonia include several potentially avoidable medications. In addition, good care of existing comorbidities might prevent pneumonia and related hospitalization.

P-227

Cognitive stimulation therapy—an under-utilised treatment

Abstract Area: Cognition and dementia

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Introduction: Cognitive stimulation therapy (CST) is an evidence based psychological intervention for people with mild-to-moderate dementia. It has a cognitive benefit similar to memory enhancing medications such as donepezil. In the UK, CST is offered by the

majority of UK memory services through a variety of funding mechanisms, however the last national memory clinic audit highlighted that patients were under-referred for this treatment. Following the impact of the coronavirus pandemic on local CST provision, a quality improvement project (QIP) aiming to improve access to CST provided by our memory service was carried out. This component of the project aimed to assess the internal CST referral processes and to identify barriers preventing referral of eligible patients.
Methods: A retrospective review of 125 patient records from November 2021 to April 2022 was conducted. CST eligibility was determined using CST trial inclusion/exclusion criteria. Referral status was compared against the CST log of completed participants.
Results: 89 (71.2%) of the 125 patients were potentially eligible for CST. Of these, only 10 (11.2%) were referred. Reasons for not referring were not recorded. Discrepancies within the referral process were noted, requiring further exploration.
Key conclusions: Patients were potentially under-referred for CST. This may reflect a hangover effect from practice during the height of the coronavirus pandemic when group CST was suspended. However, these data highlight the need to standardise the referral process and support the development of specific educational interventions to ensure that clinicians can facilitate patients to access this treatment.

P-228

Establishing a dementia care pathway initiated by a frailty at the front door team

Abstract Area: Cognition and dementia

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Introduction: The Irish National Dementia Strategy advocates for the development of a national and local dementia care pathway to ensure timely diagnosis of cognitive impairment and appropriate follow up. The aim of this feasibility study was to assess ease of identification of undiagnosed cognitive impairment and to quantify outcomes for patients with suspected cognitive impairment detected by a front door frailty team.
Methods: Patients over 70 years, referred by a front door frailty team to outpatient memory services (OPD), based on 4AT, collateral history and AD8, were followed to document outcome. Demographics, 4AT, AD8 and outcome was prospectively entered onto excel by a clinical specialist Occupational Therapist. Exclusion criteria were pre-existing cognitive impairment, nursing home resident and inability to attend appointment.
Results: Mean age was 84.5 (SD = 4.4) years. Male:female ratio was 1:1.2. Mean (SD) CFS was 4.5(SD = 0.6). 4AT was completed in 81%(n = 18), mean (SD) 2.6 (1.7). AD8 was completed in 64% (n = 14), mean (SD) 3.3 (1.6). Collateral information gathered by dementia-trained team members informed onward referral for 14%, n = 3. Sixty-eight percent (n = 15) attended OPD. 67% (n = 10) were diagnosed with cognitive impairment, including dementia. 33% (n = 5) were not.
Key conclusions: Referral of patients with unknown prior cognitive impairment from a front door frailty team successfully identified patients with cognitive impairment/dementia. A front door frailty team transdisciplinary approach will be developed to standardize assessment and to ensure timely diagnosis of dementia in frail older persons. This should ensure that in excess of 85% of suitable patients are correctly identified by non-dementia trained team members.

P-229

Identifying potentially inappropriate medications in memory clinic attendees

Abstract Area: Cognition and dementia

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Introduction: Unease about the risks of adverse effects from medications in older people has been an area of concern in both clinical practice and the academic literature for some time, in particular in people with dementia. A number of tools have been developed to aid clinicians to identify and deprescibe potentially inappropriate medications (PIMs). Before strategies using these tools can be trialled it is important to quantify the number of people exposed to PIMs. This project set out to compare three tools (PIMcog, Anticholinergic burden score and STOPPfalls) in identifying exposure to PIMs in memory clinic attendees with dementia.
Methods: A retrospective review of the first 100 patients with diagnoses of dementia who attended the memory clinic from 1/10/21 was carried out. Basic demographic data was collected including age, sex, residence, diagnoses. Prescribed medication was reviewed and numbers of PIMcogs and falls risk increasing drugs (FRID) (as per STOPPfalls) were calculated. The number of anticholinergic medications and anticholinergic scores were calculated.
Results: Data were available from 100 patients. 53% female, mean age 83, mean MMSE 19. 95% were taking at least 1 medication, 21 were taking $\geq$ 1 PIMcog, 33 $\geq$ 1 medication with anticholinergic properties (of whom 42% had an ACB score $\geq$ 3), 43 $\geq$ 1 FRID.
Key conclusions: Each tool identified a significant proportion of memory clinic attendees as being exposed to potentially inappropriate medications. The STOPPfalls tool identified more at risk patients than the other tools. These data will be invaluable in supporting ongoing quality improvement work in the memory service.

P-230

Understanding older adults awareness of healthcare research

Abstract Area: Cognition and dementia

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Background: Older adults are often excluded from healthcare research, particularly those with cognitive impairment who cannot always provide informed consent. Understanding older people's perceptions of research is important to design inclusive policies and research studies. This pilot study aimed to understand older adults'

views about healthcare research and what they imagine their wishes would be if they were to develop memory problems.
Methods: In this prospective observational study, participants were recruited from outpatient clinics. Consenting participants were surveyed about their perceptions of healthcare research.
Results: Twenty-five telephone interviews were conducted. Median age 76.24 years (range 68–85 years). Most respondents reached secondary education (80%), and most volunteered knowing very little about healthcare research. All participants had a nominated next of kin (NOK). Of 23 participants who had not previously been involved in healthcare research, none had been asked to do so. Most participants would be interested or very interested in participating in a study that involved either survey questions (64%), chart review (88%), or additional investigations (68%). Only a minority were interested or very interested in partaking in research involving a trial drug (16%). Most participants (88%) would be happy or very happy for their NOK to 'consent' on their behalf (if they themselves were unable to do so).
Conclusion: In this study, older adults had clear views about healthcare research and a keenness to participate. This group expressed trust in their NOK to make decisions on their behalf regarding research participation. More research is required to explore this area further.

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A lifeline for elderly care in Qatar- teleconsultation during COVID-19 pandemic

Abstract Area: Cognition and dementia

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Background: World Health Organisation declared the COVID-19 pandemic in March 20201, and the elderly population was deemed high risk for severe illness. A reorganization of health care services took place globally to reduce the rates of transmission. In Qatar, the Department of Geriatrics and Long-Term Care launched the first teleconsultation "Vsee" Clinic in Hamad Medical Corporation, to ensure that the older adults continue to receive health care input during this pandemic without the risk of exposure.
Aim: Analyse the impact of use of teleconsultation services on the new cases waiting time in the Geriatric Outpatient Clinics during the COVID-19 eraCompare with the data during pre-COVID-19 era
Methods/case presentation: Retrospective analysis of the electronic health records to obtain the number of new cases seen during the COVID-19 era from April 2020 to October 2020 and identify the waiting time during this period and compare this with the pre-COVID-19 era from April 2019 -October 2019.
Results: The number of patients seen in the pre-COVID 19 era was 516 and during the COVID-19 era using teleconsultation was 762. The average waiting time period for clinic appointments between April 2019 and October 2019 was 23.6 days and between April 2020 to October 2020 was 12.37 days which shows a marked reduction.
Conclusion: This data highlights that teleconsultation is a way forward to continue to provide health care input to patients were clinically appropriate during this COVID-19 pandemic, whilst keeping them safe in the comfort of their homes.

P-232

Developing a culturally adapted cognitive assessment tool for Qatar

Abstract Area: Cognition and dementia

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BACKGROUNDGetting the right diagnosis is the most crucial step in the care of Dementia journey. Having a structured objective cognitive assessment is the central step in the diagnostic process. Existing widely used Cognitive assessment Tool like Montreal Cognitive Assessment (MOCA, Nasreddine et al.) has its limitations. Larner (2013) highlighted MoCA was normed in highly educated population and norms in lesser-educated, community-based, multicultural samples were not available, and its validity has never been thoroughly tested (Hummelova-Fanfrdlova et al. 2006). Here in Qatar in our routine clinical practice, we found MOCA scores were not rightly reflective of the cognitive ability of our Qatari elders as educational limitations played a factor in the ability of our elders to comfortably complete the assessment. Addenbrookes Cognitive Examination - ACE 111 is a widely used tool to identify Cognitive impairment in conditions such as DementiaWe carried out the Cultural and Language adaptation of ACE 111, as a tool that our elders would find more at ease to attempt and complete.
Aim/objectives: To Develop a Culturally adapted Cognitive Assessment Tool for QatarMethodologySeries of Multidisciplinary Multispecialty Led Workshops Including Addenbrookes Team from Addenbrookes Memory Clinic, UK with Qatar University and Hamad Medical Corporation Qatar -Multiple Specialties including Geriatrics, Geriatric Psychiatry, Neurosciences was held over 2020
Conclusion: Addenbrookes Cognitive Examination -Qatar Version is developed, Its now in the process to go through a validation study.

P-233

Cognitive Stimulation Therapy within a memory clinic setting—views from participants

Abstract Area: Cognition and dementia

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Introduction: Cognitive Stimulation Therapy (CST) is an evidence-based group treatment for people with mild to moderate dementia. It is the only non-pharmacological therapy recommended by the National Institute for Health and Care Excellence (UK) to improve cognition, independence and wellbeing. CST is designed to stimulate memory by being challenging, yet enjoyable. Following the impact of the coronavirus pandemic a quality improvement project (QIP) aiming to improve the standard of care provided by the memory service was carried out. A review of CST provision formed part of that evaluation.
Methods: A retrospective review of routinely gathered feedback from participants in group CST was carried out.

Results: Feedback was available from 175 participants and was qualitative in nature. Key themes that emerged included improved confidence, memory enhancement and enjoyment of the activity. Comments included "Over the 7 weeks I have become more confident, I don't hold back as much"; "I enjoyed everything, it has been really good… The group has helped me remember more and it is helpful to get thinking"; "More confident in conversations, wife thinks it has improved speech. I'll never forget this, you've all been brilliant."
Key conclusions: Feedback from participants was very positive. All reported improvements that they regarded as important to them. These data will feed into the ongoing QIP.

P-234

Descriptive study of elderly people with dementia hospitalized because of COVID 19 in a secondary urban hospital in Madrid during the "First Wave" of COVID-19 pandemia, 2020

Abstract Area: Cognition and dementia

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Introduction: Spain has suffered a great burden by Coronavirus global pandemic during 2020 with over 240.000 confirmed cases in the first wave (March&April&May, 2020). During March, April&-May 2020, this hospital suffered from a burden of 300% of normal hospitalization cases.
Methods: This is an observational study. Part of the variables were obtained through a prospective hospital database fulfilled during hospitalization by attending physicians regarding demographics, presenting symptoms, laboratory and clinical data, complications, and mortality or discharge as well as destiny at discharge. During June 2020, those people hospitalized because of covid-19 during March and April identified as previously suffering from dementia were reviewed and variables completed through a retrospective chart review. A specialist in dementia retrospectively analysed charts and dementia assessment history, regarding type of dementia, dementia stage through Clinical Dementia Rating (CDR) and Global Deterioration Scale (GDS), previous existing behavioural problems, type of dementia and psychiatric treatments, previous malnutrition or sensory problems prevalence, and incidence of delirium and treatments for delirium. Initial description of patient´s characteristics is presented.
Results: Over 2600 hospital admissions during 12 weeks, 99 had previously diagnosed with dementia, with age M84,7(SD7,9). Stages were CDR0.5/GDS3 for 15, CDR1/GDS4 for 8, CDR2GDS5 16, CDR2 GDS6 37, CDR3 GDS 7 for 23. 44 patients had diagnosis of Alzheimer's Disease, 20 mixed dementia, 6 Lewy Body Dementia, 5 Frontotemporal dementia, 4 Vascular Dementia, 2 Parkinson´s Dementia, 2 others (1 Wernicke and 1 an evolved Psychiatric diagnosis of Bipolar disorder), 16 patients with CDR 0,5 had been diagnosed with Mild Cognitive Impairment with high probability of rapid progression. Pharmacologic treatments were acetylcholinesterase-inhibitor (AChEI) 29, Memantine 23, selective inhibitors of serotonin reuptake 28, Benzodiacepines 16, typical Antipsychotics 6 (haloperidol) and atypical 21, Mortality was 40.4% (N40), incidence of delirium 64,6% (64).
Conclussions: Over 60% of patients hospitalized with dementia and covid19 had moderately-advanced stages of dementia GDS > 6. Mortality rates and delirium rates were high

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Alzheimer's disease and steroid metabolome

Abstract Area: Cognition and dementia

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Introduction: Relationship of Alzheimer´s disease and metabolic biomarkers is being investigated. Steroid hormones participate in brain glycoregulation, promote neurogenesis and myelination and reduce neuroinflammation. Moreover, estrogens and androgens also influence accumulation of β-amyloid protein.
Methods: Our study investigated how the individual peripheral steroids and steroid product to precursor ratios may predict the presence of AD. AD patients were identified according to National Institute of Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Association (NINCDS-ADRDA) criteria for probable AD. The steroidomic data were obtained using gas chromatography-mass spectrometry, GC-MS/MS [1].
Results: The results show higher levels of both 5a- and 5b-reduced C21 steroids and at the same time reduced levels of both 5a- and 5b-reduced C21 steroids. The prediction model using multivariate regression models with a reduction of dimensionality was effective in discriminating between AD patients and healthy controls.
Conclusion: Steroid levels and steroid product to precursor ratios confirmed promising predictivity for the detection of AD when using multivariate regression models with a reduction of dimensionality. Future research should verify the application of the predictive model on the risk group, e.g. first-degree offspring of patients with AD. Supported by the grant NV18-01-00399 of the Ministry of Health of the Czech Republic Ref.: [1] Vankova, M.,et al. (2016). Preliminary evidence of altered steroidogenesis in women with Alzheimer's disease: Have the patients "older" adrenal zona reticularis? The Journal of Steroid Biochemistry and Molecular Biology, 158,157–177.

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Effects of the implementation of the relationship centered care model in a unit for people with dementia. Gizarea study

Abstract Area: Cognition and dementia

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OBJECTIVE: To evaluate the effects on the quality of life of people in a psychogeriatric unit after the implementation of the Relationship-Centered Care model.
Methods: The study involved 23 people with advanced dementia from a unit of the Lakua Nursing Home. 70% women, mean age, 85 years, 74% FAST ≥ 7. 60% had Dementia of the Alzheimer type, 13% Vascular Dementia. We analyze the changes in the quality of life indirectly through some care indicators (pain, level of suffering,

nutritional status, affective and behavioral situation and use of psychotropic drugs). Evaluation in 3 moments: before and after a training intervention carried out in family members and professionals through Appreciative Inquiry and six months later.
Results: There are no significant changes in some indicators indicators analyzed (pain, suffering, nutritional status, etc.) but there is a lower appearance of behavioral symptoms, especially in the opinion of the families and a decrease in treatment with psychotropic drugs (27 at the beginning and 22 at the end). Thus, in 3 people of the 13 residents (56,5%), the initial dose of psychoactive drugs has been reduced and it was totally suppressed in 4 people**CONCLUSIONS:** The improvement of relationships between professionals and families seems to improve the quality of life from in people with dementia, especially in the reduction of behavioral disorders and therefore in the need to use psychotropic drugs. We believe it is necessary to delve into the analysis of the other indicators, to see if the initial results can be confirmed.

P-237

A prevalent sleep disorder in older adults: restless legs syndrome (is there any association with other geriatric syndromes?)

Abstract Area: Comprehensive Geriatric Assessment

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Objective: Restless Legs Syndrome (RLS) is a common sleep disorder which affects quality of life in older individuals. We aimed to find out the geriatric syndromes and other factors significantly associated with RLS in an older study population.
Materials and methods: This was a retrospective-cross sectional study conducted with the participants $\geq$ 60 years old who admitted to the geriatric outpatient clinic of a tertiary hospital. Essential clinical features of RLS had to be present for diagnosis of RLS. Geriatric syndromes like sleep disturbance, falls, polypharmacy ($\geq$ 5 medications/day), constipation, chronic pain, cognitive impairment, depression, urinary and fecal incontinence, malnutrition, sarcopenia (S), dependency in basic and instrumental activities of daily living and reduced quality of life were assessed. Decreased muscle strength was assessed via handgrip strength measurement and defined as "probable S". Confirmed S was defined as "decreased muscle strength and mass" and muscle mass was assessed via Tanita BC-532 bioimpedance analyzer. We used cut-offs recommended by EWGSOP2 for low muscle strength, and population specific cut-offs for low muscle mass diagnosis. p value of less than 0.05 was accepted as significant.
Results: 1766 older subjects were included, 68.6% were female. Median age was 72 (60–99). RLS was seen in 28.3% and it was significantly higher in female subjects (76.4%). RLS group was younger and had higher number of comorbidities and regular drugs. Sleep disturbance, chronic pain, cognitive impairment, constipation, dependency in IADL, depressive mood, fear of falling, polypharmacy, reduced QoL and urinary incontinence were significantly more prevalent in RLS group. Multivariate analysis revealed that the only factors independently associated with RLS were age (Odds ratio (OR) (95% confidence interval (CI)) = 0.94 (0.89–0.99); $p < 0.01$) and cognitive impairment (OR (95% CI) = 2.25 (1.07–4.75); $p < 0.03$).
Conclusion: Only geriatric syndrome independently associated with RLS was cognitive impairment. More studies are needed to identify the relationship between RLS and congitive functions; and to reveal the cognitive profile of the individuals suffering RLS.

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Modifiable predictive factors and all-cause mortality in the non-hospitalized elderly population: an umbrella review of meta-analyses

Abstract Area: Comprehensive Geriatric Assessment

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Objective: This umbrella review aimed to summarize the association between modifiable predictive factors and all-cause mortality in the non-hospitalized elderly population, and estimated the credibility and strength of the current evidence.
Methods: PubMed, Embase, Web of science, and EBSCOhost were searched up to February 28, 2022. Random effect summary effect sizes and 95% confidence intervals (CIs), heterogeneity, small-study effect, excess significance bias, as well as 95% prediction intervals (PIs) were calculated. Methodological quality was assessed with the Assessment of Multiple Systematic Reviews 2 (AMSTAR-2) tool. The credibility of the included meta-analyses was graded from convincing to weak using established criteria. This umbrella review was registered with PROSPERO, CRD 42021282183.
Results: In total, 32 predictive factors involving 49 associations extracted from 35 meta-analyses were analyzed. Forty-three of the 49 (87.8%) associations presented nominal significant effects by the random-effect model ($P < 0.05$), of which 34 had harmful associations and nine had beneficial associations with all-cause mortality. Frailty (FRAIL scale), low short physical performance battery (SPPB) score, and fewer daily steps carried a more than three-fold risk for all-cause mortality. Convincing evidence showed that weight fluctuation, prefrailty and frailty status, sarcopenia, low SPPB score, fewer daily steps, and fatigue increased the risk of all-cause mortality, while daily moderate-to-vigorous physical activity (MVPA) duration and total physical activity participation reduced the risk of death. There were twenty, nine, five, and six associations that yielded highly suggestive, suggestive, weak, and non-significant grades of evidence. Thirty-four (69.4%) of the associations exhibited significant heterogeneity. Twenty-two associations presented 95% PIs excluding the null value, two indicated small-study effects, and three had evidence for excess significance bias, respectively. The methodological quality of most meta-analyses was rated as low (37.1%) or critically low (42.9%).
Conclusions: A summary of the currently available meta-analyses suggests that a broad range of modifiable predictive factors are significantly associated with all-cause mortality risk in the non-hospitalized elderly population. The most credible evidence indicates that physical function represented by frailty and sarcopenia, as well as physical activity, are significant predictors for all-cause mortality. This umbrella review may provide prognostic information to direct appropriate diagnostic evaluation and treatment goals in the future. More solid evidence is still needed coming from moderate-to-high quality meta-analyses.

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Comprehensive Geriatric Assessment is associated with increased antidepressant treatment in frail older people with unplanned hospital admissions—results from the randomised controlled study CGA-Swed

Abstract Area: Comprehensive Geriatric Assessment

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Background: Frail older people are at higher risk of further deterioration if their needs are not acknowledged when acutely ill and admitted to hospital. Mental health comprises one area of needs assessment. The aims of this study were threefold: to investigate the prevalence of depression in frail hospital patients, to identify factors associated with depression, and to compare depression management in patients receiving and not receiving Comprehensive Geriatric Assessment (CGA).
Methods: This secondary analysis from the CGA-Swed randomized control trial included 155 frail older people aged 75 years and above. Instruments included Montgomery Åsberg Depression Rating Scale (MADRS), the ICE Capability measure for older people (ICECAP-O) and the Fugl-Meyer Life Satisfaction scale (Fugl-Meyer Lisat). Depression was broadly defined as MADRS score ≥ 7. Regression models were used to identify variables associated with depression and to compare groups with and without the CGA intervention.
Results: The prevalence of depression at baseline was 60.7%. The inability to do things that make one feel valued (ICECAP-O) was associated depression (OR 4.37, CI 1.50–12.75, $p = 0.007$). There was increased odds of receiving antidepressant medication in the CGA intervention group (OR 2.33, CI 1.15–4.71, $p = 0.019$) compared to patients in the control group. Interpretation: Symptoms of depression were common among frail older people with unplanned hospital admission. Being unable to do things that make one feel valued was associated with depression. People who received CGA intervention had higher odds of receiving antidepressant treatment, suggesting that CGA improves recognition of mental health needs during unplanned hospital admissions.

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Predictive value of the Short Physical Performance Battery for falls in community-dwelling older persons

Abstract Area: Comprehensive Geriatric Assessment

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Background: The Short Physical performance Battery (SPPB) has been indicated by the European Medicines Agency as the preferred tool to categorize physical frailty.
Objective: Our objective was to determine the predictive value of SPPB for single, recurrent and injurious falls during 12 months in older adults living in the community.
Methods: Data collected during the "Sarcopenia and Physical Frailty in Older People: Multicomponent Treatment Strategies" (SPRINTT) project were used. The multicenter, Innovative Medicine Initiative (IMI)-funded SPRINTT project was the first long-term, large-scale randomized controlled trial (RCT) focused on physical frailty and sarcopenia in community-living older Europeans. The RCT targeted community-dwelling persons aged 70 years and older, with low appendicular lean mass and SPPB score of 3–9, but able to walk 400 m in 15 min. The SPPB was completed at baseline, data on falls or injurious falls during the previous 12 months were obtained with a single question "How often did you fall during the last 12 months?" with possible answers being none, 1–3, or 4 and more falls at baseline. The same question was asked after 12 months of enrolment. Sociodemographic data, depression (GDS), cognition (MMSE), comorbidities, and physical activity levels were also collected.
Results: A total of 1567 participants were enrolled in the SPRINTT project. Mean age was 78.9–5.8 SD, with 1119 (71.4%) women. The SPPB score was 6.7–1.4 points. The average MMSE score was 27.9–1.8). 694 participants (44.3%) reported at least one fall in the previous 12 months, 233 (14.9%) reported an injurious fall.
Conclusion: The high rate of fallers and the physical limitation of participants reflected by a low SPPB score indicate that the SPRINTT population is at risk of fall events. Predictive value of the SPPB on future falls or injurious falls will be presented.
Key words: SPPB, prediction, falls, Refs: Marzetti, E., Cesari, M., Calvani, R., Msihid, J., Tosato, M., Rodriguez-Manas, L.,... Landi, F. (2018). The "Sarcopenia and Physical fRailty IN older people: multicomponenT Treatment strategies" (SPRINTT) randomized controlled trial: Case finding, screening and characteristics of eligible participants. Exp Gerontol, 113, 48–57. https://doi.org/10.1016/j.exger.2018.09.017

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Comprehensive geriatric assessment in older patients with valvular heart disease: usefulness in treatment indications and detecting problems

Abstract Area: Comprehensive Geriatric Assessment

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Faced with surgical or percutaneous aortic valve implantation (TAVI)1, older people may present unsatisfactory health outcomes and increase morbidity, mortality and readmission rates, as well as decrease their quality of life, all of which is conditioned by the special characteristics acquired by the disease in the elderly. After the PARTNER studies, TAVI is established as the treatment of choice in the elderly population with AS. Comprehensive geriatric assessment improves health outcomes by acting on potentially modifiable situations of frailty. The objectives of this work are: a) to study the clinical, functional, mental, and social characteristics of elderly patients with severe symptomatic valve disease, and b) to analyze the possible existence of underdiagnosed diseases, situations of frailty, functional dependence, and cognitive impairment that condition the choice of treatment. In our sample of patients ($N = 7$), 2 of them presented criteria for dementia, 4 out of 7 had mild functional dependence and 2 out of 7 had moderate functional dependence. 5 of 7 had severe aortic stenosis, but one of them had a biological

prosthesis, 1 of 7 had severe aortic regurgitation, and the last had severe mitral regurgitation. Of the patients with aortic stenosis, TAVI was recommended in 4 of 5, with prehabilitation in 50% of them. In the other of the 5, surgery was recommended as it was aortic stenosis on a biological valve. Of the 2 candidates for surgical intervention due to mitral disease and aortic insufficiency, conservative treatment was recommended for 1 due to poor life expectancy and high valvular comorbidity. The detection of medical problems through comprehensive geriatric assessment is essential, since the foundations are laid to analyze whether the establishment of a low-intensity multicomponent physical exercise program and prehabilitation prior to replacement can contribute to improving the care process and the health results in these patients.

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Aging and noise sensitivity in urban environments

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The modern way of life has been associated with noise as well as social problems such as loneliness and isolation which also have a negative impact on physical and mental health of older adults. This review aims to explore possible interactions between noise sensitivity, wellbeing and quality of life in older urban dwellers.
Methods: A literature review was conducted at Google Scholar, PubMed and Scopus databases using the keywords: "noise sensitivity", "urban environment", "older adults" and "quality of life".
Results: According to WHO (2019), it is estimated that 466 million people worldwide are living with hearing challenges, with 60 percent being older persons. Limited research data shows that apart from other age-related hearing impairments, older people also develop noise-sensitivity as they age especially after Stroke and Traumatic Brain Injury (TBI). Older persons and less healthy people are more often sensitive to noise. Dwellings in noisy areas, are involved in the development of noise sensitivity, affect the quality of sleep, provoke health issues and report poor quality of life. Older people who are annoyed by sound show a higher need for quietness which possible leads to isolation. Quiet recreation can have a compensating effect on the need for quietness. Individuals with anxious, introverted personality traits suffer equally from noise sensitivity as they age.
Key conclusions: The recognition of aggravating factors and effects of noise sensitivity is an important public health issue which needs further research so as to improve wellbeing and quality of life in older urban-dwellers.

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Inside the black box: a narrative review on comprehensive geriatric assessment-driven interventions in older adults with cancer

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: There is a consensus that the use of comprehensive geriatric assessment (CGA) is good clinical practice for older patients with cancer. To be complete, CGA must include a geriatric assessment and an intervention plan. According to the SIOG consensus, CGA should assess several domains: functional status, comorbidity, cognition, mental health, fatigue, social support, nutrition and geriatric syndromes. Progress has been made in the best way to detect problems, but the benefits are mostly based on prognosis stratification and on the adaptation of cancer treatment. The present review aims to evaluate the level of evidence regarding geriatric interventions proposed following the detection of a problem in each domain mentioned above.
Methods: An online search of the PubMed database was performed using predefined search algorithms specific for each domain of the CGA. Eligible articles had to have well-defined interventions targeting specific domains of the CGA.
Results: We screened 1864 articles, but only a few trials on single-domain interventions were found, and often, these studies involved small groups of patients.
Conclusions: This review highlights the scarcity of published studies on this topic. The specific impacts of CGA-based interventions have not yet been demonstrated. Multi-domain interventions seem promising, especially when they are based on global assessments. However, standardization seems difficult considering the lack of evidence for each domain. New studies are necessary in multiple care contexts, and innovative designs must be used. An accurate description of the intervention and what "usual care" means will improve the external validity of such studies.

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Management of nonagenarian patients with severe aortic stenosis: the role of frailty

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: We assessed the clinical characteristics and management of nonagenarian patients with severe aortic stenosis.
Methods: A total of 345 (62.03% females) consecutive patients were referred to geriatrics from April 2016 to February 2022. Demographic variables, functional and physical status [Lawton and Barthel index (BI); Short Physical Performance Battery (SPPB)], cognitive status [Mini-Mental State Examination of Folstein (MMSE)], and comorbidity (Charlson index) were evaluated. A multidisciplinary valve heart team determined the optimal approach. The main reasons about conservative management were recorded.

Results: Thirty-one nonagenarians (8.98%) were recorded [19 females (61.29%)]; mean patient age: 91.19 ± 1.44 years. Twenty nine patients (93.55%) had a Lawton index < 8; 7 patients (22.58%) had BI = 100 and 24 (77.42%) were mildly dependence in basic activities of daily living (ADL) (BI: 61–99 points); 5 patients had SPPB ≥ 10 (16.13%); 24 (77.42%) SPPB < 10; 2 (6.45%) not available. Eighteen patients (58.06%) had absence of cognitive impairment; 4 mild (12.90%) and 9 moderate cognitive impairment (29.04%). Twenty-three patients (74.19%) had a Charlson index < 3. A total of 20 patients (64.52%) were managed conservatively, and 11 (35.48%) underwent transcatheter aortic valve implantation. Main reasons of conservative management: 8 frailty (40%); 5 comorbidity (25%); 2 patient's wishes (10%); 2 no cardiologic benefit (10%) and 3 others (15%).
Key conclusions: More than three quarters of study population referred to a geriatrician had limitation in instrumental and basic ADL, low physical performance and low comorbidity. Almost half of them had mild or moderate cognitive impairment. Two-third of nonagenarians received a conservative management, mainly due to the frailty.

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Positive effects on activities of daily living one year after receiving comprehensive geriatric assessment—results from the randomised controlled study CGA-Swed

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Acute hospital care is poorly adapted to the complex needs of frail older people. This exposes them to avoidable risks, such as loss of functional capacities. Being frail and in need of acute hospital care often leads to higher dependence in Activities of Daily Living (ADL), especially if one's needs are not acknowledged. Comprehensive Geriatric Assessment (CGA) is one way to meet frail older people's needs. The study's aim was to investigate the effects on frail older people's ADL 12 months after receiving CGA.
Methods: This is a two-armed randomised controlled intervention study. Participants were frail older people (75+) seeking acute medical care. The intervention was CGA performed at a geriatric management unit during hospital stay. The CGA included comprehensive assessment of medical, functional, psychological, social, and environmental status as well as treatment, rehabilitation, discharge planning, and follow-up. Multidisciplinary teamwork and a person-centred approach were used. The control received care at an ordinary medical hospital ward. The primary outcome was change in dependence in ADL from 2 weeks before admission to the 12-month follow-up.
Results: At admission, 155 people participated (77 in the control, 78 in the intervention). At the 12-month follow-up, 78 participated (40 in the control, 38 in the intervention). Attrition was mainly due to mortality. Four participants in the control (5.2%) and twelve in the intervention group (15.4%) had improved in their ADL one year after discharge (OR = 3.32; 95% CI = 1.02–10.79).
Key conclusions: In-hospital CGA performed at a geriatric management unit improves frail older people's ADL.

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Centenary morbidity profile

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Increasing in the quality of life and the improvement of healthcare systems, it's not unusual to reach old age. In Spain, it's estimated in 2050 that 31.4% of the population would be 60 years old or older, of whom 0.2% would be centenarians.
Methods: Longitudinal and retrospective study. We included centenarians who were admitted in the last two years. Variables: sociodemographic variables, comorbidities, polypharmacy, geriatric syndromes, functional and mental situation. Outcome variables: mortality and hospital readmission. Continuous variables are descriptively using the mean ± standard deviation (SD), and categorical variables with percentages. The curves for absence of mortality after hospital admission used the Kaplan-Meier method.
Results: In the last two years, fourty patients ≥ 100 years were admitted from the Acute Geriatric Unit. Mean age: 101.97 + 1.97, 90% were women and 62.5% lived in nursing home. Barthel index (mean ± SD) was 27.25 ± 31.95, RCM (mean ± SD) 2.77 ± 1.69, Charlson index (media ± SD)5,23 ± 3,29 and frailty (mean ± SD) 6.69 ± 1.195. Urinary incontinence, constipation, hyporexia and immobility were the most frequent geriatric symptoms. In-hospital mortality was 38%. 25 cases at follow up, 60% died and 56% required at least one hospital readmission. Of the patients who died, 40% occurred in the first six months post-discharge, and the main causes of death were cardiovascular and respiratory diseasesKey **Conclusions:** Centenarians are been studied limited and more prevalent nowdays, so their study may contribute to identify patients with a higher risk of sequelae in the short term that require closer follow-up

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Assessment of dysphagia in Idiopathic Parkinson's disease and identifying its relationship with frailty, malnutrition, sarcopenia and quality of life

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Dysphagia is a common symptom in Idiopathic Parkinson's disease (IPD) and its prevalence increases with advanced stages. We aimed to assess dysphagia with different methods; screen frailty, malnutrition, sarcopenia and reduced quality of life (QoL) and study the association of dysphagia with these parameters.
Methods: We conducted the study between January 2020-January 2022. We included participants older than 18 years having IPD diagnosis according to the United Kingdom Parkinson's Disease Society Brain Bank Diagnostic Criteria. We assessed the stage and motor severity of the disease with Hoehn Yahr scale and Unified

Parkinson's Disease Rating Scale (UPDRS)-third section, respectively. We assessed dysphagia with a simple question asking whether individuals having difficulty in swallowing food/drinks, via Eating Assessment Tool-10 (EAT-10) and Gugging Swallowing Screen (GUSS). We screened for frailty via FRAIL scale, malnutrition via Mini Nutritional Assessment-Short Form, sarcopenia via SARC-F and QoL via Euroqol-5Dimensions-3Levels (EQ-5D-3L) tests.
Results: Study group consisted of 112 individuals, 77 (69%) were male. Mean age was 62.0 ± 12.2. Median Hoehn&Yahr scale score was 2 (1–4) and mean UPDRS motor score was 30.5 ± 13.4. According to subjective dysphagia assessment, EAT-10 and GUSS; dysphagia prevalences were 27, 31.5 and 26.1%, respectively. There was a weak, but significant relationship between GUSS scores & subjective dysphagia and EAT-10 scores ($r = -0.388$ and -0430, respectively, $p < 0.001$). Objective dysphagia (via GUSS) demonstrated a significant relationship with motor severity of the disease, duration of the disease, frailty and QoL ($p = 0.03$, 0.02, 0.008, and < 0.001; respectively). According to Model 1, frailty increased the risk of dysphagia eight times, adjusted for duration of the disease and motor severity [OR (95% CI) = 8.0 (1.2–52.8)]. Similarly, model 2 revealed that frailty was the only independently associated factor with objective dysphagia; adjusted for age, number of drugs, duration of the disease and motor severity [OR (95% CI) = 15.8 (1.5–168.3)].
Conclusion: Our results revealed that physical frailty might be a significant risk factor for dysphagia. Therefore, we suggest that frailty assessment should be routinely performed in units where IPH patients are followed. Longitudinal studies are needed for identifying other risk factors related to dysphagia in IPH.

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Feasibility of a community-based integrated care model for home-dwelling older adults

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Evidence about the effectiveness of integrated care models (IC) in real world settings is not conclusive, and does not indicate if failure was due to problems with the intervention or the implementation. When evaluating IC models for frail home-dwelling older adults, assessing its implementation outcomes in addition to its effectiveness is essential, as implementation is a prerequisite for effectiveness. We therefore assessed proximal implementation outcomes as part of a feasibility study of a community-based integrated care model for home-dwelling older adults from the staff and clients' perspective.
Methods: A parallel convergent mixed-methods design was used to measure acceptability, adoption, and fidelity towards the components of the intervention (i.e. screening, comprehensive geriatric assessment (CGA), individual care plan development and follow-up). Sample: purposive sample of 18 frail older adults 75 + and the nurse and social worker implementing the intervention. Fidelity was measured using quantitative data collected from health records. Qualitative data to assess fidelity, feasibility, acceptability, and adoption was collected through meeting logs and interviews.
Results: Preliminary quantitative data analysis shows a high fidelity towards the screening, CGA and follow-up. The development of an individual care plan showed low fidelity, which was explained qualitatively by the differences in the acceptability and adoption of the new intervention between the nurse and the social worker. Interviews of older adults are currently being analyzed for acceptability and adoption.
Key conclusions: A feasibility assessment of an integrated care model can contribute to early identify problems with its implementation, and define new implementation strategies to increase the fidelity, acceptability and adoption of the intervention, prior to the evaluation of effectiveness.

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A geriatric assessment intervention in primary care provided by a nurse or a GP (CEPIA): a cluster-randomised trial

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Comprehensive geriatric assessment (CGA) is a multidimensional holistic assessment of the health status of elderly people. Although its benefit is known in hospital care, its impact is uncertain in primary care. We hypothesised that a geriatric assessment intervention led by a nurse, or a GP, would be more effective on over-70 s with chronic conditions than usual care in primary care. The primary objective was to assess the 1-year morbimortality with a composite criterion combining all-cause mortality, emergency visits, hospitalisations, and institutionalisations. Secondary objectives were assessed on each component of the composite criterion, quality of life, autonomy, polypharmacy, and care actions delivered.
Methods: A cluster randomised trial in 3 parallel arms between May 2016 and November 2017 in France. Inclusion criteria were: patients over 70, with a long-term illness scheme or an hospitalisation in the past 3 months. In arm 1, a systematic CGA was provided by a nurse and in arm 2, a case-by-case basis CGA was implemented by GPs. Arm 3 was usual care.
Results: 39 practices (89 GPs) included 634 patients: 231 in arm 1, 190 in arm 2 and 213 in arm 3. In ITT analysis, after adjusting and multiple imputations, arm 2 tended to be significant, with $p = 0.055$ (adjusted OR [IC95%] = 0.64 [0.41–1.01]). Arm 1 was not statistically significant.
Conclusion: This study shows the effectiveness of CGA in primary care when provided by GPs. Delegation of tasks to nurses, with no real collaborative work, could explain the failure of the arm 1.

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Characterization of data-driven geriatric syndrome clusters in older adults with HIV

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Living with HIV is proposed as a condition that accelerates/exacerbates aging. Therefore, the objective of this work was to estimate the prevalence of GS and determine the effect of the cumulative number of GS independently of chronological age amongst Mexican older adults with HIV.
Methods: Multi-centric, cross-sectional study including 501 Mexican community-dwelling adults of $\geq$ 50 years living with HIV. Participants underwent comprehensive geriatric assessment. The overall prevalence of nine selected GS and their cumulative number was estimated. An Age-Independent Cumulative Geriatric Syndromes scale (AICGSs) was constructed, and correlations between the AICGSs and HIV-related parameters assessed. Finally, to test whether the accumulation of GS could be the result of an adverse clinical profile due to HIV trails independent of age, k-mean clustering analysis were performed.
Results: Median age 56 (IQR: 53–61) years, 81.6% of men. Polypharmacy (74.8%), sensorial deficit (71.2%), cognitive impairment (53.6%), physical disability (41.9%), pre-frailty (27.9%), and falls (29.7%), were the more prevalent GS. 25.4% participants had at least three of any GS, 17.6% had $\geq$ 5 GS, and 1.6% did not have any. Participants with pre-frailty/frailty had lower current CD4 + counts respect to non-frail participants, and participants reporting falls had lower CD4 + nadir cells. A significant negative correlation between the AICGSs and normalized values of CD4 + nadir cells was found ($r = -0.126$). Likewise, a significant inverse association between the CD4 + nadir cells and the AICGSs was observed on linear regression analysis (β − 0.065). Cluster analysis identified three differentiated groups varying by age, AICGSs and HIV-related parameters.
Key conclusions: We observed a high prevalence of GS on the study's population; supporting the existing literature. The original and relevant results adding to the current knowledge are the findings of age-independent accumulation of GS and its associations with HIV-related parameters. Thus, Early recognition and management of GS are crucial in the promotion of healthier aging trajectories in people with HIV.

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Apathy, fatigue and physical function in older people with mild neurocognitive disorders

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Factors influencing physical function should be carefully addressed in neurocognitive disorders (NCD) because physical decline is related to cognitive decline and affects the autonomy. The aim of this study was to investigate how apathy and fatigue, which both manifest in reduction of activities, affect physical performance and daytime physical activity in older people with mild NCD.
Methods: 56 older people with NCD (mean age = 78.5 ± 5.6 years; MMSE = 25.3 ± 2.7) performed a 6-min walk test (6MWT), a 10-m walk test (10MWT), a Timed Up and Go (TUG) and worn an actigraph during seven consecutive days. Fatigue and apathy were assessed using the Fatigue Severity Scale (FSS) and the Apathy Inventory (AI).
Results: Higher fatigue was associated with worse performance in the 10MWT ($\beta = 0.43$, $p = 0.01$), the 6MWT ($\beta = -0.46$, $p = 0.001$) and the TUG ($\beta = 0.34$, $p = 0.01$). Higher apathy was associated with worse TUG performance ($\beta = 0.32$, $p = 0.02$), greater daytime sedentary ($\beta = 0.38$, $p = 0.02$) and lower moderate to vigorous intensity activity ($\beta = -0.28$, $p = 0.05$).
Key conclusions: Apathy and fatigue are two limiting factors with deleterious effects on physical function. More specifically, physical performance was mainly impacted by fatigue, while daytime physical activity was mainly impacted by apathy. We can hypothesize that apathy and fatigue are implied in the vicious circle of physical deconditioning. This suggests the importance of assessing them in the clinical practice, and to put in place strategies targeting physical functions in fatigued and apathetic patients. The TUG appears to be an interesting tool to assess the physical consequence of apathy and fatigue.

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Assessing decisional abilities in older adults

Abstract Area: Comprehensive Geriatric Assessment

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Assessing Decisional Abilities in Older Adults
Introduction: Assessment of the ability to make rational decisions is a crucial aspect of the ethical treatment of older adults. In this context, a nearly universal problem encountered by Adult Protective Services (APS) workers in the US is the refusal by clients to accept vital services. However, few APS agencies have adopted a standardized methodology or have trained their workers to assess decisional ability. Instead, screens for cognitive functioning, such as the MMSE or MoCA, have been widely used but are only partially relevant to the task at hand. The Cornell-Penn Interview for Decisional Abilities (IDA) is a semi-structured tool that assesses decisional ability in older adults. The specific aim of the Cornell-Penn IDA is to guide Adult Protective Services (APS) workers, or their equivalent in other countries, in gathering information on the ability of suspected victims of elder mistreatment to make decisions about the risks they face. THE CORNELL-PENN IDA. The interview consists of an introductory "Pre-IDA," in which the major problems faced by the client are reviewed and the single most imminent risk is selected. The subsequent 3 steps of the IDA are built upon this one risk. Based upon established components of decision-making, the 3 main, or "anchor" steps of the IDA are: Step 1. Understanding in general. Does the client recognize that the problem exists in general, that other people might be similarly affected?Step 2. Appreciation or insight. Does the client acknowledge that he or she is personally facing this problem or risk?Step 3. Reasoning. Can the client weigh the relative pros and cons of a plan proposed by himself or the worker to address the risk?Each step is rated Yes, No or Maybe, and verbatim quotes are recorded. Failure to acknowledge the general problem in Step 1 ends

the interview at that point. There is no numeric score, but there is a "Post-IDA" section in which the worker and supervisor review the written record of the IDA, determine a plan of action and if necessary refer the client on to professional capacity evaluation and possible involuntary intervention. FUTURE PLANS The Cornell-Penn IDA has now been successfully adopted by APS organizations in 4 populous US states—New York, Massachusetts, California, and Kansas. Preliminary data from California have supported the inter-rater reliability of the tool and the effectiveness of the IDA training program. In the UK a planned pilot will apply the Cornell-Penn IDA to the problem of high-risk discharges from hospitals. Abrams RC, Ansell P, [+ 6 authors], V Lo Faso. The Interview for Decisional Abilities (IDA): A tool to assess the decisional capacity of abused and neglected older adults. J Elder Abuse Negl 2019 Mar; 31(3) 244–254. https://doi.org/10.1080/089465566.2019 Stevens GD, Sadamitsu K [+ 3 authors], B Olsen. Inter-rater reliability of the California APS Interview for Decisional Abiliities (IDA 3.0-CA). USC Center for Elder Justice, OSF Preprints, 2020.

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From palliative sedation to curing an infection through situational diagnosis

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The comprehensive geriatric assessment is very useful to have an overall picture of the patient and act accordingly. We present a case of a patient who was admitted in the last days of life to start palliative sedation in the context of an acute condition. The comprehensive geriatric assessment had a great impact on decision making.
Methods: Anamnesis was performed with her relatives who reported a hypoactive confusional syndrome and functional deterioration since one week ago. Previously, the patient needed partial help in basic activities of daily living (BADLs) and had simple conversations. Complementary tests showed elevated inflammatory markers and alteration of the hepatic profile. An abdominal CT scan was performed, which ruled out biliary pathology but described a multilobar pneumonia that justified the patient's condition.
Results: Piperacillin-tazobactam was started and de-escalated to amoxicillin-clavulanate for 7 days. The clinical evolution was favorable since the confusional syndrome was resolved as well as the multilobar pneumonia. Dysphagia was ruled out and physiotherapy was performed for functional recovery. Finally, she was institutionalized at discharge.
Key conclusions: The situational diagnosis is obtained from the comprehensive geriatric and frailty assessment. It is a multidimensional assessment to establish objectives of greater or lesser intensity appropriate to the patient's profile and in agreement with the patient and family members. The therapeutic intensity and optimization of resources will be in accordance with the patient's prognostic approach.

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Guidelines on Comprehensive Geriatric Assessment for hospitalized older adults—an ongoing project of the German Geriatrics Society

Abstract Area: Comprehensive Geriatric Assessment

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The comprehensive geriatric assessment (CGA) is a multidimensional, interprofessional diagnostic and therapeutic process for the identification of medical, psychosocial and functional needs as well as resources of older adults followed by a tailored and integrated treatment and care plan. The application of CGA reduces rates of (re)hospitalization and discharge to long-term care facilities[1] and improves functional status[2] and quality of life[3]. Specialised care for older people at risk of or with functional decline is crucial during high-performance medicine. Recent years have registered a rising number of official guidelines from medical disciplines highly recommending the comprehensive assessment approach. Yet, because of a lack of specialized staff, CGA is often not applied and there is no official international guideline on CGA use in hospital settings. The German Geriatrics Society established a task force for the development of an official evidence- and consensus-based guideline (following the AGREE II standards). Its foundation is a systematic review and GRADE evaluation of available literature. The ongoing work focuses on different conditions and clinical settings, on application methods, design and efficacy of performed CGA. Clinically relevant PICO questions are being used, e.g. which dimensions a CGA should evaluate and which organisational framework conditions are necessary. The ultimate goal is to raise awareness towards the CGA use in older patients independent of individual organ illnesses and across specialties. These guidelines may be adapted at an international level according to the individual healthcare system characteristics. All other European groups working on comparable projects are welcome to share their thoughts.1. Ellis G, Gardner M, Tsiachristas A, et al. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev. 2017;9:CD006211. https://doi.org/10.1002/14651858.CD006211.pub32. Stuck AE, Siu AL, Wieland GD, Adams J, Rubenstein LZ. Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet Lond Engl. 1993;342(8878):1032–1036. https://doi.org/10.1016/0140-6736(93)92884-v3. Chen Z, Ding Z, Chen C, et al. Effectiveness of comprehensive geriatric assessment intervention on quality of life, caregiver burden and length of hospital stay: a systematic review and meta-analysis of randomised controlled trials. BMC Geriatr. 2021;21(1):377. https://doi.org/10.1186/s12877-021-02319-2

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Comprehensive Geriatric Assessment to reduce functional impairment during admission

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: With the comprehensive geriatric assessment, we were able to identify the different geriatric syndromes (GS) assessment, which helps us identify the problems of the elderly hospitalized patients and carry out a multidisciplinary treatment.
Objectives: To compare the approach to GS in a Geriatric ward (E1) rather than a conventional one (P). METHOD: Observational analysis of consecutive 100 patients admitted to the Geriatrics Service at the University Hospital of Navarra during 2021. 50 of them were admitted in E1, and 50 in P, were randomly chosen. Variables analyzed: Sociodemographic characteristics, length of stay, Barthel Index, and presence of cognitive impairment. Other data registered were: functional impairment, delirium, incontinence, pressure ulcers, dysphagia, and falls.
Results: N = 100 patients, 66 women, mean age 88.4 (SD 4.9), Barthel Index 63.02 (SD 33.1), length of stay 6.13 (SD 3.4). Both groups had functional impairment. Furthermore, there is more tendency to lift patients (98%), perform physiotherapy (34%), and promote urinary autonomy (46%) in the Geriatrics ward. Two falls were recorded in the geriatrics ward, which was informed and addressed. GS identifies and treats in E1: urinary incontinence (> 50% of patients), constipation (42%), pressure ulcers (10%), and dysphagia (26%). A high presence of delirium data is observed in P patients (42%) with more antipsychotics prescription during admission (42%). Still, the ambulatory is avoided, in only 12% of the patients is prescribed. Not enough dysphagia tests were performed.
Conclusions: A comprehensive geriatric assessment improves the maintenance of autonomy, diagnosticated geriatric syndromes and could reduce functional deterioration after admission.

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Sex-associated differences in older patients with chronic kidney disease (CKD)—prognosis outcomes on dialysis and kidney transplantations between sexes

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: It is well-known that women live longer but are more frail and suffer from more chronic diseases than men. Regarding chronic kidney disease (CKD), more women are affected than men, although men represent the majority of chronic dialysis patients. In terms of deceased-donor kidney donation, women have a lower organ availability than men. There is little data on the prognosis of older women who are on chronic dialysis or receive a kidney transplant.
Patients and methods: Study participants were enrolled between 2016 and 2019 in a prospective observational study with one year follow up at the Nephrology ward of the University Hospital of Cologne. Inclusion criteria for this secondary analysis were age > 65 years and CKD according to the "Kidney Disease—Improving Global outcomes" (KDIGO) classification. All patients received a Comprehensive Geriatric Assessment (CGA) with a prognosis calculation by the multidimensional prognostic index (MPI), which is informative about 1-year mortality. The MPI yields a continuous number between 0 and 1 and stratifies patients into three risk groups (MPI-1, low risk, 0.00–0.33; MPI-2, medium risk, 0.34–0.66; MPI-3. high risk, 0.67–1.0).
Results: Of 375 participants, 242 were male (64.5%, mean age 77.6y) and 133 female (35.5%, mean age 78.1y). Women had a significantly higher MPI score on admission than men (0.51 vs. 0.47, p = 0.002). 37% of men (n = 89) and women (n = 39) were on chronic dialysis. A kidney transplantation was received by 13% of men and 9.8% of women. Survival after one year was significantly lower in women on chronic dialysis compared to women not on chronic dialysis (p = 0.012). For all CKD patients without performing chronic dialysis, survival after one year was significantly higher in women compared to men (p = 0.049). The prognosis assessment by MPI was slightly better in women than in men in chronic dialysis patients (0.47 vs. 0.51, p = 0.811); in kidney transplant patients, MPI was also lower in women than in men (0.45 vs. 0.41, p = 0.553). DiscussionThese results suggest a survival disadvantage for older women suffering from CKD who are on chronic dialysis. In men there was no difference in terms of survival with or without chronic dialysis in this cohort. The prognostic calculation by MPI indicates a slightly improved prognosis for women who are on chronic dialysis or have received a kidney transplant compared to men, although this trend is not statistically significant. Prospective translational research is needed to understand the reasons for the survival disadvantage of women on chronic dialysis.

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Palliative percutaneous abdominal drainage in a person-centered care program for complex chronicity (PropCC). Do we need the hospital?

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: To describe the intervention carried out on a patient, within the framework of the ProPCC.
Method: Synthesis and chronological-review of clinical history.
Results: A 82-year-old male with hypertension, diabetes, advanced liver cirrhosis with refractory ascites requiring evacuating paracentesis at hospital and ischemic stroke. In September 2019 complexity was detected in emergency department by the hospital ProPCC team. The integrated evaluation wasMild dependence for basic daily activities with recent functional loss. Mild cognitive impairment,

emotional lability, poor apetite. Living with partner in adapted house and good economic capacity. Good relationship, support from children. He delegated clinical information to the family. Patient was catalogued as MACA (advanced chronic disease and no-response to the surprise question) and included in ProPCC program. The aims of the PICC (shared individual intervention plan) were exploring wishes and adequating therapeutic intensity. Patient and family expressed desire to carry out care at home and to avoid hospital transfers as much as possible. Since December 2019 primary care ProPCC, Hospital at Home and Palliative Care Teams worked in coordination to perform paracentesis at home with a periodicity of up once a week, obtaining 10–12 L per session. In February 2021 a palliative percutaneous drainage was placed. In April 2021, patient died peacefully at home.

Conclusions: ProPCC is focused on people with multimorbidity, advanced diseases and complex health needs. Patients, caregivers and healthcare professionals participated in the design. It aims to be an instrument of person-centered care to obtain better health outcomes, greater professional satisfaction, greater value and, imporatntly, better patient experience.

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Research on population ageing in morocco: a scoping review and thematic analysis

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The world counted 726 million people aged $\geq$ 65 in 2020. Morocco is in phase 3 of its demographic transition and expects 10 million older adults by 2050. This vulnerable population needs special cares. Geriatrics as a medical specialty is unknown in Morocco. Research must be developed to further adapt the health system to respond to the demand taking into account the evidence-based medicine. Our objective was to explore the research domains covered in literature on the ageing population in Morocco between 2010–2021.

Methods: A scoping review was carried according to the PRISMA checklist. Data sources were Medline, Google Scholar, governmental websites. The keywords were "elderly", "geriatrics", "geriatric health services", "Morocco". We included original articles and reports on older adults in Morocco. A thematic content analysis was done.

Results: We included 62 records. Mainly, we found original articles (n = 53) in the epidemiology field (n = 48). The main themes identified were 1) geriatrics with a majority of papers on physical health, 2) the habits with mainly the medical adherence and cares consumption and 3) the ageing process.

Conclusions: The literature on the older persons in Morocco covers different health problems and impairments without any conceptualization of specific geriatric diagnoses and therapeutic managements. There is a paucity of research on the ageing population in Morocco. The research should advance to enhance holistic cares for older adults to face the challenge of ageing with dignity. This study represents the first step to strengthen, orient and develop the multidisciplinary research on the older persons in Morocco.

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A quality improvement project to improve communication with next of kin in an inpatient geriatric population

Abstract Area: Comprehensive Geriatric Assessment

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Communication with relatives is a vital component to caring for the elderly. This quality improvement project aimed to audit failings in communications with relatives on an inpatient geriatric ward to improve our practice to provide excellent quality care. To understand what constitutes good communication we surveyed the patient population to assess their opinions prior to any intervention. We also surveyed how regularly they would like their relatives to be updated. We reviewed barriers to good quality and quantity of communication with relatives through discussions with the doctors on the ward. For the first PDSA (plan-do-study-act) cycle we focused on quantity of updates. Our objectives were as follows; "Patients should have their NOK updated within 48 h of their first consultant ward round on Sage Ward" and "Patients NOK should be updated every 7 days ". Our first intervention was to introduce a "NOK last updated" column to board round. Prior to intervention, 18.8% of patients surveyed felt that the medical team were not updating relatives enough. Following our intervention, we noted a 15% increase in patients who had received a NOK update within 48 h of admission and a decrease of 24% in the number of patients who had gone more than 7 days without a family update. Updating relatives should be considered a key component of good quality care in the geriatric population. Including NOK updates in board rounds keeps the medical team accountable for updating relatives who otherwise might be feeling in the dark.

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Development and implementation of geriatric-surgical co-management for fracture patients

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Due to population ageing, an increasing number of older patients requires surgical interventions. Multimorbidity, polypharmacy and the presence of geriatric syndromes in older patients, makes their perioperative care more complex. Geriatric co-management on non-geriatric wards has proven effective in improving patient outcomes. The aim of our study was to 1) develop a contextually adapted nurse-led geriatric-surgical co-management model and 2) select strategies to successfully implement the model on the traumatology ward of the University Hospitals Leuven in Belgium.

Methods: The co-management model was developed and adapted based on literature review, document analysis and stakeholder

meetings, including nurses, physicians, allied health and IT/data warehouse professionals. Implementation strategies were determined based on clinical experience of the multidisciplinary research team and stakeholder input. Implementation strategies were mapped according to the ERIC taxonomy.
Results: The final co-management model includes four core components: geriatric screening upon hospital admission, bed-side geriatric evaluation, individual care planning using standardized geriatric protocols, and systematic nurse-led follow up. The preliminary implementation strategies include: development of project website for internal use, organization of monthly project meetings and weekly stakeholder meetings, programming of the baseline assessment tool, development of a detailed manual including processes and protocols, and programming key performance indicators, among others.
Key conclusions: Intensive stakeholder involvement and carefully selected implementation strategies supported the evolvement of an initially nurse-led model into an interdisciplinary co-management model. This is in line with the strong interdisciplinary character of geriatric care and will help towards sustainable implementation and upscaling of the model.

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Outcomes from a pilot project offering frail older adults living with HIV a virtual MDT Comprehensive Geriatric Assessment

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Advancements in HIV treatment has resulted in an ageing population in people living with HIV (PLWH). Increasing prevalence of frailty in older PLWH has been demonstrated, giving rise to multi-morbidities, polypharmacy and consequently, complex medical and social needs. Approximately 5650 people are living with HIV across Greater Manchester.1 With increasing patient complexity, a pathway was developed to help provide holistic care and improve quality of life for older adults living with HIV.
Methods: A pilot involving multi-disciplinary professionals from the hospital frailty, HIV and community teams was established. Patients were screened using the Clinical Frailty Scale2 and patients with a CFS $\geq$ 4 were referred for completion of a comprehensive geriatric assessment (CGA). Patients would then be discussed at the Frailty MDT meeting, where action plans were devised.
Results: 47 patients were assessed between October 2020 to December 2021, with 30 eligible for review in the frailty clinic. Commonly reported issues were mobility n = 26 (86.6%), pain n = 23 (76.6%), low mood n = 14 (46.6%), memory issues n = 3 (43.3%) and falls n = 12 (40%). Following MDT recommendations, 8 (26.6%) referrals were completed for social care,1 (3%) referral for safeguarding and 9 (30%) referrals for active case management community teams for co-ordination of care in the community. Deprescribing recommendations were suggested for 16 (53.3%) patients and new medicine recommendations made for 24 (80%) patients.
Conclusion: A collaborative MDT approach to managing older PLWH can facilitate formulation of action plans to address patients physical, psychological and social needs.

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Avoidable care transitions: consensus-based definition using a Delphi technique

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Some care transitions are avoidable [1], and it has been shown that a reduction in care transitions has positive implications on patient outcomes, cost control and quality of care [2]. However, there is no commonly accepted definition for "avoidable care transitions", leading to miscommunication in research and clinical practice [3,4,5]. Hence, this study aimed to find a consensus-based definition for "avoidable care transitions".
Methods: A four round Delphi study was conducted as part of the TRANS-SENIOR international training and research network. It was based on a literature review that identified existing definitions surrounding "avoidable care transitions". In total 106 definitions were identified and coded to find themes. The codes formed the base of the Delphi survey.
Results: A total of 99 experts from nine countries participated. After four rounds, the agreement rate was 91%. The following definition was concluded as final: "Avoidable care transitions 1) are without significant patient-relevant benefits or with a risk of harm outweighing patient-relevant benefits and/or 2) are when a comparable health outcome could be achieved with lower resource settings using the resources available in that place/healthcare system and/or 3) violate a patient's/informal caregiver´s preference or an agreed care plan."**Conclusion:** Consensus on a definition for "avoidable care transitions" was reached by a multidisciplinary and international panel of experts. The definition might enhance the common understanding of avoidable care transitions and is now ready for application in research and quality and safety management in healthcare.

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Change in frailty status among severe COVID-19 older survivors in a long COVID-19 clinic in Mexico City

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Frailty is a geriatric syndrome that predicts poor outcomes in acute [1] and long-term care settings [2]. It has been extensively studied as an adverse outcome marker in patients with COVID-19. However, little is known about its determinants in COVID-19 survivors. We aimed to determine the comorbidities, post-COVID symptoms, and geriatric issues associated with a change in frailty status in COVID-19 survivors receiving care at a third-level hospital.
Methods: Older adults with a history of severe COVID-19 were included. Frailty status was assessed at baseline (2 weeks before admission as per clinical history) and at 4-months and 1-year after discharge using the Clinical Frailty Scale (CFS). A geriatric assessment (GA) was performed in both visits after discharge. Usual cut-off points were used [3], and change within categories was investigated. Univariate and multivariate logistic regression analyses of frailty category change (worsened, improved) were performed.
Results: The median age of participants was 72 (range 65.3–87.3), and 59.4% were women. Multivariate logistic regression analysis showed that a poor social network identified by a Lubben scale < 6 (OR 25.02, $p = 0.036$) and the lack of family support (< 2 encouraging family members) (OR 5.5, $p = 0.019$) were independently associated with worsening frailty status at the 4-month visit. In contrast, having a good social network (Lubben scale ≥ 6) was associated with improved frailty status at the 1-year follow-up (OR 19.9, $p = 0.022$).
Key conclusions: Social network was significantly associated with change in frailty status at 4-months and 1-year follow-up in older COVID-19 survivors.
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Frailty and cognitive impairment increase the risk of mortality

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The Frail-VIG index (IF-VIG) is based on geriatric assessment and presents a good discriminative capacity for the degree of frailty. The purpose of this study was to assess the degree of frailty in patients with cognitive impairment and its progression over time.
Methods: Prospective, observational, longitudinal study, conducted in outpatient clinic with a three-year follow-up duration. We included 101 consecutive patients referred for cognitive impairment, from September to December 2018. Followed up to 3 years. Participants were classified in groups based on their Frail-VIG score (< 0.20 No frail; > 0.20–0.36 Mild frail; and > 0.36 Moderate-to Severe frail). Mini-mental Examination of Folstein (MMSE), GDS and Barthel Index were evaluated at baseline. Mortality and adverse outcomes were evaluated in the following 3 years.
Results: 101 patients, 33% men. Mean age 84.9 ± 5.2 Barthel > 90 in 43%; IF-VIG < 0.20: 24; 0.20–0.36:57 y > 0.36:20. GDS 3–4: 83%; GDS $\geq$ 5:11%. In this period, 57 (56,4%) patients had hospital admission (9 not frail; 32 mild frail and 16 moderate-severe frail). Hospitalization was statistically related ($p < 0.02$) between frail and not frail, and also related ($p < 0.02$) between mild frail and moderate-severe frail. At 3 years, 37 (36.6%) patients had died, 6 (25%) in No frail group, 15 (26.3%) in Mild frail group, and 16 (80%) in Moderate-severe frail group. At 3 years was statistically related ($p < 0.001$) between mild frail and moderate-severe frail, but not related ($p > 0.17$) between no frail and frail.
Conclusions: The degree of frailty, measured using the Frail-VIG index, indicate a relationship between frailty and adverse health outcomes.

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Retrospective analysis of one year activity of an orthogeriatric unit: looking for improvement opportunities

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Orthogeriatric Units (OGU) have proven to reduce length of stay, mortality and functional deterioration in older patients with fragility fractures. This OGU works with patient centered co-management by a multidisciplinary team and assists patients with hip fracture over 65 years old. The COVID pandemic challenged care

quality for OGU patients. The present analysis intends to find priorities for quality-of-care improvement.
Methods: Retrospective observational study of all patients admitted to an OGU during 2021.
Results: 310 patients were admitted, 74% were women, mean age was 83 years, 31% were nursing home residents, 62% had at least moderate frailty (clinical frailty scale); Most (63%) were dependent for instrumental daily living activities (Lawton scale), 72% autonomous or lightly dependent for basic daily life activities (Barthel index). 78% had autonomous gait (Functional ambulatory categories). 57% had at least moderate cognitive impairment (Global Deterioration Scale). Most patients (77%) had Charlson comorbidity index 4 or above. 308 patients were submitted to surgery, but only 30% in the first 48 h. Only 3 patients had a justifiable cause for surgery delay. Average length of stay was 11 days. In hospital mortality was 7%, most covid related deaths. Delirium, infectious complications and pressure ulcers incidence were 37%, 5% and 27% respectively.
Key conclusions: In this OGU health care quality was compromised by covid pandemic and is urgent to recover previous standards. This study allowed to prioritize the following interventions: propose a fast track protocol for hip surgery, draw a pressure ulcers educational and auditory program, implement a delirium prevention protocol.

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Comparison of the predictive value of physical function assessment for adverse health outcomes among elderly people in community-dwelling elderly in Beijing

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: WHO proposed that the most important thing to achieve healthy aging is to maintain intrinsic ability, among which physical function has the greatest impact. There are many physical function tests used in clinical practice, including gait speed (GS),time up and go test (TUGT),5-repetition sit-to-stand test (FRSST) and short physical performance battery (SPPB). We compared the predictive value of the above tests for all-cause mortality and falls in the community elderly to select the most effective method.
Methods: This study included the $\geq$ 75 years elderly in a community in 2018. Social-demographic data and CGA were collected at baseline, using GS, TUGT, FRSST and SPPB to evaluate physical function. All-cause death and falls were recorded during follow-up in 2021.
Results: A total of 216 elderly people (83.9 $\pm$ 4.5) were included, with 124(57.4%) women, 25 deaths and 99 falls. Multivariate logistic regression (adjusted for age, sex, comorbidity and polypharmacy) showed that GS (OR 0.079, $p = 0.009$), TUGT (OR 1.053, $p = 0.015$), FRSST (OR 1.038, $p = 0.003$) and SPPB (OR 0.790, $p = 0.007$) could independently predict all-cause death. GS (OR 0.141, $p = 0.001$),TUGT (OR 1.070, $p = 0.002$) and SPPB (OR 0.847, $p = 0.003$) were independent predictors of falls. The AUC of GS, FRSST, TUGT and SPPB for predicting all-cause death was 0.722,0.760,0.787 and 0.741 respectively. The AUC of GS, TUGT and SPPB for predicting falls was 0.703,0.724 and 0.707. Comparing the AUC before and after adjusting for co-variables, there was no significant difference in the predictive value of TUGT for predicting all-cause death (0.787 vs 0.841, $p = 0.303$) and falls (0.724 vs 0.751, $p = 0.237$).
Key conclusion: Among the elderly in the community, the 3-m standing and walking test was better than other physical function tests in predicting all-cause death and falls.

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The relationship between geropsychiatric assessment scales and life quality in older patients during the COVID-19 pandemic. Where does frailty stand?

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: This study aimed to show the relationship between geropsychiatric assessment scales and life quality in older patients during the COVID-19 pandemic, and the role of frailty assessed by different scales.
Methods: 136 patients admitted to the geriatric outpatient clinic were included. The Katz activities of daily living (ADL), Lawton's instrumental activities of daily living (IADL), Mini-mental State Examination (MMSE), Mini Nutritional Assessment-Short Form (MNA-SF), 15-item Geriatric Depression Scale (GDS-15), Cumulative Illness Rating Scale for Geriatrics (CIRS-G), Multidimensional Perceived Social Support Scale (MSPSS), Templer's Death Anxiety Scale (T-DAS), Loneliness Scale for Elderly (LSE), Quality of Life Scale in Older People (CASP-19), Generalized Anxiety Disorder-7 (GAD-7), Tilburg frailty indicator (TFI), FRAIL scale, and Clinical Frailty Scale (CFS) were performed.
Results: The median (min–max) age was 72.2 (65.3–90.3) years, and 61.8% were female. The CASP-19 had strong inverse correlations with TFI ($r = -0.715$) and LSE ($r = 0.725$). The CASP-19 had moderate inverse correlations with GDS-15 ($r = -0.612$), T-DAS ($r = -0.414$), FRAIL scale ($r = -0.481$) and CFS ($r = -0.573$); weak inverse correlation with CIRS-G (($r = - –0.372$) and GAD-7 ($r = -0.373$). MSPSS had positive moderate correlation with CASP-19 ($r = -0.490$). ADL, IADL, MMSE, MNA-SF, GDS-15, CIRS-G, MSPSS, T-DAS, LSE, CASP-19, and GAD-7 scores were significantly worse in the frail groups.
Conclusion: Depression, anxiety, loneliness, social support, chronic diseases, and frailty affect life quality in the COVID-19 pandemic. Although CFS, FRAIL scale, and TFI are ALL related to life quality, TFI is the best.

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The Comprehensive Geriatric Assessment and the Oncological Multidimensional Prognostic Index as an integrated and a standardized part of the diagnostic and therapeutic course of the over 70 years old patients with breast cancer in an Italian region

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Breast cancer is the most frequent cancer in women worldwide. Given the high incidence in post-menopausal age and also the high prevalence of long survivors, growing attention is now focused on the long term effects of therapies and the quality of life in patients over 70 years old. Despite advances in management of breast cancer, comprehensive geriatric assessment (CGA) is rarely effectuated in clinical practice.
Methods: In this setting, as recommended by main international guidelines, we decided to introduce the geriatric evaluation using the oncological Multidimensional Prognostic Index (onco-MPI) in the already standardized diagnostic and therapeutic course of the patient. It is a project that we are going to present to the Ligurian Region Government in June 2022 and it involves the two major breast units (San Martino and Galliera hospitals) of the Ligurian Region (one of the European regions with highest prevalence of older population). Women over 70 years should be carefully assessed for their fragility at baseline and periodically reassessed during cancer therapy.
Results: We expect to reduce the 5 years over-all mortality, the rates of hospitalization, the incidence of adverse events and to improve the quality of life (measured by a quality questionnaire), avoiding the over-treatment or the under-treatment and the toxicity of the cancer therapy, and improving the adherence to the therapy.
Key conclusions: The aim of the project is to confirm that increased awareness of the utility of the CGA is needed to improve the outcomes of the breast cancer treatment in the women over 70 years old.

P-269

Self-perceived functioning and (I)ADL questionnaires after a hip fracture: Do they tell the same story?

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: (I)ADL questionnaires are often used as a measure of functioning for different purposes.[1] Depending on the purpose, subjective patient perspectives about their functioning can be an important part of this measurement. However, it is unclear to what extent (I)ADL instruments capture self-perceived functioning. This study aims to explore what functioning means to older persons after a hip fracture and to assess the extent to which (I)ADL instruments align with their self-perceived functioning.
Methods: This qualitative interview study is part of a prospective cohort study on recovery after a hip fracture among older persons in a hospital in one of the largest cities in the west of the Netherlands. Eighteen home-dwelling older persons ($\geq$ 70 years) who had a hip fracture 6–12 months ago were interviewed about functioning before and after the hip fracture. Interviews were coded and analysed using the framework method.
Results: The activities mentioned by participants to be part of their self-perceived functioning could be split into activities necessary to maintain the desired level of independence, and more personal activities that were of value to participants. Both the 'independence activities' and the 'valued activities' mentioned went beyond the activities included in ADL and IADL questionnaires. Due to various coping strategies, limitations in activities that were specifically measured in the ADL and IADL questionnaires did not necessarily lead to worse self-perceived functioning.
Conclusion: Self-perceived functioning differs from functioning measured with (I)ADL questionnaires in the items included and the weighing of limitations in activities.

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Handgrip strength and serum albumin in hospitalized older patients

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Handgrip strength (HGS) is a biomarker of the overall health status. Studies have shown relationship/association between reduced HGS and nutritional/inflammatory status, number of comorbidities, falls, bone mineral density, fragility fractures, mild cognitive impairment, quality of life and all-cause mortality. Albumin is a marker of disease severity in critically ill patients and chronic diseases. Aims: To assess the correlation between HGS and serum albumin in older inpatients.
Methods: An observational, cross-sectional analysis was carried out on older inpatients admitted to a district general hospital in the UK. The HGS was measured using a hand held JAMAR dynamometer; the Southampton protocol was used. Serum albumin was measured on admission as part of routine screening. Consecutive patients 60 years and older were included in the analysis. Patients with incomplete data were excluded. IBM SPSS 28 software was used for statistical analysis. Descriptive statistics was used to describe baseline characteristics. Pearson's correlation coefficient and linear regression analysis were used to measure correlation.
Results: 105 patients were included in the analysis; 41 males and 64 females. Mean age for men was 82.2 years (SD 9.21) and mean age for women was 83.1 years (SD 7.41). Mean serum albumin was 36.7 g/L ($\pm$ 4.9), and 36.6 g/L ($\pm$ 5.9) for male and female patients respectively. The mean HGS for the men was 20.21 kg (SD 8.09) and for the women was 14.31 kg (SD 8.09). According to the European Working Group on Sarcopenia in Older People (EWGSOP) the cut offs for low HGS are less than 27 kg in men and less than 16 kg in women. There was statistically significant positive correlation between HGS and serum albumin in male and female patients ($r = 0.341$; $p = .03$, and $r = 0.266$; $p = .03$ respectively).

Limitations of the study: Admission diagnosis and past medical history were not documented. Either can impact HGS or serum albumin. It was not clear whether the reduction of HGS is acute or chronic.
Conclusion: There is positive correlation between handgrip strength and admission serum albumin in hospitalized inpatients, both men and women.

P-271

The benefits of a geriatric medicine liaison service for older patients undergoing emergency laparotomy at Manchester Royal Infirmary (MRI): a retrospective analysis

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Emergency surgery in the older population is challenging due to increasing comorbidities and frailty. The British Geriatrics Society (BGS) recommends that all patients aged > 65 with Clinical Frailty Score (CFS) > 5 or aged > 80, who are undergoing emergency laparotomy, should receive geriatrician-led multidisciplinary comprehensive assessment (CGA) within 72 h of admission, as this has been shown to reduce mortality and institutionalisation [1].
Methods: A liaison service was commenced in October 2022, consisting of two ward rounds per week, led by a consultant geriatrician. The service was offered to all general surgical patients who met the BGS recommendations above. A retrospective analysis was done based on data from National Emergency Laparotomy Audit (NELA) database for older patients who received emergency laparotomy before and after October 2022 [2].
Results: 13 patients were enrolled into NELA's database following implementation of the liaison service in comparison to 18 patients sampled pre-service. The median age of patients in the intervention group was 74.3 years with average CFS of 4.1 in comparison to 79.8 years with average CFS of 4.7 in the pre-intervention group. Median length of stay (LOS) in those receiving CGA was 17 days in comparison to 21.5 days for those who did not receive a geriatrician assessment. Mean critical care LOS and NELA scores in both groups were equivalent at 3.7 days and 13% respectively.
Conclusion: The median length of stay of older patients undergoing emergency laparotomy at Manchester Royal Infirmary reduced by 4.5 days following implementation of geriatric medicine liaison service.
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Evaluation of patient experience of elderly hospitalized patients and their caregiver: EXPERTAGE project

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The human dimension is becoming increasingly central in the management of elderly patients and their caregiver. The concept of « patient experience» has a role to play in this connection. The patient experience of elderly hospitalized patients and their cargiver seem complementary. The objective of the present study is to describe the experience of elderly patients hospitalized in an acute geriatric medicine unity, and their caregiver's.
Methods: We performed a two step, monocentric, prospective qualitative study based on semi-directive interviews of elderly patients and their caregiver, during the hospitalization and two months later, and compared the results.
Results: 44 interviews were conducted during the hospitalization. 50% of the patients, and 30% of the caregivers included weren't interviewed two month later, mostly because of the worsening of the patients' health condition. The analysis of the 38 interviews showed 5 themes: the image of the hospital determined the experience and defined a therapeutic contract between the patient and the medical staff; the image of geriatric médicine was linked with the respect of human rights and the overall management of the patient; the patient/caregiver relation was sometimes experienced as inverted, and infuenced the experience; the hospitalization was the place of confrontation with the aging process; the COVID-19 outbreak impacted their experience. The patients' description of their experience during the hospitalization seemed more accurate than two months later.
Key conclusions: This study assessed the patient experiences of elderly patients and their caregivers', which were mostly similar. Overall, the experience was positive, but further studies are needed to better determine those findings.

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Project title: Analysis of the evolution of patients with symptomatic aortic stenosis candidates for treatment with TAVI

Abstract Area: Comprehensive Geriatric Assessment

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Summary Introduction: Percutaneous aortic valve implantation (TAVI) is a consolidated therapy in patients with severe symptomatic aortic stenosis. The different technological advances, as well as the

learning curves, already overcome by the different multidisciplinary teams, have substantially improved clinical results in the short and medium term.
Main goal: Analysis of the characteristics and survival of patients with severe symptomatic aortic stenosis candidates for TAVI by performing various scales to detect the frail elderly in the Geriatrics service of Hospital Nuestra Señora deGracia from 01/01/2020 to 12/31/2020.
Methods: The aim is to analyze patients, referred from the Cardiology service to assess the indication for treatment with TAVI. For the analysis, the basic characteristics of each patient will be collected retrospectively, as well as various scales for detecting the frail elderly, whether they were candidates for TAVI, the postoperative evolution and survival at one year. Subsequently, the statistical analysis of the collected data will be carried out and the results will be presented.

P-274

Instrumented evaluation of static balance: the complementary expertise of engineering science and clinicians

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Balance is a complex function relying on biomechanical, motor and sensory systems, coordinated by the nervous system. The study, diagnosis and rehabilitation of balance is therefore multidisciplinary by nature, involving neurological, physical therapy, as well as psycho-social knowledge. Besides, other domains including mathematics and computer science contributed to further explore this function by developing instrumented tools such as force platform and inertial sensors. The signals obtained from those tools require a technical expertise to be processed and analyzed properly, but clinicians are essential to explicit the physiological phenomena they represent.
Methods: Through a literature review on the evaluation of static balance with a force platform, on 6 databases and search engines, we identified the protocols and signal features used to describe older adults' balance, as well as their relevance to reflect impairments of sensory systems involved in balance.
Results: Protocols and features used to explore and describe the role of sensory afferences in older adults' balance is extremely diverse. Although sensory deprivation impact simple descriptive features like sway amplitude or speed, there is no consensus on the clinical interpretation of these results in relation to balance deficits in the elderly. We reckon that more complex analysis such as local and time-frequency analysis could be clinically relevant by revealing sensory and motor strategies linked to specific balance impairments.
Key conclusions: This review highlighted a diversity of protocols, requiring a "multi-level" approach to study their impact on the center of pressure's trajectory, and new analysis to understand the underlying physiological phenomena.

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Frailty and quality of life in elderly (QoL) with cognitive impairment (CI) or Mild Cognitive Impairment (MCI) living in the community

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Prevalence of CI among elderly patients in primary care is high. In addition to the cognitive diagnosis, it's important to assess the functional and emotional status, presence of frailty and QoL through the Comprehensive Geriatric Assessment (CGA) to establish individualized care plans and prevention strategies.
Objectives: To describe the frequency of CI and MCI among geriatric patients who consulting by cognitive problems and to analyze the frailty, functional, emotional factors, and quality of live related to the presence of CI or MCI.
Material and methods: Subjects were recruited from the 6 Primary Health Care Centers in Barcelona. Three groups of patients were included according to their cognitive status: patients with CI, MCI and normal cognition (NC). CGA was performed: Barthel index, Lawton scale, yesavage test, QoL (EuroQol-5D) and Clinical Frailty Scale (CFS).
Results: 337 patients were included: 57% women. Average age 78 years. Subjects with NC 163(48.8%) MCI 107(31.8%) and CI 67(19.9%). Mean Lawton scale in NC 7.07, MCI 6.53 and CI 4.90($p < 0.001$). Mean CFS in NC 2.65, MCI 2.89 and CI 3.28($p < 0.001$). Mean Barthel index in NC 99.73, MCI 98.97 and CI 95.9($p < 0.001$). Mean yesavage test in NC 3.21, MCI 4.17 and CI 4.06($p < 0.001$). Mean EQ-5D in NC 0.9688, MCI 0.9489 and CI 0.9509($p < 0.001$).
Conclusions: Patients with IC present greater frailty and functional dependence for basic and instrumental activities of daily living. Patients with MCI have a worse quality of life and higher prevalence of depression.

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Point-of-care ultrasound and geriatric patients: a systematic review

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Geriatric patients are characterised by multimorbidity, polypharmacy, atypical presentation of disease, and a degree of frailty. These traits constitute a diagnostic challenge for physicians during clinical examination. Point-of-care ultrasound (PoCUS) is a non-invasive, safe, and patient-centered bedside approach for the

clinical examination, making it ideal for geriatric patients. Objectives: To assess the diagnostic accuracy of point-of-care ultrasound for the diagnosis of the most common emergency medical conditions affecting lungs, abdominal organs, along with the heart and deep venous system in the lower extremities in geriatric patients.
Methods: We plan to search the following databases: CENTRAL, CINAHL, SCOPUS, MEDLINE, Web of Science, EMBASE, and LILACS for PoCUS studies conducted in a geriatric population without language or publication restrictions. We will include randomised controlled trials, meta-analyses, and diagnostic accuracy studies conducted in a hospital or primary care setting. We will include trials randomising individual patients as well as clusters of patients. Two reviewers will independently, and in duplicate, screen abstracts, perform risk of bias assessments, and extract data on the following primary outcomes: I) sensitivity and specificity II) likelihood ratio, and III) diagnostic accuracy. We will assess the certainty of evidence according to the five GRADE domains.
Conclusion: PoCUS is evolving, and future updates of this upcoming study will be conducted to ensure a living, up-to-date, and state-of-the art systematic review on the usage of PoCUS in geriatric patients. This will serve as a fundament for clinicians and researchers to encourage the further use of the method in geriatric patients.

P-277

A qualitative study: the experience of geriatricians with active ageing of older adults with Parkinson's disease

Abstract Area: Comprehensive Geriatric Assessment

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Purpose: The main purpose of this qualitative research was to study about how geriatricians manage older adults with Parkinson's disease holistically in the light of active ageing policies. The idea is to analyse the geriatricians' perspectives about the available services in Malta, interdisciplinary teams and resources and any possible improvements.
Methods: Interpretative phenomenological analysis (IPA) was used as it allows discovering the details of each individual participant. Five geriatricians volunteered to participate and fulfilled the criteria after an invitation through the Malta Geriatric Society. Snow balling was used to recruit the other two. Semi-structured interviews were then conducted, transcribed and analysed.
Results: Five superordinate themes were identified with various themes and subthemes. These were: Parkinson's disease as a major health concern; management of the condition; challenges in the community; active ageing policies and the future of Parkinson's disease in the community.
Conclusions: Parkinson's disease is a common, challenging condition which is best managed by an interdisciplinary team approach as confirmed by international research. Having Parkinson's disease specialist nurses would be of added benefit to the patients and caregivers.
Keywords: Parkinson's disease, active ageing, older adults, geriatricians, interdisciplinary team

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Pathological ageing in autism and intellectual disability adults: arguments from EFAAR (Frailty Assessment in Ageing Adults with Autism Spectrum and Intellectual Disabilities) cohort

Abstract Area: Comprehensive Geriatric Assessment

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Autism spectrum disorder (ASD) is a whole-body disease in which comorbidities—in particular co-occurring intellectual disability (ID)—contribute to premature mortality. Nevertheless, ageing with ASD + ID is few explored. Objectives: To assess geriatric syndromes (comorbidity burden, multimorbidity and frailty) and their association with ASD severity, adaptive skills, level of autonomy, and drug exposure in a well phenotyped sample of adults with ASD + ID—the EFAAR cohort.
Methods: A total of 63 ASD + ID adults with a mean age of 42.9 ± 15.1 years were recruited from nine specialized institutions. They underwent a comprehensive assessment. The comorbidity burden was evaluated using the Cumulative Illness Ratings Scale (CIRS-G). Multimorbidity was considered as the coexistence of two or more chronic health conditions. Frailty was assessed using the Frailty Index (FI) based on 104 clinical and biological variables.
Results: We observed a large range of comorbidities, including usual gastro-intestinal, mental and neurological diseases, but also chronic kidney disease. The comorbidity burden was high (mean CIRS-G total score of 10.6 ± 4.8), comparable with that observed among older patients hospitalized in geriatric departments. Furthermore, the comorbidity burden positively correlated with age, decreased autonomy, and polypharmacy. We observed 84.1% multimorbidity, significantly associated with age. Finally, mean FI was 0.24 (± 0.11), for a biological age around 89 years. FI was significantly associated with age and polypharmacy.
Conclusion: The comorbidity burden and multimorbidity severity, and the premature ageing in ASD + ID adults highlight their crucial need of personalized medical care, including a holistic approach and an earlier geriatric comprehensive assessment.

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Multidimensional profiles of aging in the oldest old

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: The "biopsychosocial model of disease" underlines the importance of the person-centered, value-based and goal-oriented medicine of older persons. However, evidence on the comprehensive characterization of the oldest-old is still spare. The aim of this retrospective work was to detect factors associated to "successful ageing" in wellbeing in community dwellers aged 80 years old and older.
Patients and methods: Records from the prospective "NRW80 + study" are being analysed which include 1.863 people over 80 years of age in North Rhine-Westphalia. Using the MPLUS statistics program, three different models of analysis are being carried out on the basis of geriatric syndromes and resources, sociodemographic characteristics, physical and cognitive/emotional health and daily functions of study participants: 1) latent class analysis, 2) cluster analysis, 3) creation of a multidimensional prognostic index.
Results: Records from 676 men (36.3%) and 1187 women (63.7%) display 54% aged 80–84y (n = 1012), 31% 85–90y (n = 573) and 15% > 90y (n = 279). In a preliminary evaluation, the latent class analysis identified three classes. Class 1 (43%M, 66% 80–84Y) is characterized by high cognitive performance, higher functions in daily activities, less multimorbidity and depression. Class 3 (74% F, 28% 80–84Y, 38% 85–89Y, 34% > 90Y) is more affected by dementia, disability, depression. Class 2 (74% F, 42% 80–84Y, 36% 85–59Y, 22% > 90Y) show intermediate characteristics. The differences between the classes are statistically significant ($p < 0.001$). All analyses were adjusted for chronological age. DiscussionThis preliminary analysis shows that it is possible to identify multidimensional profiles of robustness-prefrailty-frailty among very old community dwellers and that these profiles are independent of chronological age even in the oldest old. Further analyses are ongoing to evaluate deeper psychosocial phenotyping associated to the three classes of robustness-prefrailty-frailty persons.

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MPI-prognosis change of older patients one year after Emergency Department visit

Abstract Area: Comprehensive Geriatric Assessment

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Background: The complexity of geriatric patients, especially in critical moments like the Emergency Department (ED), necessitates a structured approach to provide best care and cure. The Multidimensional Prognostic Index (MPI) is a validated comprehensive geriatric assessment (CGA) which can quantify such complex scenarios and frailty. The aim of the present study was to identify which traits are associated with unfavourable changes in the MPI, after a visit at the ED, and thus also in patient outcome.
Patients and methods: The provisional database contains up until now 310 ED patients (164 M, 146 F, MAge = 75,9 ± 6,7) aged 65 and older. Patients underwent a blood withdrawal for the analysis of metabolomics by NMR spectroscopy and quality of life assessment (EQ5D5L) as well as a CGA with MPI calculation both at admission and 12 months later.
Results: Improvement of or stable MPI scores were observed in 185 patients (104 M, 81 F, MAge = 75,6 ± 6,8y) while 125 (60 M, 65 F, MAge = 76,4 ± 6,6) showed worse MPI score with respect to baseline. Poor EQ5D5L as well as low branched chain amino acids (leucine, valine, isoleucine) and histidine blood levels were shown in patients who worsened compared to those with stable or improved overall health one year after baseline ($p < 0.05$). The results were independent of age and gender.
Conclusion: EQ5D5L and selected amino acids known to play a role in the physical frailty phenotype appear to be correlated, independent of chronological age, with a worsening of MPI as a measure of multidimensional frailty and surrogate marker of biological age after 12 months. Further studies are needed to identify predictors and confounders of overall health worsening.

P-281

Assessment of the nutritional status of patients with dizziness based on anthropometric and laboratory parameters in older patients of the hospital ward

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: An abnormal nutritional status is one of seniors significant health problems. Malnutrition is an especially unfavorable prognostic factor for elderly people with dizziness. The aim of the study was to present individual methods and tools of anthropometric and laboratory assessment of the nutritional status of elderly people with dizziness.
Material and methods: A cross-sectional study of 245 patients admitted to the geriatric ward at the turn of 2019 and 2020. Comprehensive geriatric assessment results were analyzed and additionally, the anthropometric parameters was measured by Mid-Arm Circumference (MAC), Calf Circumference (CC), Body Mass Index (BMI), Waist to Hip Ratio (WHR), Mini Nutritional Assessment (MNA-SF); using laboratory parameters like: albumin, lymphocytes.
Results: The average age of participants was 81 (6.7) years, and 73.9% were women. 54% of them reported dizziness. Patients with dizziness were older than patients without (80.4y (6.8) versus 81.8y (6.4), $P < 0.09$). A statistically significant difference was detected in parameters that evaluate the central distribution adipose tissue WHR − 0.89 (0.09) versus 0.92 (0.91) $P < 0.01$) and in CFS (4.0 (3.0–6.0) versus 4.0 (3.0–5.0) $P = 0.031$). Patients with dizziness had worse parameters of albumin (g/L) 4.16 (4.0–4.3) versus 4.0 (3.6–4.3) $P < 0.001$). There were no significant differences in MNA-SF, BMI, CC, MAC and parameters of lymphocytes.
Conclusions: Malnutrition is an especially unfavorable prognostic factor which particularly influences persons over 65 years of age. Our research it is being pointed out that it is necessary is to use a variety of

complementary, indirect methods for this purpose in order to assess the state of nutrition patients with dizziness.
Key words: dizziness, older people, geriatric ward, nutrition

P-282

Dizziness and walking impairments revealed by CGA in older patients with cancer

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Comprehensive geriatric assessment (CGA) in older patients with cancer can increase chemotherapy completion rates with less toxicity and higher quality of life. However, less focus has been on functional maintenance and walking ability, although chemotherapy seems to increase risk of falls. In our new geriatric oncology outpatient clinic patients with all cancers can be referred to CGA before, during and after cancer treatment.
Methods: Data on cancer diagnosis, comorbidity, physical strength and falls examination were noted. Interventions were initiated on all identified health issues. Later, patients were systematically followed up after 3 months assessing hand grip strength (HGS) and chair stand test (CST) and data was evaluated with a paired sample t- test.
Results: Of the first 88 patients (female 50%, median age 79) 88% had received chemotherapy. Many patients had symptoms of dizziness or vertigo (53%), walking impairments (85%) and 39% reported recent falls. Orthostatic hypotension was found in 49% of the patients, signs of severe neuropathy assessed by biothesiometry was found in 31% of patients and 17% were referred for vestibular examination. Follow up assessment of totally 19 patients showed significantly improvements in CST after 3 months ($p = 0.002$) but no difference was seen in HGS.
Key conclusions: Older patients with cancer referred to CGA often suffers from dizziness and risk of falls. CGA in older patients with cancer can reveal reasons for impaired walking and interventions can improve physical performance. Further research is needed to evaluate the effect of chemotherapy on autonomic and vestibular function.

P-283

Screening instruments to predict adverse outcomes for undifferentiated older adults attending the emergency department: results of SOAED prospective cohort study

Abstract Area: Comprehensive Geriatric Assessment

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BackgroundFrailty screening facilitates the stratification of older adults at most risk of adverse events for urgent assessment and subsequent intervention in the acute or community setting. We assessed the validity of the ISAR (Identification of Seniors at Risk), Rockwood Clinical Frailty Scale (CFS), PRISMA-7 and InterRAI-ED at predicting adverse outcomes at 30 days and six months among older adults presenting to the ED.
Methods: A prospective cohort study of consecutive older adults ($\geq$ 65 years) who presented to the ED was conducted. The ISAR, CFS, PRISMA-7 and InterRAI-ED were performed by an experienced ED research nurse. Blinded follow-up telephone interviews were completed at 30 days and six months to assess the incidence of mortality, ED re-attendance, hospital readmission, functional decline and nursing home admission.
Results: 419 patients were recruited with 49% female and a mean age of 76.9 years (SD 7.15). The prevalence of frailty varied across the screening tools (ISAR, 47% vs InterRAI-ED, 63%). At 30-days, mortality rate was 5.4%, ED re-attendance 16.9%, hospital readmission 13.6%, functional decline 47.1% and nursing home admission 7.3%. Older adults who screened positive for frailty demonstrated an increased risk of all adverse outcomes at 30 days and 6 months, regardless of frailty screening tool administered. All tools had a relatively high sensitivity but low specificity. The ISAR was the only tool which was statistically significant at predicting all outcomes at 30 days.
Conclusion: The ISAR, CFS, PRISMA-7 and InterRAI-ED demonstrated modest validity at predicting adverse outcomes at 30 days and 6 months. We would recommend the implementation of one of these frailty screening tools in EDs to support clinicians in identifying older adults most likely to benefit from specialised geriatric assessment and intervention in the hospital or community setting.

P-284

Point of care ultrasound or bedside clinical ultrasound utility in a Geriatric Functional Recovery Unit and Day Hospital

Abstract Area: Comprehensive Geriatric Assessment

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Background: Geriatric patients´s diagnosis at different care levels is complex, it´s attributed to multiple factors like: atypical clinical presentation; difficulty in taking an adequate anamnesis and factors that make it impossible to carry out diagnostic tests. These factors generate a delay in diagnosis and treatment. For this reason, it´s interesting to find tools that facilitate its handling. Point of Care Ultrasound (POCUS) is fast, cheap, easily accessible and answers dichotomous questions to rule out or confirm clinically suspicious pathologies.
Aim: To describe the diagnostic contribution of POCUS in Geriatric Functional Recovery Unit (GFRU) and Day Hospital (DH) in patients with specific diagnostic suspicions.
Methodology: Series of cases obtained from January-2022 through April-2022. Patients: Patients hospitalized in a GFRU and DH at a University Hospital. Measurements: Age, sex, functional status [Barthel Index (BI); Functional Ambulation Category (FAC)];

cognitive status [Reisberg Global Deterioration Scale (GDS)], nutritional assessment [Mini nutritional assessment, short version (MNA-SF)], frailty assessment; Frailty-index (IF-VGI) > 0.2 and Clinical-Frailty-Scale (Rockwood) > 4]. POCUS was performed in case of suspected pathology such as: deep vein thrombosis (DVT), cellulitis, hematoma, venous insufficiency (VI),acute-urinary-retention (AUR), ascites, hepatomegaly, interstitial-syndrome (IS) and pleural-effusion (PE).

Results: We included 14 patients. Mean age: 85.21 years (SD 7.52). 71.4% were female. Mean values of functional status: BI: 78.71(16.79); FAC: 4(1.20); Cognitive status: GDS: 2.36(1.08). Nutritional evaluation: MNA-SF: 9.2(1.93). Frailty: 100% according to the IF-VGI and 71.42% to the Clinical-Frailty-Scale (Rockwood). Following diagnoses were ruled out: DVT: 8(57.14%), AUR: 2(14.28%). The following diagnoses were confirmed: IS: 3(21.42%), PE: 3(21.42%), hematoma: 2(14.28%), AUR: 1(7.14%), pericardial-effusion-mild: 1(7.14%), ascites: 1(7.14%), hepatomegaly: 1(7.14%), cellulitis: 1(7.14%),VI:(7.14%).

Conclusions: POCUS is useful for confirming and ruling out pathologies in patients treated in GRFU and DH, allowing timely treatment, and avoiding unnecessary mobilizations, referrals and procedures that may have a negative impact on these patients.

P-285

Older persons' experiences and perspectives of Comprehensive Geriatric Assessment

Abstract Area: Comprehensive Geriatric Assessment

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BackgroundThere is an abundance of evidence to demonstrate the positive impacts of Comprehensive Geriatric Assessment (CGA) on clinical and process outcomes for older adults across settings of care. However, it is unclear how older adults themselves view CGA and their experiences of the care process. The aim of this qualitative evidence synthesis is to explore the experiences and perspectives of older adults of CGA.

Methods: A comprehensive literature search was completed across MEDLINE, CINAHL, PsycINFO, PsycARTICLES and Social Sciences Full Text. Qualitative or mixed methods studies that included qualitative data on the perspectives and experiences of older adults of CGA were included. The methodological quality of the included studies was appraised using the Critical Appraisal Skills Programme checklist for qualitative research. Findings were synthesised using thematic analysis.

Results: Nine studies were included in the synthesis, including studies where CGA was completed in hospital, outpatient assessment unit and home settings. Divergent experiences of CGA were reported. Older adults reported experiences of being respected and listened to during CGA and attention paid to all their issues and priorities. Good communication by healthcare providers was central to these positive experiences (theme 1). In contrast, experiences of being unclear about the aim of CGA or perceived benefits of CGA, feeling that the outcome of CGA did not align with their priorities (theme 2) and not feeling involved in decision making during CGA (theme 3) were also commonly reported.

Conclusion: Findings indicate that CGA is a process by which older adults can felt respected and paid attention to. However, scope exists to further improve older adults' experiences of CGA. Enhanced healthcare provider communication and facilitation of older adult involvement in decision-making are priority areas for improvement. Further research should focus on exploring other stakeholder groups experiences of CGA including caregivers and healthcare professionals.

P-286

We need to collaborate when treating frail heart failure patients: implementation of the heart-brain clinic

Abstract Area: Comprehensive Geriatric Assessment

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Introduction: Many patients with heart failure are frail and have high morbidity, challenging their treating physicians. Although goals of care are often tailored to heart failure type and severity, they are also highly dependent on factors which require a multi-domain assessment, including cognitive screening. Patients with heart failure often have cognitive impairment, lowering therapy adherence and increasing likelihood of complications and hospital admissions. Screening for frailty and cognitive i in heart failure outpatient clinics is not standard care, but may improve health care outcomes. However, little data is available regarding cardiologists' views on cognitive impairment in their patients.

Methods: We performed an open-link clinical questionnaire survey amongst cardiologists in the Netherlands. Cardiologists were asked about their knowledge and views on frailty and cognitive impairment in heart failure patients.

Results: Three out of four cardiologists (mean age 48) indicated that knowledge about frailty and cognitive impairment would change their clinical decision-making, and that systematic screening in the outpatient clinic would improve care. However, more than half indicated not having the time, knowledge or tools to assess cognitive function in their patients. Only three percent of cardiologists performed structured cognitive assessment.

Conclusions: Cardiologists are aware of the importance of cognitive function in their patients, but lack tools, time and knowledge to assess cognitive function. In line with the results of this survey, we implemented a multidisciplinary clinical care pathway, in which heart failure patients are screened for frailty and cognitive function, and geriatricians, cardiologists and general practitioners collaborate to provide appropriate supporting care.

P-287

Potentially inappropriate medications according to TIME criteria and risk of in-hospital mortality in COVID-19 patients

Abstract Area: COVID-19

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Background and Aim: Coronavirus disease 2019 (COVID-19) is a significant cause of death in older people. Identifying risk factors for mortality is important to recognize risky patients and manage them accordingly lots of parameters are related to in-hospital mortality in COVID-19. Potentially inappropriate medications use (PIM) is a geriatric problem, has been shown to be related to increased mortality in the general older population. Up to now, there are no studies on the possible association between COVID-19 related mortality and PIM in older adults, and the PIM and COVID-19 association is still conflicted. This study aims to evaluate the relationship between hospital admission PIM and in-hospital mortality of COVID-19 and consider other possible factors related to mortality as well.
Methods: Turkish inappropriate medication use in the elderly (TIME) criteria was used to define PIM. The Nutritional Risk Screening 2002 (NRS-2002) determined the nutritional status of the participants. Data were collected on demographics, co-morbidity, PIM, and mortality. The primary outcome of this study was in-hospital mortality. Analysis was adjusted for age, gender, PIM, CHF, dementia, the score of NRS-2002, and laboratory parameters. Cox regression proportional hazards models were used to examine the association of PIM with mortality.
Results: We included 201 older adults. Mean age was 73.1 + 9.4 (standard deviation, SD), 48.9% were females. In-hospital mortality rate was 18.9% (n = 38). The prevalence of PIM was 78.1% (n = 157). The most common PIM according to TIME to START was malnutrition patients who did not take any nutritional support. Proton-pump inhibitor (PPI) usage for multiple drug use indications was the most prevalent PIM based on the TIME to STOP. Mortality was related to PIM in univariate analysis (p = 0.005) but not in multivariate analysis (p = 0.599). Older age (Odds Ratio (OR): 1.08; CI 95%: 1.02–1.13, p = 0.005) and a higher score of NRS-2002 were correlated to in-hospital mortality (OR: 1.29; CI 95%: 1.00- 1.65, p = 0.042).
Conclusion: Older age and malnutrition were related to in-hospital mortality in COVID-19. The results of this study suggest that if malnutrition is screened at the time of hospitalization in older individuals who had COVID-19 and treated in line with TIME's recommendations (initiating ONS, continuing for at least 1 month, etc.) better outcomes will be seen in the older adults.

P-288

Follow-up of older people hospitalised with COVID-19 infection: a single centre study

Abstract Area: COVID-19

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Introduction: Symptoms of COVID-19 can persist for months following initial infection. This carries significance in the older population of who have been disproportionately affected by COVID-19. Studies focussing on older survivors of COVID-19 have demonstrated a high prevalence of long-term symptoms, affecting both physical and cognitive performance. Systematic follow-up for these patients is therefore essential to understand and better manage this symptom burden.
Methods: The aim of this study was to ascertain the nature of follow-up for older people hospitalised with COVID-19 infection. Patients diagnosed with COVID-19, alongside an abnormal chest radiograph, were referred for follow-up at 12 weeks. Telephone consultations with a geriatrician were conducted using a post-COVID questionnaire to screen for symptoms, and onward referrals arranged where necessary.
Results: 82 patients aged 60 years or older were identified. Fatigue and exhaustion were most frequently reported (28%), followed by shortness of breath (24%) and cognitive issues (18%). Whilst a significant number received further follow-up within Geriatric medicine (13%), few were referred to long COVID clinics (4%) or mental health services (4%).
Conclusions: Geriatric medical review was beneficial, however we recognise limitations to existing referral criteria. A significant cohort of older COVID-19 survivors will not be detected by this method: those presenting with delirium or fatigue rather than radiographic changes, and those in the community who may not self-present. We therefore recommend that a history of COVID-19 is important to elicit in comprehensive geriatric assessment.

P-289

Functional decline in COVID-19 older survivors compared to other pneumonia patients, a case control study

Abstract Area: COVID-19

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ObjectivesAmong patients over 75 years, little is known about functional decline due to COVID-19. The aim of this study was to explore this functional decline, compare to other infectious pneumonia.
Design and setting: This case–control study included all COVID-19 patients hospitalized from March to December 2020 in Acute Geriatric Ward in Nantes University Hospital matched 1/1 with patients with pneumonia hospitalized in geriatric department between March 2017 and March 2019 (controls) on sex, age. Functional decline was assessed at 3 month follow up as it is routinely done after hospitalization in geriatric ward. We performed multivariable analyses to compare clinical outcomes between patients with COVID-19 vs controls.
Results: 136 pairs were matched on age (mean: 87 y-o), and sex (61% of women). In multivariable logistic regression analysis, there were no statistical significant association between COVID-19 infection and functional decline (OR = 0.89 p = 0.72). A statistical significant association was found between functional decline and Charlson comorbidity index (OR = 1.17 p = 0.036); prior fall (OR = 2.16,

p = 0.008); malnutrition (OR = 1.85 CI, p = 0.045); preadmission ADL (OR = 1.32 p = 0.013) and length of hospital stay (OR = 1.05 p = 0.002).
Conclusion: COVID-19 does not seem to be responsible for a more frequent or severe functional decline than other infectious pneumonia in older and comorbid population after 3 month follow up. In this population, pneumonia is associated with functional decline in almost 1 in 2 cases. The individual preadmission frailty seems to be a more important predictor of functional decline, encouraging multidimensional care management for this population.

P-290

Quality of life impact of hospitalization due to COVID infection in the elderly

Abstract Area: COVID-19

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Introduction: The COVID-19 pandemic has reached its third year and focus is changing for its long-term impact: quality of life (QoL) and the COVID fog. QoL is reduced following COVID-19 infection in various settings. However, the impact on the elderly has been largely studied related to lockdown, not to the infection itself.
Methods: Cross sectional observational study by self-application of QoL questionnaire (EQ-5D-5L) and persistent symptoms sent by mail to patients who had been admitted to our COVID ward the previous year. We compared previous and current QoL and between elderly (> 65 years old) and the young.
Results: Elderly was 69% of our 125 participants. They were similar in relation to gender and ethnicity, but were more dependent (27% vs 0%, p-value < 0.001). Comorbidities were alike, with exception of heart failure (28% vs 8%, p-value = 0.01), and status post solid organ transplantation (2% vs 13%, p-value = 0.02). More frequently, they were admitted due to COVID infection (81% vs 67%, p-value = 0.007). However, both disease severity and severity markers were alike. Considering the COVID fog symptoms, their distribution was comparable, except fatigue (68% vs 45%, p-value = 0.01). Regarding QoL, the only significant difference between groups was on the index following COVID-19 infection, which was lower for the elderly (0.69–0.3 vs 0.8–0.2, p-value = 0.01).
Key conclusions: The elderly had a lower QoL than the overall and younger population, which show us the impact of this infection. However, most of our data was not significant which we attribute to a small sample size, requiring further studies.

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Quality of life and psychological disorders in the older survivor of COVID-19

Abstract Area: COVID-19

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Introduction: Exposure to infectious disease epidemics, and especially those that require admission to hospital, could cause psychologic problems as described in survivors of other coronavirus. The emotional impact on the daily life of COVID-19 survivors has gained increase attention in research so our aim is to describe it in the older.
Methods: Longitudinal observational one-year follow-up study of patients > 70 years discharged from an acute geriatric unit during the first wave of the COVID-19 pandemic. Data collection: sociodemographic variables (age, sex); comorbidity, functional and cognitive status. At 12 months follow up: questionnaire of pre- and post-discharge symptoms after COVID-19, PTSD test and EuroQoL-5D.
Results: At 12 months follow-up, the survivors were 138. We excluded patients with dementia (54%). Sample of 64. EuroQoL-5D: Problems in mobility and pain were more described, followed by self-care and usual activities and anxiety/depression. The Visual Analog Scale: mean of 73.5 ± 15.9 and the EQ-5D index was 0.63. The percentages of the index:better health status-1: 9(14%), greater 0.5: 37 (58%) and less than 0.5 18(14%) .47% present dyspnoea, 23% urinary incontinence, 23% cognitive worsening, 14% concentration problems and 38% short-term memory problems after surviving COVID-19. Finally, post-traumatic stress disorder was described in 31%.
Key conclusions: The quality of life in elderly survivors of covid-19 is reflected in problems in ABVD, self-care and mobility. Psychological problems have been increased following the pandemic associated or not with the disease per se.

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Covid-19 pandemic humanization plan in the community of Castilla y León (Spain)

Abstract Area: COVID-19

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Background and aims: Implement the Humanization of careMethod: Review of accompanying measures for covid patients. The Covid-19 pandemic caused the need to isolate patients and their close contacts for the sake of the safety of patients and professionals. For this reason, the Health Management of Castilla y León (Spain) had to establish measures that limited the follow-up and visits of hospitalized patients, as well as outpatients, despite the added suffering caused by the disease. Currently, due to the evolution of the epidemiological situation, the restrictions on visits and support must be adapted to the progressive normalization of the activity of health centers.
Result: Covid-19 Humanization Plan, which defines: 1-General measures in hospitalized patients (with and without covid), the accompaniment of patients admitted by a person with the function of

essential caregiver is allowed. In the ICU, the relevance of the visit will be assessed individually. On an outpatient basis in Emergencies, Hospital Outpatient Consultations and Health Centers, the accompaniment in non-covid areas of a single person is allowed.2-Measures to accompany patients in situations of poor immediate prognosis and at the end of life, to avoid their death in solitude and whenever possible, the patient will be transferred to a single room, thus allowing family privacy in the farewell.
Conclusion: In a new Plan, in which the necessary restrictions are relaxed at the peak of the incidence of the pandemic to alleviate, in part, the emotional problems that loneliness conditions in patients.

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OEDIPUS (Overcrowding: Emergency Department Investigate Problem to solve Unfound Solution) at Rome during COVID Pandemic. An Italian study of how overcrowding got worse during COVID pandemic in geriatric patients (> 75 years). PART I: The infinfluent or am

Abstract Area: COVID-19

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Introduction: Crowding is a worldwide problem, that concerns the entire hospital and the entire health system, not only the Emergency Department. The Emergency Department is crowded if the hospital is crowded. There is a mistaken belief that input factors are the main factors of crowding, belief which is often exasperated by the media.
Purpose: To analyze the role of inpuct factors in the overcrowding of the Gemelli Hospital in Rome, during the first year of the COVID-19 pandemic, in geriatric patients (> 75 years).
Methods: All the ED-visits of geriatric patients (> 75 years) of the Gemelli Hospital in Rome, during the pandemic period were analyzed (precisely in the period between 21 February 2020 and 31 December 2020), and compared with all the ED-visits of the previous year, in the same period (21 February 2019–31 December 2019). The main information about the patients was noted down: reason for visit, sex, age, and vital parameters. To analyze the role of the input factors, the following were analyzed: the number of ED-visits, the waiting times, the incoming triage codes, and the admission mode in the ED (autonomous, in an ambulance).
Results: Considering the subpopulation of geriatric patients (> 75 years), despite the statistical significance (due to the high sample size), there is no difference in average age between 2019 and 2020 (82.5 vs 82.7 years). In 2020 there was a decrease of about 23% of accesses in the ED of the Gemelli Hospital in Rome, considering the period from 21 February 2019 (official start date of the Sars-Cov-2 pandemic) to 31 December 2019, compared to the same period of the following year (11728 vs 9084). This reduction is evident throughout the year, more pronounced in the period from week 10 to week 21 and in the period between week 43 and week 51, where the reduction was 20% and 20%, respectively. These periods correspond to the first and second pandemic waves. In 2020, there was a significant increase in access by ambulance (39.1% vs 52.4%), compared to a reduction in autonomous access (52.3% vs 38.9%). Also, a decrease in the median waiting time in 2020 compared to the previous year was noticed (18 vs 28 min). 50% of accesses in 2019 had a waiting time that ranged from 10 to 75 min, while in 2020 the interquartile range was 8–43. Overcrowding in the Gemelli Hospital in Rome instead, increased throughout the pandemic ($p > 0.001$).
Conclusions: As part of a project aimed at analyzing the trend of hospital overcrowding throughout Italy (and which we would like to extend to all centers in the world that wish to participate), the statistical analysis carried out at the Rome center showed that inpuct factors had an infinfluent or ambivalent role in the first year of pandemic. It should be noted that the turnout was strongly reduced when crowding was greater. The increase in complexity and severity of patients is also highlighted by the increase in high priority access codes, as well as by the need for ambulance transport to reach ED. This fact is a prelude to the greater complexity of assessments, treatments and stabilization, that are throughput factors.

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OEDIPUS (Overcrowding: Emergency Department Investigate Problem to solve Unfound Solution) at Rome during COVID Pandemic. An Italian study of how overcrowding got worse during COVID pandemic in geriatric patients (> 75 years). PART II: throughput factors

Abstract Area: COVID-19

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Introduction: Crowding is a worldwide problem, that concerns the entire hospital and the entire health system, not only the Emergency Department. The Emergency Department is crowded if the hospital is crowded. The change in the role of emergency doctors over the years has seen their figure become increasingly important in the process of diagnosis and stabilization of the patient, bringing the way of working from admit to care to care to admit. All of this obviously requires adequate time, adequate diagnostic equipment, adequate space to perform increasingly complex procedures, monitoring and therapies.
Purpose: To analyze the role of throughput factors in the overcrowding of the Gemelli Hospital in Rome, during the first year of the COVID-19 pandemic, in geriatric patients (> 75 years).
Methods: All the ED-visits of geriatric patients (> 75 years) of the Gemelli Hospital in Rome during the pandemic period were analyzed (precisely in the period between 21 February 2020 and 31 December 2020), and compared with all the ED-visits of the previous year, in the same period (21 February 2019–31 December 2019). Throughput factors (internal factors) are represented by the processing time, meaning the time between taking charge of the patient and the outcome (diagnosis and decision: discharge, hospitalization, and transfer). They include also all the complementary exams that are performed in the ED (such as laboratory analysis and imaging). These factors are also affected by the healthcare personnel (in terms of

quality of work, working hours, burnout, drop in performance, overtime, and holidays).

Results: Considering the subpopulation of geriatric patients (> 75 years), despite the statistical significance (due to the high sample size), there is no difference in average age between 2019 and 2020 (82.5 vs 82.7 years). There seems to be a difference in the outcome at the end of treatment in the ED: there has been a decrease in discharges in 2020, compared to 2019 (41.4% vs 27.6%), compared to an increase in hospitalizations (44.7% vs 58.7%). Considering the total accesses in ED, in 2019 the patients hospitalized or transferred were 49.6%, compared to 65.2% in 2020. The average processing time has increased over the 10 months of 2020, compared to the same period of the previous year, passing from 534 to 707.5 min. 50% of accesses in 2019 had a waiting time that ranged from 217 to 1469 min, while in 2020 the waiting time ranged from 252 to 1500 min.

Conclusions: As part of a project aimed at analyzing the trend of hospital overcrowding throughout Italy (and which we are happy to extend to all centers in the world that wish to participate), statistical analysis carried out at the Rome center has shown that throughput factors associated with overcrowding increased during the COVID-19 pandemic. This is related to the increase in the rate of complex medical therapies, the frequent checks that patients needed, the difficulty in stabilizing patients, the dressing and undressing processes, the duplication of clean and dirty paths, tiring shifts, as well as skipped rests. All of this has led to a significant increase in process times. As for throughput factors, crowding is the result of changes in the role of emergency physicians and general practitioners. Emergency wards are no longer just places where patients are sorted into specialized wards, but places where patients are now treated, stabilized, and undergo differential diagnostic testing.

P-295

OEDIPUS (Overcrowding: Emergency Department Investigate Problem/IntimateProject to solve the Unsolved Problem) at Rome during COVID Pandemic. An Italian study of how overcrowding got worse during COVID pandemic in geriatric patients (> 75 years). LOS as an

Abstract Area: COVID-19

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Introduction: Crowding is a worldwide problem, that concerns the entire hospital and the entire health system, not only the Emergency Department. The Emergency Department is crowded if the hospital is crowded. Crowding has increased in hospitals in all Italian regions during the Covid-19 pandemic. The causes of overcrowding can be classified into three categories: input, throughput, and output factors. These parameters are mostly independent of each other, but they are interconnected and influenced by underlying contributors, making the phenomenon of overcrowding multifactorial and complex. Input factors are represented by factors determining patient access to the ED, including the waiting time, the number of patients who arrived in the ED, as well as their severity and complexity. Throughput factors are represented by the processing time, which also includes all the complementary exams that are performed in the ED (such as laboratory analysis and imaging). These factors are also affected by the healthcare personnel (in terms of quality of work, working hours, burnout, drop in performance, overtime, and holidays). Output factors include patients boarding in the ED, availability of hospital beds, exit block, and so on. It can therefore be established that the LOS is a crowding indicator, including the three components. Purpose: To analyze the level of crowding in the, during the first year of the COVID-19 pandemic, in geriatric patients (> 75 years).

Methods: All the ED-visits of geriatric patients (> 75 years) of the Gemelli Hospital in Rome during the pandemic period were analyzed (precisely in the period between 21 February 2020 and 31 December 2020), and compared with all the ED-visits of the previous year, in the same period (21 February 2019–31 December 2019). The main information about the patients was noted down: the reason for visit, sex, age, and vital parameters. To analyze the role of the input factors, the following were analyzed: the number of ED-visits, the waiting times, the incoming triage codes, and the admission mode in the ED (autonomous, in an ambulance).

Results: Considering the subpopulation of geriatric patients (> 75 years), despite the statistical significance (due to the high sample size), there is no difference in average age between 2019 and 2020 (82.5 vs 82.7 years). In 2020 there was a decrease of about 23% of accesses in the ED of the Gemelli Hospital in Rome, considering the period from 21 February 2019 (official start date of the Sars-Cov-2 pandemic) to 31 December 2019, compared to the same period of the following year (11728 vs 9084). As for the median value of total time spent in the ED in 2020, it was significantly higher compared to 2019 by about 156 min (558 vs 705). The time spent in the ED ranged from 1 to 16550 min (just over 11 days). It seems useful to report 4 patients with a LOS of more than 7 days, of which 3 in 2020.

Conclusions: As part of a project aimed at analyzing the trend of hospital overcrowding throughout Italy (and which we would like to extend to all centers in the world that wish to participate), the statistical analysis performed at Gemelli Hospital in Rome showed that overcrowding increased significantly during the first year of the pandemic, considering the subpopulation of geriatric patients (> 75 years).

P-296

OEDIPUS (Overcrowding: Emergency Department Investigate Problem to solve Unfound Solution) at Pavia during COVID Pandemic. An Italian study of how overcrowding got worse during COVID pandemic in geriatric patient. PART III: output factors

Abstract Area: COVID-19

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Introduction: Crowding is a worldwide problem, that concerns the entire hospital and the entire health system, not only the Emergency

Department. The Emergency Department is crowded if the hospital is crowded. The American College of Emergency Physicians (ACEP) and some European authors believe that the output factors are the most important and prevalent factors in determining overcrowding.
Purpose: To analyze the role of output factors in the overcrowding of the Pavia Hospital, which treated "patient zero", during the first year of the COVID-19 pandemic in geriatric (> 75 years old) patients.
Methods: All the geriatric-ED-visits of the Pavia Hospital during the pandemic period were analyzed (precisely in the period between 21 February 2020 and 31 December 2020), and compared with all the ED-visits of the previous year, in the same period (21 February 2019–31 December 2019). The main informations about the patients were noted down: reason for visit, sex, age, vital parameters. To analyze the role of the output factors, the following were analyzed: the outcome of ED-visits (discharged, hospitalized, transferred), boarding and exit block times, the percentage of patients who experienced boarding and exit block phenomena, the total boarding and exit block time.
Results: The mean age of over 75 years old patient in 2020 seems to be almost unchanged compared (83.6 vs 83.). The number of ED-visits decreased by about 20%, (15556 vs 12416). In 2020 there seems to have been an increase in hospitalizations (40.9% vs 29.8%) compared to a decrease in discharges compared to the previous year (55.7% vs 67.0%). There seems to be a slight increase in the subjects undergoing Access Block during 2020, going from 3.5% (of hospitalized or transferred patients) in 2019 to 5.5%. There is a significant increase in the median time of Access Block in 2020 compared to the previous year, going from 530 to 654 min ($p = 0.0012$). The Total Access Block in 2019, as regards subjects aged $\geq$ 75 years, was 431,617 min (equal to approximately 300 days), while in 2020 it significantly increased, for a total of 705,319 min (approximately 490 days). Among the hospitalized or transferred subjects, in 2020 there was an increase in the subjects undergoing Boarding, passing from 3.8% to 6.0% ($p < 0.001$). In 2020 there is a maximum boarding time of 10902 min (about 7 and a half days) with a median duration of 523 min, significantly higher than the median boarding time in 2019, which was 433.5 min. The total Boarding Time in 2019, in the 10 months considered, was 418843 (equal to approximately 291 days) and 702114 min in 2020 (equal to just over 487 days).
Conclusions: Within a project that aims to analyze the trend of hospital crowding throughout Italy (and which we gladly extend to all centers in the world that wish to participate), the statistical analysis conducted in the center of Pavia has shown that output factors played the most influential role during the first pandemic year. The increased need for hospitalization in concert with reduced availability of beds has led to a significant increase in crowding rates.

P-297

Care home participation in research

Abstract Area: COVID-19

Emma Law[1]

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Background: In 2014, we conducted a survey of 130 Scottish Care Homes (Law et al. 2021) and found as little as 7.7% recalled research involvement. This survey has been repeated in 2022, to look at whether the landscape of care home research involvement has changed.
Objectives: The research aimed to explore the research participation, opportunities and barriers, experienced by care homes staff, their residents and families, including during the Covid-19 pandemic.
Methods: An online survey was distributed to Scottish care homes for older adults and/or people living with dementia or neuroprogressive conditions. The 2022 survey is open to responses online as well as a printed version to distribute at care home-related events. The results will be analysed and written up by the Neuroprogressive and Dementia Network and ENRICH Scotland.
Results: The 2014 findings found that Care home staff recognised the value of research for staff and residents but felt that time and workload pressures create obstacles. These obstacles have only increased since the pandemic, therefore a more up to date survey of research participation will help look at how best to approach increasing research in care homes given the shift in barriers.
Findings: The findings will be used to inform policy and practice around research engagement, care homes and the effects of Covid-19 on participation. The suggestions for future research generated by care home staff will inform future research proposal development.

P-298

Are pre-existing cognitive disorders associated with high mortality in older patients with COVID-19?

Abstract Area: COVID-19

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Introduction: Since 2020, the world has had to deal with a new pandemic linked to the coronavirus. The disease has a mortality rate around 3%. Many risk factors for mortality have been identified, including older age, male sex, overweight and cardiovascular disease. However, the literature shows contradictory findings regarding cognitive disorders. The main objective of our study is to evaluate whether pre-existing cognitive disorders were a risk factor for mortality in older patients with COVID-19.
Methods: LICORNE (LIlle CORonavirus NEtwork) is a cohort created at the Lille University Hospital, with clinico-biological data of patients tested positive to COVID 19 between March and December 2020. We included patients in this cohort who were 65 years and older, and whose infection was confirmed by PCR. Data from the cohort were completed via medical letters from the patients' electronic medical record and from INSEE (French national statistical institute) data on deaths.
Results: We included 239 patients in our study. The average age was 73 years old. The population is mainly male (72.4%), living in an individual home (93.3%), with preserved functional independence (89.8%). 6.3% had pre-existing cognitive disorders. The mean survival time was 127 days. Cognitive impairment tended be associated with an increased mortality rate, but this association was not significant ($p = 0.08$). Other factors, such as male ($p = 0{,}047$), older age ($p = 0{,}039$), respiratory ($p = 0{,}0002$) or thromboembolic history ($p = 0{,}0134$), were significantly associated with an increased mortality rate.

Conclusion: Coronavirus disease is particularly fatal in older, or non-vaccinated population. Our study failed to show a significant association between cognitive impairment and mortality.

P-299

"A disembodied voice over the telephone": a qualitative study of healthcare practitioners' experiences in geriatric medicine

Abstract Area: COVID-19

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The COVID-19 pandemic has accelerated the implementation of remote models of patient care, including in specialities or patient groups for whom these would historically have been considered less suitable. The aim of this study was to explore the experience of delivering care remotely among practitioners in a UK geriatric medicine clinic, with a view to informing longer term plans. Nine semi-structured interviews were conducted with consultants (n = 5), nurses (n = 2), a speech and language therapist and an occupational therapist, and analysed using thematic analysis Three themes were developed that emphasised the aspects of practitioner experience that were considered particularly salient to the types of patients and conditions presenting at the clinic; Rapport Building; Setting and Context; Patient-Professional relationships. Participants felt that rapport and trust had been more feasible to develop remotely than they had anticipated, particularly through videocalls, although this was more challenging for new patients and those with cognitive or sensory impairments. While practitioners identified some advantages of remote consultations, such as involving relatives who live far away, saving time and reducing anxiety, they also saw disadvantages such as consultations feeling like a 'production line', missing important visual cues and reduced opportunities for private discussions. Some clinicians felt their professional identity was threatened by the lack of face-to-face contact, linked to feeling that remote consultations are not suitable for frail older adults or those with cognitive deficits. Research to promote practitioner confidence and sense of professional identity may be valuable in increasing the acceptability of remote consultations in this field.

P-300

COVID-19 infection and simultaneous arterial and venous thrombosis: report of two elderly cases

Abstract Area: COVID-19

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Background: Patients with COVID-19 usually present with respiratory symptoms like cough, fever, and shortness of breath, with 20% of cases being severe or critical. The data suggest a very high incidence of thromboembolic complications in patients admitted with COVID-19 infection including pulmonary embolism, ischemic stroke, acute limb ischemia and ischemic myocardial injury. Patients with abnormal coagulation studies at presentation are associated with worse outcomes. We report 2 cases of COVID-19 infection complicated by simultanuous arterial and venous thrombosis. Case 1: A 87-year-old female patient with arterial hypertension and cardiac insufficiency who presented to our department of Internal Medicicne with shortness of breath and fever. On examination, the heart rate was 103 beats/min; blood pressure, 114/78 mmHg; respiratory rate, 29 breaths/min; and oxygen saturation, 94%on supplemental oxygen: 8 l/min. Her nasopharyngeal swap was positive for COVID-19 infection. Laboratory tests revealed lymphopenia 970/mm3 (reference, 1000–4000/mm3), D-dimer: 10000 ng/ml (reference, < 500 ng/ml), C reactive protein: 47.91 mg/L (reference, < 10 mg/L). All other laboratory analysis were within the normal range. Computed tomography angiography showed floating arterial thrombosis of the inferior segmental artery of lingula and left sub-segmental pulmonary embolism. The patiente was started on heparin and anti-vitamin K drug. No surgical intervention was done. She was discharged and followed in our external department. Case 2: A 78-year-old female patient with medical history of arterial hypertension and melitus diabetes presented to our department of Internal Medicine with COVID-19 infection. ON examination: the heart rate: 116 beats/min; blood pressure, 150/90 mmHg, oxygen saturation, 94% on oxygen: 2 l/min and temperature: 36.8°C. Initial laboratory evaluation was within the normal range except D- dimer: 10000 ng/ml (reference, < 500 ng/ml). Computed tomography angiography showed bilateral thrombosis of the lobar arteries and the left superior pulmonary vein. Anticardiolipin, anti-b2-glycoprotein IgA, IgM, and IgG antibodies and lupus anticoagulant antibody were within normal range. The patient was treated with heparin and anti-vitamin K drug and was discharged to home in stable condition.

Conclusion: Most patients hospitalized with COVID-19 who had thromboembolic complications developed deep vein thrombosis and pulmonary embolism. Arterial thrombosis has also been reported but less frequent. Patients with COVID-19 have abnormal levels of D-dimer, decreased prothrombin time, and increased activated partial thromboplastin time. Moreover, Tang et al. in their study found that 74% of patients who died of COVID-19 had disseminated intravascular coagulopathy. The mechanism of thromboembolic complications associated with COVID-19 infection is not fully understood. COVID-19 related hypercoagulability is likely multifactorial and direct viral infection of the endothelial cell leading to diffuse endothelial inflammation, increased procoagulant factors and high inflammatory state associated with the cytokine storm leading to coagulation and fibrinolysis activation.

P-301

Unusual case of Covid-19 infection with overdose of anti-vitamin K due to consumption of Nigella sativa

Abstract Area: COVID-19

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Introduction: Hebal medicines, espacially Nigella sativa (NS) have been tried to treat COvid-19 infection. NS is consumed excessively in arabian countries but few studies investigated on its side effects on hemostasis. It seems to induce transient changes in the coagulation

activity with significant transient prothrombin time (PT) prolongation and thrombin time (TT) reduction. We report a case of Covid-19 pneumonia with an overdose of anti-vitamin K due to consumption of NS. Case report: we describe a case of a 74-year-old man known to have diabetes mellitus, arterial hypertension, coronary insufficiency and atrial fibrillation treated with anti-vitamin K drugs, developed cough and dyspnea 15 days before admission. The patient had been diagnosed with Covid-19 pneumonia. He had been ingesting NS at doses 10 g daily for almost 7 days. Physical examination was normal. Laboratory tests showed normal platelet count (549000/mm3), normal hemoglobin (14.2 g/dl), normal liver function test, normal amylase level, and normal cardiac enzymes. Coagulation testing revealed PT prolongation (3%), an elevated international normalized ratio (> 23) and normal thrombin time (TT). An urgent computed tomography revealed no major bleeding and no abnormalities. Anti-vitamin K drug and NS were withdrawn and the coagulation changes had been corrected. The Covid-19 pneumonia resolved with no thromboembolic events. The anti-vitamin K drug was reintroduced and adjusted to maintain the therapeeeeutic target international normalized ratio. Then, the development of changes of hemostasis was largely due to the patient's large consumption of NS.
Conclusion: Popular consumption of NS in Covid-19 infection may cause any toxic effect espacially transient changes of hemostasis. Further studies in human are necessary to establish the utility of NS in Covid-19 infection.

P-302

Inpatient mortality and end-of-life care in Parkinson's disease during the COVID-19 pandemic

Abstract Area: COVID-19

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Introduction: & **Methods:** We conducted a retrospective analysis of all patients with Parkinson's disease (PD) who died while admitted at the Oxford University NHS Foundation Trust between March 2019 and Feb 2022. This period was selected to include one year before, during and after the COVID-19 pandemic. Our objective was to investigate how the pandemic affected overall inpatient PD mortality, the causes of death and the quality of end-of-life (EOL) care provided.
Results: There were a total of 166 inpatient PD deaths over the 3-year period. PD deaths increased by 17.4% during the pandemic, with a further increase of 22.2% after the pandemic. Pneumonia (excluding COVID-19) was the leading cause of death every year, responsible for 57% (pre-pandemic), 46% (pandemic) and 53% (post-pandemic) of inpatient PD deaths. COVID-19 was the second-most common cause of death during the pandemic, accounting for 13% of deaths, declining to 3% of deaths after the pandemic. 62% of terminal patients were seen by a dedicated palliative care service before the pandemic, dropping to 46% during the pandemic. This increased to 61% in the year after the pandemic. The prescription of end-of-life medications saw a decline, changing from 83 to 76% to 79%, over the same 3-year period.
Conclusions: Inpatient PD mortality increased significantly both during and after the height of the COVID-19 pandemic, and this is not solely attributable to COVID-19. The pandemic also had a deleterious effect on the service delivery of EOL care in terminal PD patients.

P-303

Exploring older people's experiences of shielding during the COVID-19 pandemic

Abstract Area: COVID-19

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Background: COVID-19 has resulted in large scale infection rates, significant death rates and an economic crisis for many countries. Older people were identified as being in a high-risk group in terms of morbidity severity and mortality rates. This led to many governments recommending older people shield as a protective, public health measure. This study considers how older people experienced shielding in an urban area of Ireland. Method: Following TCD Ethics approval, twenty participants were recruited through nursing services in one Community Healthcare Organisation. Semi-structured interviews were conducted between 14/1/21 to 8/3/21 and analysed using thematic analysis (Braun & Clarke, 2006).
Results: Two overarching themes were identified: 1) Shielding experienced as a social disruption: Compliance resulted in transformed lives with marked impacts on social roles, identities, ways of living as well as the personal consequences of adhering to restrictions. Older participants spoke of careful strategies of self-protection and acute awareness of the personal and societal effects of the ongoing pandemic. 2) Coping with and countering social disruption: Participants described strategies they engaged in to adapt to, resist, address or avoid the impacts of shielding that challenged pre-COVID-19 social roles, identities, or ways of living.
Conclusion: As global societies slowly emerge from the pandemic, particularly in the context of vaccination roll out, older people's experiences are important to acknowledge. In this study, there was evidence of both the resilience of older people but also the multifaceted negative impact on their health and welfare. In addition, the experience of the pandemic has highlighted pre-existing service issues (home care service provision fragmentation), digital divides and the lack of older people's voices in political decision making. This points to the need to have robust, and accessible rehabilitation services incorporating comprehensive geriatric assessment and to reform health care delivery to enhance capacity to sustain services in pandemic times.

P-304

Navigating the storm: experiences of older person residential care home directors of nursing in COVID 19

Abstract Area: COVID-19

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Introduction: COVID-19 presented a major challenge to health and social care systems globally. In Ireland, the Health Protection and Surveillance Centre (2022a) report COVID-19 deaths in the over 65 age group represent 89.6% of total related deaths. As the pandemic approaches a third year, it has been a steep learning curve for all environments within health and social care systems. Care homes were disproportionally impacted due to the high-risk factors (older age,

congregated setting, co-morbidity risk), resulting in high mortality rates. This presentation discussed experiences of care homes' Directors of Nursing/Persons in Charge (DoN) in their preparedness, management and control of care during COVID-19.
Methods: A mixed methods approach was used to collect survey data (n = 122) and 20 semi-structured interviews were conducted with DoNs in private and voluntary older person care homes in the Republic of Ireland. Survey data was analysed using SPSS and interview data was analysed using thematic analysis.
Findings: Most DoNs (97%) identified they were confident in their current abilities to prepare for COVID-19 outbreaks. Over 50% of respondents had experienced a COVID-19 outbreak, but there was no significant difference in preparedness and management in care homes which had outbreaks and those who had no outbreaks. The survey data also indicates that care homes experienced financial challenges and that they struggled with staffing issues during the pandemic. An important finding is that almost one fifth (19%) of DoNs were actively seeking other work, while a further 28% admitted to thinking of leaving their post. The interview findings provided more depth to the DoNs' experiences and detail a constant concern about the welfare and protection of residents and staff. This concern blurred lines between work hours and personal time and rendered the DoNs to being on relentless alert to comply with rapidly changing public health guidance, completion of documentation, identification and management of infection control in the care homes, containment of outbreaks and staffing issues.
Conclusion: DoNs' experienced a very challenging time in coping with care in the nursing homes. An addition burden was experienced in the disproportionate negative sensationalisation of care in both in media and political narratives. The report concludes with a number of general recommendations related to public health guidance, long term care, serial testing, staff recruitment and retention and political and media reporting. Finally, sector level recommendations related to resident well-being and rehabilitation, staff psychological well-being, family support, safe staffing, financial support and viability, staff training and preparation and access to medical support are also identified.

P-305

Retrospective study of diabetic patients aged 75 and over hospitalised with Sars-Cov infection 2. Role of metformin?

Abstract Area: COVID-19

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Introduction: Dimethylbiguanide was first released as an anti-influenza drug and have shown an adjuvant therapeutic effect in various viral, parasitic or bacterial infections, nephroprotective, preventive or adjuvant therapeutic effect in certain cancers or neurodegenerative diseases, with, a cell-protective and anti-inflammatory effect. It is therefore in this capacity as an immunomodulator that we decided to conduct a study on the possible impact of metformin in the evolution of patients with Covid-19 in our geriatric population.
Methods: This is a retrospective study of patients hospitalized between March 2020 and September 2021 aged 75 years and over, in the Jolimont network for Sars-cov 2 infection and with a history of diabetes. Clinical and biological data were studied as well as comorbidities, treatments, length of stay, and mortality.
Results: 186 patients with diabetes, 2 groups (n = 102 without metformin treatment and n = 84 with metformin were studied). The average age was 82.8 years, 59.7% female, total in-hospital mortality was 27.4% (n = 51 cases). The comparison between the 2 groups was homogeneous (Cox multivariate regression analysis), except for mortality in both groups which was statistically lower in the metformin group (16.7% versus 36.3%).
Conclusion: Metformin should confirm here its protective role in the case of Sars-cov2 infection in the geriatric population. Our results should be confirmed by a larger and ideally prospective study to answer questions like what is the minimum effective dose and the minimum duration to be effective against infection?

P-306

Retrospective study of diabetic patients aged 75 years and older hospitalised with Sars-CoV2 infection between March 2020 and September 2021in the Jolimont network

Abstract Area: COVID-19

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Introduction: The metabolic syndrome and its associated comorbidities, such as diabetes, have rapidly emerged as predictive factors of severe disease and even mortality in patients with Covid.19 In the recent literature, metformin has been suggested as a protective factor against mortality.
Material and methods: This is a retrospective study of patients hospitalised between March 2020 and September 2021, aged 75 years and older, in the Jolimont network for Sars-cov 2 infection and with a history of diabetes. We examined clinical, biological and radiological data. Histories such as hypertension, obesity, renal failure, COPD, immunosuppression and its treatment as well as glycosylated haemoglobin and BMI were analysed. We also indicated the degree of percentage of parenchyma affected on the lung scan and if there was an admission to intensive care.
Results: The study included 84 patients on chronic metformin and 102 patients on antidiabetic therapy without metformin. There was no significant difference between the two groups in terms of BMI, comorbidities, presence or absence of pulmonary embolism, there was no difference in the severity of chest CT in our two groups (on or off metformin, despite the fact that the second group had a higher mortality rate). Of note, the study group had a low rate of ICU admission (3.6%).

Conclusion: We did not observe a more severe radiological impairment in both groups nor a difference in ICU admission despite a higher mortality in diabetics without metformin.

P-307

Mortality of older patients admitted to an ICU for COVID-19: a systematic review

Abstract Area: COVID-19

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Objectives: To conduct a systematic review of mortality and factors independently associated with mortality of older patients admitted to an intensive care unit (ICU) for COVID-19. Data sources: MEDLINE via PubMed, EMBASE, the Cochrane Library, and references of included studies. Study selection: Two reviewers independently selected studies evaluating mortality of older patients ($\geq$ 70 years) admitted to an ICU for COVID-19. Data extraction: Two reviewers extracted general characteristics, mortality rate, and factors independently associated with mortality. Disagreements were resolved by discussion within the study team. The methodological quality of each study was evaluated by using the Critical Appraisal Skills Programme checklist. Data synthesis: Because of expected heterogeneity, no meta-analysis was conducted. We selected 36 studies (11,989 patients). Many of the studies were conducted in Europe (42%) and many were retrospective (61%) and multicenter (61%). ICU mortality ranged from 8 to 90%, 1-month mortality from 33 to 90% and 3-month mortality, reported in 5 studies, from 46 to 60%. Frailty, assessed by the Clinical Frailty Score, was significantly associated with 1-month and 3-month mortality respectively in two studies (hazard ratio [HR] 3.2 [2.56–4.13] and HR 2.83 [95% CI 1.96–4.08]).
Conclusion: In this systematic review of older patients admitted to an ICU with COVID-19, we documented high heterogeneity of mortality rates. Frailty assessed by the Clinical Frailty Score seems to be an important prognostic factor.

P-308

Reduced physical activity amongst older adults during COVID-19 lockdowns: UK longitudinal data

Abstract Area: COVID-19

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Introduction: Regular physical activity is consistently associated with reduced risk of chronic diseases, cognitive decline, and mortality. In 2020 to reduce COVID-19 transmission, lockdowns were imposed and people instructed to stay at home, with many services suspended, thereby limiting opportunities for physical activity.
Methods: Understanding Society is a longitudinal survey of approximately 40,000 UK households. Some 3,660 older adults (aged $\geq$ 65) took part in annual surveys pre-2020 and specific COVID-19 studies. We examined changes in proportion of older adults that were achieving physical activity recommendations for health maintenance at several time points before and after COVID-19 lockdowns were imposed. We stratified these trends by the presence of health conditions, age, neighbourhood deprivation, and pre-pandemic activity levels.
Results: There was a marked decline in older adults' physical activity levels during the national lockdowns to January 2021. The proportion achieving physical activity recommendations decreased from 47% pre-pandemic to 33% in January 2021. This decrease in physical activity occurred regardless of health condition, age, neighbourhood deprivation, or pre-pandemic activity levels. Those doing the least activity pre-lockdown increased their activity during initial lockdowns and those doing the most decreased their activity levels.
Conclusions: Reductions in older adults' physical activity levels during COVID-19 lockdowns have put them at risk of becoming deconditioned and developing adverse health outcomes. Resources to promote the uptake of physical activity in older adults to reverse the effects of deconditioning are needed and we describe the Greater Manchester response.

P-309

Body composition, aging and inflammation in critically ill patients affected by COVID-19: the Verona ICU experience

Abstract Area: COVID-19

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Introduction: With aging increase in ectopic and visceral adipose tissue (VAT) deposition occur, both related to inflammation and higher morbidity and mortality. The aim of the present study was to evaluate if two proxy, respectively, of VAT (epicardial adipose tissue, EAT) and myosteatosis (intermuscular adipose tissue area, IMAT) are associated with risk of mortality and pulmonary-embolism in critically ill COVID-19 patients admitted to intensive care unit (ICU).
Methods: The study sample consisted of 158 intubated patients suffering from severe COVID-19, mean age 68.2 $\pm$ 9.5 years, hospitalized in ICU for which chest CT scan was available. Analysis of EAT, IMAT and psoas muscle volumes was performed and CPK, D-dimer and IL-6 were collected.
Results: Age, BMI, IL-6 and pulmonary embolism prevalence were significantly higher across EAT volume tertiles. Participants in the highest tertile of EAT volume had 3-times shorter survival at 28-days from admission. In the full model, after adjusting for potential confounders, the relation was no longer significant and only age was independently associated with mortality. Participants in the higher tertile of IMAT/muscle had the 12-times shorter 28-day survival and higher CPK and IL-6. From a binary logistic regression, subjects in the highest tertile of EAT volume and in the lowest tertile of EAT density showed 4-times and 3.6-times increased risk of pulmonary-embolism, respectively.
Key conclusions: ICU subjects affected by severe COVID-19 with higher EAT and IMAT volume should be carefully monitored and

managed with a prompt approach, to prevent serious and life-threatening consequences and the increase of hospital treatment costs.

P-310

Comparison of clinical characteristics between old and oldest old patients hospitalized for SARS-COV2

Abstract Area: COVID-19

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Introduction: Oldest old patients may have unusual SARS-COV2 presentation which can jeopardize diagnosis and management. The aim of this study is to compare the clinical characteristics and outcomes of oldest old ($\geq$ 85 years) and of old patients (75–85 years) admitted with COVID-19 in Belgian hospitals during the first wave of the pandemic.
Method: We conducted a multi-center, retrospective, observational study in ten Belgian hospitals. We reviewed the electronic medical records of patients $\geq$ 75 years hospitalized with COVID-19 from March 2020 to June 2020.
ResultsA total of 986 patients was included in the RedCap register (Old group: n = 507; Oldest old group: n = 479). Before hospitalization, the Oldest old presented more geriatric syndromes including comorbidity, frailty, falls, cognitive impairment and incontinence. At admission, the Oldest old presented less cough, less headache and less fever but significantly more delirium than Old. The Oldest old were less frequently admitted to Intensive Care Units. A geriatrician was consulted to help in decision making process more often for the Oldest old. The global mortality of the cohort was 47%, with no difference between the two groups. Patients of Oldest Old group were more often institutionalized after hospitalization, and less often referred for rehabilitation.
Key conclusion: The "oldest old" patients present more geriatric syndromes, which make them vulnerable toward dependence and institutionalization after hospital, without having a higher mortality rate than the "younger old" patients. A geriatrician expertise is necessary in the management of these oldest old patients.

P-311

Impact of functional status, cognition and quality of life in elderly patients hospitalized for Covid-19 and evolution at three months Impact of functional status, cognition and quality of life in elderly patients hospitalized for Covid-19 and evolution a

Abstract Area: COVID-19

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Introduction: The COVID-19 pandemic has been particularly severe among elderly patients, causing a considerable morbidity leading to a significant mortality rate. We aim to figure out baseline functional status, cognition and perceived quality of life in old patients hospitalized for COVID-19 and their evolution at three months.
Methods: This observational cohort study was conducted in Hospital Universitario Vall Hebrón (HUVH), in Barcelona, Spain. Eligible patients were aged 75 years or older and had been admitted to emergency department for COVID-19 in the first outbreak of global pandemic; March-April 2020. Data about demographic characteristics, functional and cognitive status, perceived quality of life, frailty, incidence of delirium, readmissions and mortality was collected at hospital discharge and 3 months after.
Results: A total of 212 patients were included, with a mean age of 85.79 years. Global mortality rate was 49.52%. From baseline, majority of patients had no cognitive impairment, with mean Global Deterioration Scale (GDS) of 1.74. Globally, patients were mildly dependent, with mean Barthel Index (BI) of 88.14 and had a considerably good quality of life (QoL),with mean value of 78.14. Three months after discharge there was a higher prevalence of cognitive impairment, with mean GDS of 2.01; an increase in degree of dependency, with mean BI of 81.72; and a worsening in quality of life, with mean QoL of 64.61. After that time, mortality rate and hospital readmissions were 27.6% and 12%,respectively.
Conclusions: COVID-19 in hospitalized elderly patients causes high short-term mortality and a considerable decline in functional status, cognition and self-perceived quality of life three months after discharge, leading to a substantial mortality rate and hospital readmissions at that time.

P-312

Follow-up of older patients after acute COVID-19 comparatively with the younger counterparts: results on persistent symptoms and control imaging findings

Abstract Area: COVID-19

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Background/Objective: Covid-19 is known to affect older individuals more severely in the acute phase. However, it may have consequences that may continue to affect thesuffered patients in the early post-infectious period and later in life. Herein, we aimed to reportthe data on the follow-up of affected older adults comparatively with the younger counterparts.
Methods: We included a total of 665 Covid-19 patients who were admitted to our dedicated Covid-19 follow-up outpatient clinic between May 8 and June 21, 2020, after recovery of the acute infection. Their clinical characteristics, detailed laboratory examination, initial and control chest imagings (Computed tomography or direct X-ray) were examined.
Results: The median age was 46 years, and 346 (53%) were males. We assessed patients at amedian of 47 days after the recovery. Older adults aged $> = 65$ constituted 10.5% of the study population. Almost half of the patients (43.6%) were suffering from one or more ongoing symptomatology except fever. The prevalence of complained symptoms or physical examination findings were not different between the younger and older participants ($p > 0.05$, for all). The

most prevalent ongoing symptom in both groups was dyspnea (11.8% and 14.3% in younger and older groups, respectively). The most common ongoing laboratory abnormality was the presence of high pro-BNP (12.2%, in both age groups). There were no differences regarding imaging findings during the acute-phase of Covid-19. However, there was significantly higher rates of imaging abnormality in the older subgroup (35.7% vs. 19.4%; $p = 0.006$). There were about 30% younger patients who had normal imaging on admission, of whom about 10% developed some form of sequela. On the other hand, 40% of older patients had normal imaging on admission, of whom 25% developed any sequela.

Conclusion: Our findings suggest that, complaints related to SARS-CoV2 infection persists in a significant extend of the patients at the following 1.5 months in both age groups. More than one out of three older post-Covid-19 patients displayed some form of pulmonary sequela in the post-acute period, being more prevalent in this group. These results put forward that, compared to the younger counterparts, the clinicians should be alert and more tentative in follow-up of older adults for subsequent pulmonary sequela, even though they have normal imaging finding on initial presentation.

Keywords: COVİD-19, follow-up, recovery, outpatient, symptom, imaging

P-313

Corticosteroid therapy in COVID-19 associated with in-hospital mortality in geriatric patients: a propensity matched cohort study

Abstract Area: COVID-19

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Background: Few data are available on the prognosis of older patients who received corticosteroids for COVID-19. We aimed to compare the in-hospital mortality of geriatric patients hospitalized for COVID-19 who received corticosteroids or not.

Methods: We conducted a multicentric retrospective cohort study in 15 acute COVID-19 geriatric wards in the Paris area from March to April 2020 and November 2020 to May 2021. We included all consecutive patients aged 70 years and older who were hospitalized with confirmed COVID-19 in these wards. Propensity score and multivariate analyses were used.

Results: Of the 1579 patients included (535 received corticosteroids), the median age was 86 (interquartile range 81–91) years, 56% of patients were female, the median Charlson Comorbidity Index (CCI) was 2.6 (interquartile range 1–4), and 64% of patients were frail (Clinical Frailty Score 5–9). The propensity score analysis paired 984 patients (492 with and without corticosteroids). The in-hospital mortality was 32.3% in the matched cohort. On multivariate analysis, the probability of in-hospital mortality was increased with corticosteroids use (odds ratio [OR] = 2.61 [95% confidence interval (CI) 1.63–4.20]). Other factors associated with in-hospital mortality were age (OR = 1.04 [1.01–1.07], CCI (OR = 1.18 [1.07–1.29], activities of daily living (OR = 0.85 [0.75–0.95], oxygen saturation < 90% on room air (OR = 2.15 [1.45–3.17], C-reactive protein level (OR = 2.06 [1.69–2.51] and lowest lymphocyte count (OR = 0.49 [0.38–0.63]). Among the 535 patients who received corticosteroids, 68.3% had at least one corticosteroid side effect, including delirium (32.9%), secondary infections (32.7%) and decompensated diabetes (14.4%).

Conclusions: In this multicentric matched-cohort study of geriatric patients hospitalized for COVID-19, the use of corticosteroids was significantly associated with in-hospital mortality.

P-314

Characteristics of elderly patients who died of COVID-19 infection and use of therapeutic intensity levels during the first wave of the pandemic

Abstract Area: COVID-19

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Introduction: The aim of this study was to describe the clinical characteristics of patients who died in a university hospital during the first wave of the COVID-19 pandemic and analyse the use of a therapeutic intensity level scale (called NIT-Mar).

Methods: Retrospective observational study of hospitalised patients who died of COVID-19 infection between March-May 2020. Variables: demographics, comorbidity, symptoms, PaFI index, complications, established NIT-Mar and concordance with clinical management. NIT-Mar scale that we used was adapted and agreed in our hospital before the pandemic, was systematically recorded in clinical history and its use was widespread during the first wave. Levels: 1 = unlimited treatment, 2 = intensive treatment, 3 = intermediate intensity treatment, 4 = conservative symptomatic treatment, 5 = comfort treatment.

Results: 210 patients were included, mean age 82.4 years, 110 women (52.4%). 61.5% had previous dependency (64.5% partial, 38.5% total). Most (n = 179; 85.2%) had family support. Most frequent comorbidities: hypertension (n = 159; 75.7%), heart disease (n = 84; 40.0%), diabetes (n = 73; 34.8%). Symptoms: dyspnea (n = 113; 53.8%), somnolence (n = 68; 32.4%), delirium (n = 52; 24.8%), pain (n = 15; 7.1%). PaFI 54.3% < 300, 40.5% > 300. Complications: 12.5% had cardiac dysfunction, 35.7% renal failure. 66.7% died in hospital ward, 19.0% in the ER and 14.3% in Intensive Care Unit. NIT-Mar was recorded in 74.8% patients: on admission was: 12.7% level 1, 14.0% level 2, 38.2% level 3, 30.6% level 4 and 4.6% level 5. Most patients (86.7%) were treated according with NIT-Mar.

Conclusions: Patients who died from COVID-19 were mostly elderly with previous dependence.- Main symptoms were dyspnoea, somnolence and delirium.- NIT-Mar was recorded and was in line with treatment in most patients.

P-315

Dementia and COVID-19 in hospitalized elderly patients

Abstract Area: COVID-19

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Objectives: To describe the characteristics of elderly patients with dementia, hospitalized due to COVID-19. To compare groups with and without dementia among patients with COVID-19.
Methods: Retrospective observational cohort study. We included patients admitted to the geriatric unit of Hospital San José (Teruel), diagnosed with COVID-19 between March and November 2020. The two main study groups were those diagnosed with dementia at the time of admission, compared to those who were not. Sociodemographic and clinical variables were collected.
Results: 172 elderly patients were included in the study. 80 had a diagnosis of dementia at the time of admission. When analyzing study variables between patients with and without dementia, patients with dementia presented significant differences in the distribution by gender (61.3% women); 88.8% lived in nursing homes; 59.3% had malnutrition according to the Mini Nutritional Assessment—Short Form (MNA-SF); 71.2% had a Barthel index below 35 points. We did not observe significant differences in mortality between the two groups. In the multivariate analysis, we did not find statistically significant differences in any other variable, not even the length of hospital stay.
Conclusions: Elderly patients diagnosed with dementia, hospitalized for COVID-19 were significantly more dependent, they usually lived in nursing homes and had a worse nutritional profile. Groups with and without dementia had a similar hospital stay and mortality rate.

P-316

Elderly patients with COVID-19: are there differences between those who come from nursing homes and those who come from their own homes?

Abstract Area: COVID-19

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Objectives: To know the prevalence of elderly patients who live in nursing homes among the hospitalized with COVID-19. To compare epidemiological characteristics, comorbidities, functional status, nutritional status, hospital stay days and mortality among elderly patients who live in nursing homes and those who live in their own homes.
Methods: Retrospective observational cohort study. We included patients admitted to the geriatric unit of Hospital San José -Teruel, diagnosed with COVID-19 between March and November of 2020. We divided the patients into two groups, those who lived in nursing homes and those who lived in their own homes. Sociodemographic and clinical variables were collected.
Results: 172 patients were included, of which 112 (65.12%) lived in nursing homes. When comparing the study groups, institutionalized patients were older (87.34 vs 83.92) (p 0.006), had a higher percentage of women (58%), a higher percentage of malnutrition (50.7% vs 42.1%) (p 0.389), severe and total dependence according to the Barthel index (56.9% vs 17.5%) (p 0.001), and dementia diagnosis (63.4% vs 15%) (p 0.001). The hospital stay was similar in both groups (14.4 vs 15.3 days). 39.4% of the patients who lived in nursing homes died vs 36.7% of those who lived in their own homes (p 0.736).
Conclusions: A high percentage of elderly patients with COVID-19 came from nursing homes. Patients with COVID- 19 from nursing homes were older, more dependent, and more frequently had dementia. Living in a nursing home is not related to a longer hospital stay or higher mortality.

P-317

Recovery of daily functioning and quality of life in post-COVID-19 patients in geriatric rehabilitation

Abstract Area: COVID-19

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Introduction: After COVID-19 infection with possible Intensive Care admission, frail older adults may benefit from geriatric rehabilitation (GR). However, little is known about functional recovery and quality of life (QoL) of post-COVID-19 patients during and after GR.
Methods: An international longitudinal multicenter study in > 60 rehabilitation centers across 10 European countries. Patients' characteristics, medical history, symptoms, functional status (Barthel Index; BI), QoL (EQ-5D-5L, range: 0–100), Clinical Frailty Scale (CFS) and length of stay were abstracted from medical records of GR facilities. At GR admission, the premorbid BI was collected and follow-up measures were obtained by telephone at 6 weeks, and 6 months after discharge. We use linear mixed models to examine the course of functional recovery and QoL.
Results: 728 patients were included with a median (IQR) age of 75 (69–83) years. Median (IQR) length of stay in GR was 26 (15–40) days and 77% of patients were discharged home. GR settings were heterogeneous across participating countries. On average, patients' daily functioning recovered during GR up to their premorbid status and this recovery was sustained after discharge. The EQ-5D-5L VAS score increased from 51 to 68 at admission and 6 months post-discharge respectively. Frail (CFS: 6–9) and non-frail (CFS: 1–3) patients show a similar ADL recovery trajectory during and after GR.
Conclusion: Post-COVID-19 patients recovered well in terms of daily functioning and QoL during and after GR. Currently study

follow-up is ongoing and we will be able to show more detailed results, including factors associated with recovery, in September. Note: data presented in this abstract are based on the EU-COGER database freeze of May 4, 2022.

P-318

Shared decision making in advanced care planning among hospitalized older COVID-19 patients: a multicenter, retrospective cohort study

Abstract Area: COVID-19

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BackgroundIn the Netherlands, it is customary to discuss directives regarding resuscitation, intubation, and ICU-admission with patients and/or their relatives upon hospital-admission. The outcome of this discussion is documented in a code status. Ideally these advance care planning (ACP) related decisions are made by patient and professional together in a shared decision making (SDM) process, to improve patient satisfaction and prevent undesired care. Given the outcomes in older COVID-19 patients, especially those who are at high risk of needing mechanical ventilation support and intensive care, it is particularly important to discuss the code status upon admission. This study aims to describe the current practice of SDM regarding code status.

Methods: In this retrospective cohort study, we included COVID-19 patients aged 70 years and older, admitted to two large teaching hospitals in the Netherlands, during the first months of the COVID-19 pandemic in 2020. Data about code status and the decision-making process were extracted from electronic healthcare records.

Results: Of 275 included patients, code status was documented in 274 of them. In 48% of the patients it has been described in their medical records that the patient had participated in the decision-making process. In 19% all key elements of shared decision making have been described.

Conclusion: Only in 19% of the patients all key element key-elements of SDM regarding code status (an ACP-related decision) were described, leading to the conclusion that SDM is not common practice. However, the results show that a proper SDM process regarding code status is possible, even in hectic times like the COVID-19-pandemic.

P-319

Reflections on ethical dilemmas in pandemic from the perspective of healthcare social work

Abstract Area: COVID-19

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The Covid-19 pandemic has revealed ethical dilemmas in the employed measures to contain its expansion, having social and economic impacts on vulnerable people. To prevent the spread of the virus, the accompaniment and visits to hospitalized patients has been straitened, wanting to protect them, they have been isolated from their relatives, limiting their emotional support that helps patients overcome fear during admission and illness.

Objective: To reflect about the choice either, rigidity and prohibition of visits to patients, or accompaniment by their relatives during their hospital admission.

Methodology: Qualitative and quantitative. Mixed sources, collecting data from reports made at the Hospital by the Citizen's Attention Unit, during the dates of visits restrictions, and by Preventive Medicine, about the Covid-19 outbreaks on those dates. Primary sources through interviews with patients and relatives.

Results: Pros and cons: Restrictions during three periods of total prohibition of visits. Reduction of Covid-19 outbreaks, but not their elimination. Inflection point with the vaccination of the healthcare personnel. Use of new technologies for communicating. Loneliness, disorientation, increased mechanical restraints and functional decline in hospitalized patients. Anxiety and uncertainty of relatives.

Conclusions: The study carried out has analyzed the assumptions in different regulations and aims to go along with becoming aware of the different situations for the patient and his relatives. It does not propose solutions nor opt for one or another choice, it simply highlights the difficulty of making decisions in times of pandemic where the message is "Let's take care of ourselves". But, how?

P-320

Nutritional risk assessed by the Nutritional Risk Screening 2002 is associated with in-hospital mortality in older patients with COVID-19

Abstract Area: COVID-19

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Introduction: Although numerous studies have been performed to determine predictors of coronavirus disease 2019 (COVID-19) mortality, studies that address the geriatric age group are limited. The aim of this study was to investigate the utility of the Nutritional Risk Screening (NRS-2002) and the G8 screening tools in predicting clinical outcomes in older adults hospitalized with COVID-19.

Methods: Patients aged 60 and above who were hospitalized with COVID-19 in the second wave of the pandemic were included in the study. COVID-19 infection was demonstrated by a positive real-time reverse transcriptase-polymerase chain reaction on nasopharyngeal swab or positive radiological findings. Disease severity was determined as defined by the National Institutes of Health. Patient demographics, laboratory values on admission, comorbidities and medications were recorded. The NRS-2002 and the G8 screening tools were performed for all patients by the same geriatrician. Primary outcome was in-hospital mortality.

Results: A total of 121 patients were included. Mean age was 75 $\pm$ 9 and 51% were female. Mean BMI was 27 $\pm$ 4.5 kg/m2. Sixty-nine percent of the patients had nutritional risk according to the NRS-2002. Eighty-nine percent of the patients had a G8 score less than or equal to 14. In-hospital mortality occurred in 26 (22%) patients. Older age and having nutritional risk as determined by the NRS-2002 were

independently associated with a higher risk of in-hospital mortality in older patients with COVID-19.
Conclusion: The NRS-2002 tool provides rapid assessment for risk stratification in hospitalized older patients with COVID-19.

P-321

A tale of two regions: painful lessons learnt from the Covid-19 related deaths among the long-term care residents

Abstract Area: COVID-19

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Introduction: Ontario was hit hard in the early Covid-19 pandemic. As of September 2020, among 78,000 Ontario long-term care (LTC) home residents, there were 1,869 COVID-19 related deaths (Disease & LTC-specific Mortality Rate—DL-SMR: 2.39%), while in Hong Kong, a city with comparable socioeconomic condition, there were only 30 COVID-19 related deaths among its 76,000 LTC home residents (DL-SMR: 0.039%) during the same period. However, the pattern was reversed in the latest Omicron-dominated wave. As of April 30, 2022, there were 504 Covid-19 related deaths coming from Ontario's LTC homes (DL-SMR: 0.68%), versus approximately 5,000 from Hong Kong's residential care homes (DL-SMR: 6.66%).
Methods: Using a mixed-method approach, a comparison between these two places was made by combining health-and-social indicators review with key informant's interviews.
Results: Major factors common to the high DL-SMR in both regions during different wave include: government's lack of pandemic preparedness, insufficient care-home staff, and confusing admission-and-discharge hospital policy for infected residents. Other factors being unique to either of the regions, such as, movement of contracted care workers among homes, shortage of Personal Protective Equipment supply, poor vaccination uptake in LTC population, and the collapse of emergency care would also be explained.
Conclusion: The comparison between these 2 places on LTC homes Covid-19 related deaths, would yield important lessons for protecting life of the most vulnerable old-age group in future.

P-322

Vaccination status, presentation characteristics and outcomes of older patients hospitalized for COVID-19 in the third wave of the pandemic in The Netherlands: the COVID-OLD multi-center cohort study

Abstract Area: COVID-19

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Introduction: In The Netherlands, most people aged 70 years and older have been vaccinated at least once for COVID-19. The aim of the present study was to investigate differences in patient characteristics, disease presentation and outcomes between vaccinated and non-vaccinated patients hospitalized for COVID-19 infection in The Netherlands.
Methods: This was a multi-center retrospective cohort study in 5 hospitals in the Netherlands including all patients aged 70 years and more, hospitalized with COVID-19 infection from September 1st 2021 to December 31st 2021 (third wave). Data were collected on demographics, co-morbidity, indicators of disease severity, Clinical Frailty Scale (CFS) and in-hospital mortality. At conference presentation, we expect 500 inclusions.
Results: A total of 131 vaccinated patients (median age 80 (IQR 75–86), 64% male) and 63 non-vaccinated patients (median age 78 (IQR 73–82), 54% male) were included. Vaccinated patients had higher Charlson Comorbidity Index than non-vaccinated patients (median 2 (IQR 1–4) versus 1 (IQR 0–3)) and higher CFS (median 4 (IQR 3–5) versus 3 (IQR 3–6)). There was no difference in disease severity at time of admission, although vaccinated patients were admitted earlier (median 6 (IQR 3–8) versus 7 (IQR 4–9) days since first symptoms). In-hospital mortality was lower in vaccinated patients (22% versus 31%). More vaccinated patients returned home after admission (79% versus 69%).
Key conclusions: Older people who were vaccinated against COVID-19 had lower in-hospital mortality, although they were older and more frail. This suggests COVID-19 vaccination is beneficial to in-hospital outcomes for older patients, also those with frailty.

P-323

Mortality in COVID-19 older patients hospitalized in a geriatric ward: is obesity protective

Abstract Area: COVID-19

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Objective: To investigate the relationship between obesity and 30-day mortality in a cohort of older COVID-19 inpatients.
Methods: Patients included were aged 70 years or more; hospitalized in acute geriatric wards between March and December 2020; with a positive PCR for COVID-19; not candidate to intensive care unit admission. Clinical data were collected from patients electronic medical records. Data on 30-day mortality were retrieved from the hospital administrative database.
Results: Patients included ($N = 294$) were on average 83.4 ± 6.7 years old, 50.7% were women, and 21.7% were obese (BMI > 30 kg/m2). At 30-day, 85 (28.9%) patients were deceased. Compared to survivors in bivariable analysis, deceased patients were older (84.6 ± 7.6 vs 83.0 ± 6.3 years, $P = .059$), more frequently with very complex health status (63.5% vs 39.7%, $P < .001$), but less frequently obese (13.4% vs 24.9%, $P = .033$) at admission. Over their stay, deceased patients more frequently (all $P < .001$) developed radiologic signs of COVID-19 (84.7% vs 58.9%), anorexia (84.7% vs 59.8%), hypernatremia (40.0% vs 10.5%), delirium (74.1% vs 30.1%), and need for oxygen (87.1% vs 46.4%) than survivors. In multivariable analysis that controlled for all markers of poor

prognosis identified in bivariable analysis, obese patients remain with 64% (adjOR 0.36, 95% CI 0.14–0.95, P = .038) lower odds to be deceased at 30-day than non-obese patients.
Conclusions: In this population of older COVID-19 inpatients, an inverse association between obesity and 30-day mortality was observed even after adjusting for all already-known markers of poor prognosis. This result challenges previous observations in younger cohorts and would need to be replicated.

P-324

The influence of cognitive impairment and frailty on depression, anxiety and stress during the COVID-19 pandemic

Abstract Area: COVID-19

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Introduction: We aimed to determine the influence of mild cognitive impairment (MCI) and frailty on depression, anxiety and stress among older adults during the pandemic.
Methods: Participants aged above 60 years from three ageing cohorts in Malaysia were interviewed virtually. The Fatigue, Resistance, Ambulation, Illness and Loss of Weight scale, blind Montreal Cognitive Assessment, 15-item Geriatric Depression Scale, anxiety subscale of Depression, Anxiety and Stress Scale and 4-item Perceived Stress Scale measured frailty, MCI, depression, anxiety and stress respectively.
Results: Data were available for 745 participants, age (mean ± SD) = 73.24 ± 7.03y and 56.2% women. 291(39.1%) were robust, 132(17.7%) pre-frail, 118(15.8%) MCI, 90(12.1%) pre-frail + MCI, 61(8.2%) frail and 53(7.1%) frail + MCI. Using multiple linear regression, pre-frail (mean difference, MD (95% confidence interval, CI) = 1.184 (1.052–1.335)), MCI + pre-frail (1.202 (1.037–1.393)), frail (1.675 (1.459–1.923)) and MCI + frail groups (1.754 (1.495–2.059) had significantly higher depression scores, while the MCI + prefrail (anxiety = 1.172 (1.065–1.291); anxiety = 1.256 (1.132–1.395)), frail (1.267 (1.156–1.391); 1.408 (1.259–1.575)) MCI + frail (1.271 (1.141–1.416) and (1.259 (1.106–1.432) categories had significantly higher stress and anxiety scores compared to the robust group following adjustment for potential confounders.
Conclusion: Pre-frail or frail individuals with or without the presence of MCI had significantly higher depression scores than those who were robust, while anxiety and stress were increased in the prefrail with MCI or frail with and without MCI groups. Interventions to address psychological issues in older adults during the COVID-19 pandemic could target prefrail and frail individuals and should be evaluated further.

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Immune response to the third dose of SARS-CoV-2 vaccine in a geriatric population

Abstract Area: COVID-19

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Background: The anti-spike (S) IgG antibody titer decreases significantly from the third month after the second dose of SARS-CoV-2 vaccine. We observed the immune response to a third dose in a geriatric population.
Methods: We conducted a longitudinal prospective observational study on patients followed-up in a geriatric aftercare and rehabilitation day hospital unit. All patients had received two doses of SARS-CoV-2 mRNA vaccine, either BNT162b2 or mRNA-1273. The anti-S IgG titers were measured 5–7 months after the second dose, then one month after that third dose. We used Wilcoxon signed rank test to assess the evolution of IgG anti-S titers.
Results: Among the 62 patients enrolled in the study, 43 were included in the analysis, of which 16 (37.21%) were men and 27 (62.79%) were women. The minimum age was 73 years, maximum was 94, median was 83. The median of the Charlson comorbidity index was 6. The median anti-S IgG titer was 94.0 BAU/ml at 5–7 months from the second dose, 2870.0 BAU/ml at one month from the third dose. The median of the difference of the anti-S IgG titer after the third dose from the titer after the second dose was 1946.00 BAU/ml, with a p-value inferior to 0.001.
Conclusion: One month after the third dose of SARS-CoV-2 mRNA vaccine, the anti-S IgG titers increased significantly in people over 70 years of age with multimorbidity.

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What further complications could an unvaccinated COVID-19 patient have?

Abstract Area: COVID-19

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Introduction: At the end of 2019 in Wuhan, China, a disease was originated due to coronavirus (COVID-19). According to the World Health Organization (2021), SARSCoV-2 is a highly transmissible and pathogenic coronavirus, which induces a severe acute respiratory syndrome; The COVID-19 clinical manifestations can range from asymptomatic, presenting mild respiratory symptoms, to a serious

threat of death caused by respiratory and cardiac failure.Medical history: Diabetes Mellitus. No COVID-19 vaccineComprehensive Geriatric assessment: Functional: He walks independently. Barthel index (BI) 100/100. No cognitive impairment. Social: Single. Lives with a single brother. No social network. Assessment at admission: (BI) 5/100, Bed-chair life. Evolution: Patient of 73 years old, admitted with COVID-19 pneumonia treated with, oxygen, dexamethasone, tocilizumab, prophylactic anticoagulation and broad-spectrum antibiotic with initial favorable respiratory evolution. After fifteen days, started with pain in right limb with signs of arterial ischemia, was evaluated by Vascular Surgery and underwent popliteal thrombectomy and also required amputation of the 1st, 3rd and 5th toes of the right foot. An exhaustive study was carried out to determine the cause of the acute ischemia, all the results were normal, and we concluded that the cause was COVID-19. He also presented several complications such as delirium, tracheobronchitis associated with mechanical ventilation due to Moraxella catarrhalis and Candida urinary tract infection. From the functional point of view, he has been able to walk without technical aidsat discharge: BI. 65/100.
Conclusion: Unvaccinated patients with infection secondary to COVID-19 have more complications than those who have had COVID-19 vaccine.

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Morel-Lavallée lesion an unknown complication of COVID-19 infection, a case report

Abstract Area: COVID-19

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Introduction: Morel-Lavallée lesions are post-traumatic hemo-lymphatic collections related to shear injury and disruption of the interfascial planes between subcutaneous soft tissue and muscle. In some cases, the patient reports no previous trauma. COVID-19 virus can spread easily and can result in asymptomatic cases, mild syndromes as well as severe manifestations, such as deep vein thrombosis, pulmonary embolism and hemorrhage, requiring hospitalization and Intensive Care Units (ICU). Medical history: diabetes mellitus and hypertension. Comprehensive Geriatric assessment at admission: Functional: Barthel Index (BI) 100, independent ambulation. Cognitive: no cognitive impairment. Social: married, lives with her husband and children. Functional assessment on admission: (BI) 15/100, dependent ambulation. Case report: Patient admitted to Hospital San Juan de Dios with a diagnosis of COVID-19 infection and Morell-Lavallée lesion in the left muscle measuring 74 × 73x20 mm. She was treated in ICU with anticoagulation, antibiotics and corticosteroids, after 18 days she had a negative PCR test for COVID-19. Evolution: During admission, the patient evolved satisfactorily, improving the pressure ulcer, achieving good control of diabetes and blood pressure. She presented a multisensitive pseudomona aeruginosa urinary tract infection that was treated with oral ciprofloxation. As for the Morel-Lavallée lesion of the left thigh, it was treated conservatively and decreased in size, resolving completely 60 days after discharge.
Conclusion: In this case, in which there was no previous trauma, the appearance of the Morel-Lavallée lesion is interpreted as related to infection by COVID-19, constituting one of the most complications associated with infection by this virus.

P-328

Mortality in COVID-19 older patients hospitalized in a geriatric ward: is obesity protective?

Abstract Area: COVID-19

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Objective: To investigate the relationship between obesity and 30-day mortality in a cohort of older COVID-19 inpatients.
Methods: Patients included were aged 70 years or more; hospitalized in acute geriatric wards between March and December 2020; with a positive PCR for COVID-19; not candidate to intensive care unit admission. Clinical data were collected from patients electronic medical records. Data on 30-day mortality were retrieved from the hospital administrative database.
Results: Patients included ($N = 294$) were on average 83.4 ± 6.7 years old, 50.7% were women, and 21.7% were obese (BMI > 30 kg/m2). At 30-day, 85 (28.9%) patients were deceased. Compared to survivors in bivariable analysis, deceased patients were older (84.6 ± 7.6 vs 83.0 ± 6.3 years, $P = .059$), more frequently with very complex health status (63.5% vs 39.7%, $P < .001$), but less frequently obese (13.4% vs 24.9%, $P = .033$) at admission. Over their stay, deceased patients more frequently (all $P < .001$) developed radiologic signs of COVID-19 (84.7% vs 58.9%), anorexia (84.7% vs 59.8%), hypernatremia (40.0% vs 10.5%), delirium (74.1% vs 30.1%), and need for oxygen (87.1% vs 46.4%) than survivors. In multivariable analysis that controlled for all markers of poor prognosis identified in bivariable analysis, obese patients remain with 64% (adjOR 0.36, 95% CI 0.14–0.95, $P = .038$) lower odds to be deceased at 30-day than non-obese patients.
Conclusions: In this population of older COVID-19 inpatients, an inverse association between obesity and 30-day mortality was observed even after adjusting for all already-known markers of poor prognosis. This result challenges previous observations in younger cohorts and would need to be replicated.

P-329

Lifestyle among older adults during the global COVID-19 pandemic: findings from the Southampton Longitudinal Study of Ageing (SaLSA)

Abstract Area: COVID-19

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Introduction: The COVID-19 pandemic has led to dramatic changes in older people's lives. We aimed to report pandemic-related changes in diet and physical activity (PA) and identify predictors of these changes in UK community-dwelling older adults.
Methods: We recruited 491 older males and females. A postal questionnaire was completed in summer/autumn 2021 (the first UK

lockdown was announced in 03/2020). This ascertained demographic, lifestyle factors, number of comorbidities (NoC), nutrition risk (DETERMINE checklist), and SARC-F scores, and presence of frailty. Associations between these characteristics in relation to self-reported changes in diet quality (DQ) ('healthiness' of diet) and PA (lower, similar, or higher, compared to before the first lockdown) were explored using ordinal logistic regression.

Results: Median (lower quartile, upper quartile) age was 79.8 (77.0, 83.7) years. 11 (4.9%) males and 25 (9.4%) females reported poorer DQ and 81 (36.0%) males, and 113 (42.8%) females reported lower PA, compared to before lockdown. The following were associated with increased risk of being in a worse category for both change in DQ and PA after adjustment for sex: higher BMI ($p < 0.001$); higher DETERMINE score ($p < 0.005$); higher SARC-F score ($p < 0.014$); and self-reported exhaustion in the previous week ($p < 0.003$). Higher NoC was additionally associated ($p = 0.001$) with increased risk of being in a worse category for change in PA, after adjusting for sex.

Conclusions: Individuals at greater nutritional risk and at risk of sarcopenia were at increased risk of deterioration in DQ and PA during the pandemic. Understanding whether factors are reversible is now required.

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The impact of the second wave of the COVID-19 pandemic and its concurrent measures on positive health and the role of complex health problems: a cross-sectional study in community-dwelling older adults in The Netherlands

Abstract Area: COVID-19

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Van der Klei V.M.G.T.H., Moens I.S., Simons T., den Elzen W.P.J., Mooijaart S.P., Gussekloo J., Trompet S. and Drewes Y.M. for the PHICOP-study and the COOP-consortium.

Introduction: The COVID-19 pandemic and concurrent restrictive measures had both favorable and adverse impact on Positive Health of older adults overall during the first wave. We aimed to study their impact during the second wave and the role of complex health problems in community-dwelling older adults.

Methods: During the second wave (November 2020 until February 2021), adults aged $\geq$ 65 years in the Netherlands completed an online questionnaire. Positive Health impact was measured by the self-reported change in its 6 dimensions comparing current health status to before the COVID-19 pandemic (decreased/unchanged/increased). Complex health problems were assessed with the validated ISCOPE-tool (i.e. $\geq$ 2 problems on $\geq$ 3 out of 4 domains).

Results: Of the 2,397 participants (median age of 71 years old and 60% women), 15% was considered having complex health problems. Overall, respondents reported a median decrease in 1 Positive Health dimension (interquartile range (IQR): 1–3), mostly in social participation (68%). Those with complex health problems did not have more personal experience with COVID-19 than those without (both 4%), but reported more decreased Positive Health dimensions (median (IQR): 4 (2–5) vs. 1 (1–3), $p < 0.001$). They also had a higher risk of experienced decrease in all dimensions, adjusted for age and sex, with odds ratios ranging from 1.53 in social participation (95% confidence interval (CI) 1.17–2.00) to 5.62 in bodily functions (95% CI 4.41–7.17).

Conclusion: The impact of the second wave of the COVID-19 pandemic and its measures on Positive Health was adverse and consistently more frequent in community-dwelling older adults with complex health problems than without.

P-331

Characteristics and outcomes of older hospitalized patients with COVID-19 across the COVID-19 epidemic waves: a multicenter retrospective cohort study in the Greater Paris University Hospitals

Abstract Area: COVID-19

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Introduction: Mortality is high in older patients hospitalised with COVID-19. Previous studies observed lower mortality during the Omicron wave, yet no data is available on older patients. We aim to assess in-hospital mortality of older patients hospitalised with COVID-19 during the Omicron wave, and compare it with the previous waves.

Methods: This retrospective observational multicentre cohort study used data from electronic health records of 38 hospitals within the Greater Paris Public Hospitals Group's data warehouse from 01/03/2020 to 31/01/2022. All adults $\geq$ 75 years hospitalised with confirmed COVID-19 diagnosis were included. Primary endpoint was in-hospital mortality. The fifth wave was considered as the Omicron wave as it was the predominant variant ($\geq$ 50%), and was compared with waves 1–4. Multivariate logistic regression was performed, with a sensitivity analysis according to variant type.

Results: 19,909 patients were included, age 85 (SD 7) years, 53% of women, Charlson score 3 [IQR 2–5]. Overall mortality occurred in 4,337 patients (22%), 345 patients (17%) during the fifth wave. Using multivariate analysis, after adjustment on sex, age, Charlson score components, serum creatinine, CRP and lymphocyte, only waves 1 and 3 were associated with an increased mortality risk: OR 1.45 (95% CI 1.24–1.71) and OR 1.59 (95% CI 1.35–1.87), respectively. Sensitivity analysis found that Omicron variant was associated with a decreased mortality risk, in comparison with the previous variants.

Key conclusions: Although mortality was high during wave 5, death risk was lower in comparison with waves 1 and 3, suggesting that Omicron variant is milder, but not mild.

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The effect of SARS-CoV-2 vaccination status on levels of antibodies to SARS-CoV-2 spike protein in acutely admitted geriatric patients

Abstract Area: COVID-19

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Abstract: Introduction: The SARS-CoV-2 pandemic has highlighted the lack of knowledge concerning response to vaccination in the elderly population. With a better understanding of immunosenescence we might be able to identify risk factors predicting an insufficient response to vaccines. The aim of this study was to observe the effect of vaccines on spike protein antibody levels in geriatric patients. Secondly, we observed whether age, gender or comorbidities facilitate a reduced immune response.
Materials and methods: Blood samples from acutely admitted geriatric patients were collected during two weeks in December 2021 at Bispebjerg Hospital, Copenhagen, Denmark. Data consisted of age, gender, Charlson comorbidity index (CCI), levels of antibodies to SARS-CoV-2 spike protein (anti-spike antibodies) and vaccination status. Groups with low (< 29BAU/ml) or medium-high anti-spike antibodies were compared. Chi-square test, t-test or Mann Whitney U test were used depending on type of variable and distribution.
Results: In total 79 patients (84 ± 8 years, 44 (56% women) were included. Medium-high level of anti-spike antibodies were observed in 0% (0/3), 64% (36/56) and 92% (11/12) after one, two or three vaccinations, respectively. In patients with two vaccinations 30% had high levels of anti-spike antibodies, while 75% had high levels following three vaccinations. There were no significant differences between patients with low or medium-high anti-spike antibodies concerning age, gender or CCI.
Key conclusions: The results demonstrate a strong dose response association between the number of vaccinations and anti-spike antibodies, underlining the need for booster vaccines in geriatric patients. Notably, anti-spike antibodies were not related to age, gender or CCI.

P-333

Prospective evaluation of antibody response post covid-19 vaccinations in Malaysian older persons ≧ 60 years old (PEARL 60)

Abstract Area: COVID-19

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As our understanding of the pandemic has evolved, it has become clear that outcomes have been highly age-dependent and variable. Immune response to vaccines amongst older persons too have been reported to be variable. This variability is best understood through the lens of frailty, multimorbidity and immunosenescence. Through PEARL 60 study, we hope to study the humoral immunogenicity of older persons twelve months post-primary vaccine series.
Methods: Patients aged > 60 years, attending UMMC clinics were recruited up to 3 months from their completion of primary vaccination series and followed up for 12 months. Demographics, vaccine types, Charlson Comorbidity Index (CCI), FRAIL scale and SARC-F data were collected. Total immunoglobulin levels to the receptor-binding-domain of the SARS-CoV-2 spike protein were measured with an anti–SARS-CoV-2 S enzyme immunoassay. This is an interim analysis at 3 months.
Results: 250 older persons participated in this study, mean age 68.2 years, SD: 5.36. The mean Charlson Comorbidity Index was 3.7(SD: 1.44). Of the 250, only 55(20%) received mRNA vaccines. Only 129(51.6%) had anti S levels > 250, while 76(30.4%) had anti S levels < 100. Amongst those with total antibodies level < 100, 17(6.8%) were frail and pre-frail, and 33(13.2%) had moderate to severe CCIs.
Conclusions: Though this study was limited by paucity of data on cellular immunity and neutralizing antibodies, it has highlighted the need for further investigations revolving around vaccinology, frailty and immunosenescence. Scheduling of future booster doses should be guided by these factors and objective testing to tailor its effectiveness in complex and frail older persons.

P-334

How the COVID 19 pandemic affected the French Nursing Homes organisation: the ENCOPAD cross-sectional study

Abstract Area: COVID-19

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Introduction: In 2020, the COVID-19 pandemic affected older individuals in nursing homes (NH). In France a strict lockdown took place from march 17th to may 11th: patients had to stay in their rooms, collective activities were forbidden and nursing staff had to decrease their interactions. Objectives: to explore the adaptation of NH organization to the lockdown from the point of view of coordinating physicians (CP) and directors, and factors associated with the presence of a COVID-19 cluster. Method: this national observational cross-sectional survey, consisted in an online questionnaire (219 questions) sent to NH directors and CP, through national learning societies and professionals networks. We extensively described NH organization. and analyzed its association with the presence of a cluster in NH (defined as ≥ 4 suspected or confirmed covid-cases).

Results: among 707 responders, 63.4% were CP,36.6% directors and 22.6% reported the presence of at least one cluster, 55.1% revealed creation of dedicated covid units/rooms and 89% closed their restaurant. Among directors, 11.7% declared > 20% of absenteeism among staff members. Private-for-profit NH status (vs. public hospital facility, adjusted OR (ORa): 3.62; 95% CI: [1.93–6.78]), higher numbers of residents (ORa: 2.71 [1.69–4.36]), higher CP working time (≥ 50%) 69.2% vs. 54% and the setting of dedicated covid units/rooms were associated with the presence of cluster(s) in the NH.
Conclusion: This study highlights 1. The NH internal organization adaptation and 2. Characteristics associated with the presence of cluster(s), during the first pandemic wave. This should help for better management and health care organization especially for epidemic prevention.

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Relationship of COVID-19 with the nutritional status of geriatric in-patients

Abstract Area: COVID-19

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Introduction: 50% of older patients with COVID-19 have high malnutrition (M) risk, which is related to loss of taste and smell, loss of appetite, severe weakness, and complications. Moreover, M is related to a high mortality rate. We aimed to investigate the nutritional status of geriatric in-patients with COVID-19 and to determine the relationship between the two.
Methods: A retrospective study of the electronic medical record was performed, in which 313 patients (202 women) were treated for COVID-19 in the Geriatric department of LSMU Kaunas Hospital. Demographic data and blood test results were collected, and complications and outcomes of the disease were registered. Data was analysed using the Pearson correlation coefficient and Student's t-test.
Results: The mean age of the subjects was 82.0 ± 7.2 years. The following qualitative indicators of malnutrition were identified: lymphopenia − 95.8%, hypoalbuminaemia − 84.9%, anaemia − 35.5%, vitamin D deficiency − 79.3%. Mild level of disease was detected in 10.5%, moderate in 8%, and severe in 81.5% of patients. The majority of subjects developed bacterial pneumonia (70%). Complications of the disease were identified: respiratory failure (RF) (82.7%), hypovolemia (H) (70.3%), renal impairment (IR) (22.4%), Cl. difficile-induced enterocolitis (15%), pulmonary embolism (PE) (7.7%), and sepsis (5.4%). PE, sepsis, RI, and RF were associated with a higher mortality rate. Mortality was associated with older age. Significant relationships were found between lymphopenia, hypoalbuminemia and severe COVID-19.
Key conclusions: Patients with severe COVID-19 were more likely to have lymphopenia and hypoalbuminemia, with the lowest mean of nutritional status and the highest prognostic illness mean.

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Peak and trough of anti-SARS-CoV-2 IgG level after the 2nd and the 3rd vaccination in Nursing Home residents with or without previous history of SARS-CoV-2 infection

Abstract Area: COVID-19

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Duration of post-vaccination protection against severe COVID-19 in nursing home (NH) residents is a critical issue. The objective of this study was to estimate peak and trough IgG(S) levels following to the 2nd and the 3rd (boost) dose of the mRNA BNT162b2 vaccine in NH residents with (COV-Yes) or without (COV-No) history of SARS-CoV-2 infection. Sixty-one residents (36 COV-Yes and 25 COV-No NH), median age 89 years, had IgG(S) quantification (BAU/mL) at four different time points following the BNT162b2 vaccination: 74 ± 21 (1st) and 209 ± 18 (2nd) days after the 2nd dose, and 43 ± 8 (3rd) and 186 ± 3 (4th) days after the boost dose. Table shows the median values of the IgG(S) quantifications in BAU/ml (median (IQR)) COV-NO (N = 25) COV-YES (N = 36) 1st quantification491 (178–1609) 3635 (2080–8907)***2nd quantification 84 (44–316) 1990 (1112–2080)***3rd quantification3660 (2130–10,375) 5810 (3798–13,075) 4th quantification1470 (742–2505) 2084 (1630–3973). The comparison between peak and trough IgG(S) levels allowed us to calculate that the waning rate per month (exponential decrease) was lower after the boost dose: 20% (13–25%) than after the 2nd dose: 25% (18–33) (p = 0.007) without any difference between the 2 COVID-19 status groups. We also calculated the time after vaccination of IgG(S) decline below the estimated protection rate against the delta variant (i.e. 264 BAU/ml). This time was much longer after the boost dose as compared to the 2nd dose: 11.5 vs 4.1 months in COV-No and 16.7 vs 12.7 in COV-Yes residents. As compared to the 2nd dose, the boost vaccination provides a longer protection by both increasing the peak effect and reducing the decline rate. These data indicate that in these very old frail people the 3rd (boost) dose of the mRNA BNT162b2 vaccine can provide a long lasting protection against severe forms of the SARS-COV-2 infections.

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Utility of thoracic ultrasound in selecting older patients with hyperinflammatory phase in COVID-19 pneumonia

Abstract Area: COVID-19

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Background: Cytokine dysregulation is believed to play a key role in COVID-19 clinical course and its timely recognition is pivotal for a favorable outcome, typically in the oldest patient. Lung ultrasound (LUS) has been proven to be an easy-to-perform, accurate tool for detecting COVID-19 pneumonia. In the current study, we aimed at evaluating the relationship between inflammatory markers and pulmonary injury assessed by LUS in older patients with COVID-19 pneumonia.
Methods: We consecutively enrolled older patients (age $\geq$ 65 years) hospitalized for COVID-19 pneumonia in our tertiary care hospital. All the patients underwent LUS, physical examination and complete blood tests. Kendall's Correlation was calculated to verify the relationship between LUS score and inflammation marker. A 7.5 mg/dl Hs-CRP cut-off was set to define the "hyper inflammation" state, in line with NIH guidelines. Finally, a receiver operating curve (ROC) was evaluated to define a cytokine storm—LUS-defined cut-off.
Results: Overall, 65 older patients with COVID-19 (mean [SD], 82.0 [6.9] years) were included in the analysis. LUS score was related inversely to PaO2/FiO2 ratio at admission (tau $-$ 0.29, $p < 0.01$) and nadir (tau $-$ 0.21, $p < 0.01$), and positively to H-CRP (tau 0.35, $p < 0.001$). An indexed LUS score higher than 0.8 was highly predictive of cytokine storm (AUROC 0,78, $p < 0.001$; Sensitivity 86%, Specificity 68%).
Conclusion: Lung involvement evaluated by LUS correlates directly with inflammatory markers and inversely with PaO2/FiO2 ratio. LUS value qualified as an independent predictor of cytokine storm and a score greater than 0.8 is the most predictive cut-off.

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Impact of the Dutch COVID-19 visitor-ban on residents, family and care professionals in long-term care facilities: a cross sectional comparative study

Abstract Area: COVID-19

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Introduction: The national visitor-ban during the first outbreak of COVID-19 in Dutch long-term care facilities (LTCF) from March 20 until June 15 2020, caused large social unrest. Negative impacts on residents, family and care professionals were increasingly expressed in the media, but not objectively supported by scientific evidence yet. This study aims to gauge the impact of the visitor-ban in Dutch LTCFs on residents, family and care professionals.
Methods: Cross-sectional data were collected anonymously online amongst family members of LTCF residents and care professionals 6–10 weeks after the visitor-ban started (T1) and 2–5 weeks (T2) after partial alleviation. Main outcomes: changes in severity of behavioural symptoms (proxies; T1, T2); worrying of family members (T1); and perceived ability to provide emotional and daily care, and physical and emotional exhaustion of care professionals (T1, T2). Chi-square tests and (multilevel) analyses were performed.
Results: 958 family members of residents with dementia (T1) and 811/324 care professionals participated (T1/T2). At T1 an increase in severity of behavioural problems was reported, whereas improvements for 8/9 behaviours were found at T2. Family who paid minim weekly visits before the visitor-ban worried most. Minimum weekly alternative contact moderated worrying. The decrease in frequency of (organized) music activities and television watching, COVID-19 infections, and the re-opening of LTCFs, impacted professionals exhaustion and perceived ability to provide adequate care negatively.
Key conclusions: Facilitation of alternative social contact and continuation of organisation of activities requiring limited supervision, can limit the negative impact of the highly undesirable visitor-bans in LTCFs.

P-339

Home alone: association between the COVID-19 pandemic and mental health in very old people

Abstract Area: COVID-19

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Background: During the coronavirus disease 2019 (COVID-19) pandemic, Sweden implemented social distancing measures to reduce infection rates. However, the recommendation meant to protect older individuals particularly at risk may have had negative consequences as well.
Aim: To investigate the proportion of participants aged 80 or older in Northern Sweden who experienced a negative impact on mental health by the COVID-19 pandemic, and associated factors.
Methods: We conducted a cross-sectional study amongst previous participants of the SilverMONICA (MONItoring of Trends and Determinants of CArdiovascular disease) study. Of 394 eligible participants, 257 (65.2%) agreed to participate. Of these, 250 individuals constituted the final sample. Structured telephone interviews were carried out during the spring of 2021. Data was analysed using $\chi 2$-test, t-test and binary logistic regression.
Results: Of 250 individuals (mean age: 85.5 $\pm$ 3.3 years, 54.0% women), 75 (30.0%) reported a negative impact on mental health, while 175 (70.0%) reported either a positive impact ($n = 4$) or no impact at all ($n = 171$). In the binary logistic regression model, factors associated with a decline in mental health included loneliness (odds ratio [OR] 3.64, 95% confidence interval [CI]: 1.77–7.49), difficulty adhering to social distancing measures (OR 5.10, 95% CI: 1.93–13.53) and high morale, which served as a statistically significant positive predictor (OR 0.37, 95% CI: 0.17–0.82).
Conclusions: Thirty percent of very old individuals stated having negative impact on mental health during COVID-19 pandemic,

primarily from loneliness and difficulty adhering to social distancing measures, while high morale seemed protective.

P-340

Characteristics and factors associated with mortality in elderly patients with nosocomial COVID-19 infection in an Acute Geriatric Unit

Abstract Area: COVID-19

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Introduction: The aim of this study was to describe the characteristics and evolution of elderly patients presenting with nosocomial Covid-19 infection, as well as mortality and factors that may have influenced it.
Methods: Retrospective study of patients admitted to an Acute Geriatrics Unit with nosocomial Covid-19 infection in 2020 October 2020 and 2022 January. A descriptive study was carried out and the data were analysed using the SPSS 25 statistical programme.
Results: 39 patients with mean age 87.26. 64.1% female. Previous Barthel 53.95. Previous cognitive impairment 59%. Comorbidity measured by Charlson index 3.03. Frailty measured by IF-VIG: 0.41. 66.7% patients presented symptoms, 43.6% needed oxygen therapy, 41% presented radiological infiltrates. 43.7% patients were properly vaccinated. Mortality was 38.5%. A statistically significant relationship was seen between mortality and onset of symptoms ($p < 0.001$), oxygen therapy needs ($p < 0.001$) and appearence of radiological infiltrates ($p = 0.004$). There were no significant differences between frailty and mortality and comorbidity and mortality in our sample. There was also a significant relationship between vaccination and symptom occurrence ($p < 0.001$). A trend towards decreased mortality was observed in fully vaccinated patients, but there was no significant difference, we believed due to the small sample size.
Conclusions: Nosocomial Covid-19 infection in the elderly patient carries a high mortality.- Fully vaccination significantly reduces the appearance of symptoms, the need for oxygen therapy and the appearance of radiological infiltrates, which increase mortality, so that in our sample it does indirectly reduce mortality.

P-341

External validation of eight COVID-19 prognostic models for predicting risk of mortality after COVID-19 infection in the elderly population in hospital, primary care, and nursing home setting: a study protocol

Abstract Area: COVID-19

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Introduction: Clinical prediction models can provide important information on the risk of (in-hospital) mortality after COVID-19 infection, but their performance in the elderly population is not well studied. In this study, we aim to evaluate the predictive performance and clinical utility of COVID-19 prognostic models in the elderly population in various healthcare settings (hospital, primary care, and nursing homes).
Methods: We identified eight prognostic models predicting the risk of mortality in individuals with COVID-19 (4C Mortality Score, GAL-COVID-19-mortality, APACHE-II, CURB65, NEWS, NEWS2 + , SOFA, and qSOFA). These models will be validated in individuals above 70 years of age with (suspected/PCR confirmed) COVID-19 infection constituting seven cohorts: hospital setting (3 cohorts), primary care (3 cohorts), and nursing home (1 cohort) in the Netherlands. Data analysis: Predictive performance will be evaluated in terms of discrimination, calibration, and decision curve analysis for each of the COVID-19 prognostic models in each cohort individually. For prognostic models with indications of miscalibration, an intercept update will be performed, and the performance of these updated models will be evaluated again.
Results: The study analysis is currently ongoing, preliminary results will be presented at the conference.
Key conclusions: Insights into the performance of existing prognostic models for a general population in the elderly clarifies the extent to which tailoring of COVID-19 prognostic models is needed. Tailored predicted mortality risks are crucial in informing clinical care decisions for the elderly in future waves of COVID-19 pandemic or future pandemics.

P-342

Experience of social inclusion and its relationship with isolation measures during COVID-19 pandemic among older adults at risk of developing cognitive impairment

Abstract Area: COVID-19

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Introduction: Social inclusion is an important determinant of health and well-being. COVID-19 pandemic and related infection-control measures changed the lives of older adults worldwide. This study aims to describe the experience of social inclusion during the COVID-19 pandemic in older adults at risk of developing cognitive impairment in the general Finnish population. We also explore how social inclusion is associated with isolation measures in the first wave of COVID-19 pandemic.
Methods: A postal survey was sent to 859 participants from the Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) in June 2020. Experience of social inclusion was measured with the Experiences of Social Inclusion Scale (ESIS). Isolation measures were defined as total, partial and none.
Results: 668 (78%) participants responded (mean age = 78 years, 33% lived alone, and 80% had at least one chronic condition). 75% adopted some isolation practices during the first months of the pandemic. Experience of social inclusion was not associated with age or gender. Having more than one chronic disease and living alone was associated with experience of lower social inclusion. Having better

quality of life and better mood was associated with experience of greater social inclusion. Those who adopted partial or total isolation measures experienced more social inclusion compared to those who did not isolate.
Key conclusions: Adopting isolation measures during COVID-19 pandemic was not associated with experience of lower social inclusion. Efforts should be made to improve the experience of social inclusion in older adults living alone and with multimorbidity.

P-343

Ferritin as Surrogate marker of insulin resistance and chest CT score during the first wave of COVID-19 pandemic in the elderly

Abstract Area: COVID-19

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Chest CT has reported high sensitivity in patients infected by SARS-CoV-2 [1]. Serum levels of inflammatory markers increase in COVID-19 patients [2]. Other mechanisms have been invoked in Covid-19 pathogenesis [3]. The increasing prevalence of Insulin Resistance (IR) in the elderly and their major vulnerability to Covid-19 infection is an intriguing link that is worthy to be explored [3]. IR testing is not easily evaluable in the clinical context. Iron metabolism is related to IR such that ferritin has been proposed as a surrogate marker of IR [4].
Methods: We performed a retrospective study at the Geriatric Department (AUSL –IRCCS of Reggio Emilia, North of Italy). From March 6 to May 31, 2020, 130 SARS-CoV-2 infected elderly patients undergoing a chest CT examination were evaluated. CT score was calculated as in a previous study [5]. We matched data with routinely laboratory findings. Univariate and multivariate analyses were performed to evaluate the role of ferritin on the CT score.
Results: We included 130 patients (72 males, 58 females; mean age 83.2 ± 5.8,) affected by SARS-CoV2 pneumonia. Statistically significant correlations were found between CT score vs ferritin ($p < 0.0001$) and fasting glycemia ($p < 0.0001$) levels. No statistically significant correlation was observed between CT score and lymphocyte count ($p = 0.0538$) and PCR ($p = 0.06$).
Conclusions: CT score is correlated with ferritin and fasting glycemia. These data preliminary suggested a further mechanistic link between Covid 19 infection and metabolic disorders in the elderly beyond the classical inflammatory pathway.
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P-344

Trends in demographics, clinical characteristics, frailty and in-hospital mortality of hospitalized older COVID-19 patients during the course of the pandemic: the COVID-OLD multi-center studyTrends in demographics, clinical characteristics, frailty and in

Abstract Area: COVID-19

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Introduction: The Netherlands has encountered several big waves of COVID-19 with different variants of SARS-CoV-2, treatment has been subject to change and vaccinations were introduced. Here we describe how patient characteristics, frailty and in-hospital mortality of older people with COVID-19 changed during the first three waves.
Methods: In this multi-center retrospective cohort study COVID-19 patients aged 70 years and older hospitalized in the first wave (spring 2020), second wave (autumn 2020) and third wave (autumn 2021) were included. Demographics, clinical characteristics, clinical frailty and in-hospital mortality were collected.
Results: In total, 3061 patients (median age 79 years, 60% male) were included of whom 1772 patients in the first wave, 1041 patients in the second and 203 patients (data collection ongoing) in the third wave. Comorbidity, frailty and rate of ICU admission were comparable during all waves (median CCI 2, median CFS 4, 11% ICU admission). Patients were admitted earlier with fewer days of symptoms and had a longer length of hospital stay in the second wave compared to the first wave (median 6 days vs. 7 days $p = 0.030$ and median 7 days vs. 6 days, $p = 0.015$) which remained similar afterwards. Mortality was 37% in the first wave, decreased in the second wave to 29% (adjusted OR 0.65, CI-95: 0.53–0.79) and was the lowest in the third wave with 24% (adjusted OR 0.44, CI-95: 0.30–0.65).
Key conclusions: In-hospital mortality in older people declined during the course of the COVID-19 pandemic, likely reflecting beneficial effect of new treatment options and vaccination.

P-345

Peculiarities of hyponatremia among geriatric in-patients suffering from COVID-19

Abstract Area: COVID-19

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Introduction: Hyponatremia (H) is a relatively rare electrolyte disorder, most prevalent in geriatric patients. H is often diagnosed in COVID-19 patients. In cases of severe H, specific and timely treatment is crucial. We aimed to investigate hyponatremia in geriatric in-patients with COVID-19 and to determine the relationship between the two.
Methods: A retrospective study of the electronic medical record was performed, in which 305 patients (199 women) were treated for COVID-19 in the Geriatric department of LSMU Kaunas Hospital. Demographic data and blood test results were collected, and complications and outcomes of the disease were registered. Data was analysed using the Pearson correlation coefficient, Kruskal–Wallis H-test, Mann–Whitney U-test, and Student's t-test.
Results: Hyponatremia (H) was detected in 54.4% of patients. Patients with moderate H had a longer stay (17.6 $\pm$ 10.2 days) than those with severe H (7.0 $\pm$ 5.2 days). Patients with mild H had higher mortality risk. Men were more likely to have mild H (95.2%). Moderate and severe H were reported more frequently in patients with end-stage renal failure. Severe H patients had higher troponin I concentrations. Concentrations of CRP, ferritin, and D-dimers were not associated with H. 80% of patients with severe H were treated with more than 1 L crystalloid solutions per day and hypertonic NaCl bolus.
Key conclusions: Patients without H had a shorter length of stay. Mild H was the most common form. No association was found between H severity and the severity of COVID-19. The most common treatment for H was crystalloid solutions with less than 1 l/day.

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SARS-COV2 infection resolved, are the sequels derived from the infection a cause of readmission?

Abstract Area: COVID-19

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Introduction: Knowing the incidence of readmissions after COVID-19 may be of interest in the investigation of the sequels of this disease. OBJECTIVESTo know the incidence of readmissions in patients previously hospitalized for SARS-COV2 and their reasons. To analyze the differences in the number and causes of readmissions between Geriatrics and Internal Medicine (IM).
Methodology: Descriptive, analytical, observational, longitudinal, retrospective, retrospective study in patients admitted for SARS-COV2 between March 2020 and March 2021 with follow-up one year after discharge. Variables: sex, age, home address, Barthel index (BI), Charlson index (CI), dementia, average length of stay (MS), admission service, Intensive Care Unit (ICU) stay, readmissions one year after discharge and cause.
Results: 401 COVID patients. 88 died during admission. N 313: Mean age 73.8 $\pm$ 16.6. Women 50.6%. Mean BI 65.1 $\pm$ 36. Home 73.2% (34.78% Geriatrics), institutionalized 26.8%. Dementia 29.3%. MS 12.5 days $\pm$ 11, CI $\geq$ 3: 33.1%. Geriatrics 47.1%, MI 52.9%. ICU: 3.2%, 100% MI. Re-admissions at 1 year 27.1%. 67.05% Geriatrics ($p < 0.05$). Causes of readmission: 35.29% vascular, 12.94% readmission COVID-19, 34.11% worsening dementia (79.31% Geriatrics $p < 0.05$), 60%cardiorespiratory failure (62.74% Geriatrics $p < 0.05$).
Conclusions: Significant percentage of readmissions after COVID19 the year after discharge. Higher number of readmissions in Geriatrics probably due to comorbidities associated with these patients. Higher number of readmissions due to worsening dementia in Geriatrics, probably related to their older age. High percentage of readmissions for cardiorespiratory failure, which may be related to sequels of COVID-19. This percentage was higher in Geriatrics, probably due to a worse previous cardiopulmonary situation.

P-347

Determinants of 1-year adverse event requiring re-hospitalization in COVID-19 oldest old survivors

Abstract Area: COVID-19

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Background: The incidence of "Long COVID" syndrome appears to be increasing, particularly in the geriatric population. At present, there are little data regarding the relationship between Long COVID and the risk of re-hospitalization in the oldest old survivors.
Methods: We consecutively enrolled patients aged 80 or older, previously hospitalized for COVID-19 in our tertiary care hospital, and evaluated them in a 12-month follow-up ambulatory program. At 6-month follow-up, a comprehensive geriatric assessment (CGA) was performed, including functional capabilities and physical performance. At 12-month follow-up, we evaluated re-hospitalization rates through phone interview and computerized archive.
Results: Out of 100 patients hospitalized for COVID-19 enrolled in the study (mean [SD], 85 [4.0] years), 24 reported serious adverse events requiring hospitalization within 12 months following hospitalization. The most frequent causes of re-hospitalization were due to acute heart failure (15.3%), pneumonia (15.3%) and bone fracture (15.3%). By multivariate logistic analysis, history of chronic heart failure (adjusted OR = 3.00 CI95%: 1.10– 8.16, $p = 0.031$), chronic renal failure (aOR = 3.83 CI 95%: 1.09– 13.43, $p = 0.036$), higher burden of comorbidities (CIRS-c aOR = 1.95 CI 95%: 1.28– 2.97) and Frailty (aOR = 7.77 CI 95%: 2.13– 28.27, $p = 0.002$) emerged as independent predictors of 12-month re-hospitalization after extensive adjustment for potential confounders.
Conclusion: One-fourth of older than 80 years old patients previously hospitalized for COVID-19 reported an adverse event requiring hospital re-admission; two-third of re-hospitalization occurred within the first three months. COVID-19 severity was not associated with an increased risk of re-admission; conversely, frailty syndrome, history of chronic heart failure or chronic renal failure, qualified as independent predictors of short-term re-hospitalization.

P-348

Regional differences in ICU admission during the COVID-19 pandemic; do differences in triage decisions affect in-hospital mortality? The COvid MEdicaTion (COMET) study

Abstract Area: COVID-19

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Introduction: The scarcity of intensive care unit (ICU) beds during the COVID-19 pandemic has led to (inter)national guidelines for the triage of ICU admission. European differences in medical decision making might affect ICU triage decisions. Before the pandemic, ICU admission of patients aged $\geq$ 80 years occurred more in southern than northern European countries. The question arises whether differences in in-hospital mortality of COVID-19 patients between Northern European countries—who have a more restrictive ICU admission policy—and Southern European countries—who have a more non-restrictive ICU admission policy—exist.
Methods: In the multicentre COvid MEdicaTion (COMET) study we assessed differences in ICU admission and in-hospital mortality for 2434 COVID-19 patients with various degrees of frailty in 11 European countries.
Results: In the most frail COVID-19 patients (CFS6-9), a lower proportion of ICU admission was observed in the northern regions (N) compared to the southern regions (S)(N: 84/297 = 28.3% vs S: 75/196 = 38.3%, p = 0.016). We did not find a difference regarding in-hospital mortality in frail patients (N: 103/297 = 34.7% vs S: 79/196 = 40.3%, p = 0.20). Significantly more frail patients in the southern countries compared to the northern countries both ended up in the ICU and died in the hospital (N: 23/103 = 22.3% vs S: 35/79 = 44.3%, p = 0.01).
Conclusion: There was no difference in in-hospital mortality in the most frail COVID-19 patients comparing northern and southern European countries, whereas significantly more ICU admissions were observed in the southern European countries. This suggests that ICU admission in the most frail patients does not lead to better survival.

P-349

The proportion of older patients with alcohol-related diagnoses increased during the Covid-19 pandemic. A quality study from a General Hospital

Abstract Area: COVID-19

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Introduction: Overconsumption of alcohol is a risk factor for hospital admissions. Alcohol consumption in Norway increased after the onset of the covid-19 pandemic, particularly in populations at risk. The aim was to compare alcohol-related admissions among older patients before and under the covid-19 pandemic.
Methods: From electronic patient records, we extracted anonymous diagnosis data for patients aged 65 or older admitted to the geriatric and stroke wards at Diakonhjemmet hospital between 2018–21. We estimated proportions of patients discharged with an alcohol related diagnosis (ICD-10 chapter F10) in the two-year periods before (2018–19) and during the pandemic (2020–21). We performed two-sided X2 tests to compare proportions between these periods, and logistic regression to investigate associations between age, gender and probability of discharge with an F10 diagnosis.
Results: Overall, 3.4% (95% confidence interval [CI] 3.0–3.7%) of patients admitted in the period (n = 9912) were discharged with an F10 diagnosis. This proportion increased significantly (p = 0.003) from 2018–19 (2.8%, 95% CI 2.3–3.3%, n = 4532) to 2020–21 (3.9%, 95% CI 3.4–4.4%, n = 5380). The probability of discharge with an F10 diagnosis was strongly associated with male sex (odds ratio 2.06, p < 10–8), and inversely associated with increasing age (p < 0.05).
Key conclusions: We observed a significant increase in the proportion of patients discharged with an alcohol-related diagnosis during the covid-19 pandemic compared to the years immediately before.

P-350

Positive health during the COVID-19 pandemic: perspectives of community-dwelling older individuals in The Netherlands

Abstract Area: COVID-19

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Introduction: Older individuals were urged to socially isolate during the first wave of the COVID-19 pandemic, because they are at risk of a severe disease course. This study describes the associated effects community-dwelling older persons (64+) in the Netherlands experienced on the six dimensions of Positive Health during the first COVID-19 wave.
Methods: Semi-structured in-depth interviews with community-dwelling older individuals ($\geq$ 64 years) were carried out by phone in May–June 2020. Using thematic content analysis, a code scheme was developed inductively and deductively, based on the insights and the Positive Health model. Recurrent and common themes were categorized and key elements were identified.
Results: All 31 participants (61% women, mean age 72 years, 23% living alone) experienced their lives changed. They encountered disadvantages in all dimensions of Positive Health such as decrease in scheduled physical activities, in visits to healthcare providers, in meaningful social contacts and in societal participation. Moreover fear, anxiety, absence of (physical) interaction with family and friends and loss of loved ones was experienced. The majority of the older people found ways to adapt to the situation. They spent more time on actualities, changed their daily activities, and were able to value more

intensively the remaining possibilities and the relaxation. Some also contemplated on existential questions in life.
Conclusion: The COVID-19 pandemic and restrictive measures impacted all dimensions of Positive Health in community-dwelling older individuals mostly negatively. Fortunately, the majority found ways to adapt to the situation. These strategies could be used as an example for future policies.

P-351

What happened to older adults after COVID-19?

Abstract Area: COVID-19

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Introduction: We aimed to study the changes that might have occured after COVID-19 in terms of sarcopenia, frailty and nutrition in older adults.
Methods: This study is a retrospective, longitudinal study performed in Post-COVID-19 Monitoring Center in a tertiary health center. Community-dwelling older adults aged 65 and over who recovered from their illness, diagnosed with probable or confirmed COVID-19 and admitted to the Post-COVID-19 Monitoring center, were enrolled and admitted to the follow-up unit between May 2020 and August 2021. We evaluated frailty status via FRAIL scale and screened sarcopenia via SARC-F questionnaire. In order to evaluate the effects of infection on the frailty status and sarcopenia risk, we asked participants to answer the questions by first considering their situation retrospectively (two weeks before the infection), and then considering their current situation. Hence, we obtained two different FRAIL and SARC-F scores: pre-COVID-19 and post-COVID-19. We made measurements at the monitoring center during each application. We asked for sleep disorders, by asking whether they had trouble falling asleep, staying asleep, or if they thought they were having insufficient sleep or excessive sleepiness. In addition, we asked the patients whether they had a memory problem or depressive symptoms and/or anhedonia that would affect their daily life activities.
Results: There were 120 patients (52% were women; mean age: 72.8 ± 6.5 years). Patients having inpatient treatment had a rate of 83.8% and the average hospital stay was 10 (1–41) days. 59% had positive PCR test results and 56.1% had severe/moderate pneumonia. It was determined that the patients' post-COVID-19 frailty and sarcopenia scores were statistically higher ($p < 0.05$), and COVID-19 disease increased weight loss significantly ($p < 0.001$). Sleep disturbance (30%) and memory problems (35%) were among the most common geriatric syndromes.
Conclusions: Our study reports that older adults mostly suffer from sleep and memory problems after COVID-19 infection. We also found that COVID-19 was associated with adverse outcomes in weight loss, frailty, and sarcopenia in the elderly. These consequences have detrimental effects in older adults and should be managed in post covid era.

P-352

Action of Geriatrics Coordination Group in epidemic outbreaks by SARS-COV2 (COVID19) in nursing homes

Abstract Area: COVID-19

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Introduction: In the province of Guadalajara there are 43 nursing homes with more than 4.000 places. The lack of resources and deficiencies in these centers have become evident during the pandemic caused by SARS-COV-2.
Metods: In June 2020, the Geriatrics Service created the Geriatrics Coordination Group with nursing homes (GCOCS) made up of four geriatricians and four specialist nurses in Geriatrics.
Results: GCOCS has been in charge of managing the outbreaks in the nursing homes of Guadalajara. We carry out diagnostic tests for SARS-COV2, contact tracing and follow-up. With 325 daily reports with follow-up of patients. From June, 2020 to today, we have carried out 4,318 assessments of residents in 52 centers with SARS-COV2 infection. Attending to about 100 epidemic outbreaks with several visits to each nursing home. We created our own action protocol in centers with SARS-COV2 infection: 1 Sectorization: three differentiated areas separated by risk of contagion.2 Monitoring of residents during acute infection.3 We classify the residences according to their capacity to assume treatments in the nursing home. 4 Establishing referral criteria to the hospital according to the previous dependency and the Comprehensive Geriatric Assessment.5 From the Hospital Pharmacy we have sent the intravenous drugs and material necessary to carry out treatments there to the nursing homes.
Conclusions: The objective of these visits was to improve the care quality of the residents, adjust the therapeutic intensity and adapt the level of care at which the resident should be treated, achieving treatment at the center in 98.2% of cases.

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Is age a prognostic factor for mortality at discharge after SARS-COV2 infection?

Abstract Area: COVID-19

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Introduction: We know the important mortality of COVID19 in geriatric patients at the time of infection; as well as the sequelae and complications of those who survive, which means a high mortality at discharge.
Objectives: To determine mortality after discharge in patients admitted with SARS-COV2. To study whether there are differences in mortality according to age and admission department.
Methodology: Descriptive, analytical, observational, longitudinal, retrospective, retrospective study of patients admitted for SARS-COV2 March 2020-March 2021 with follow-up one year after discharge.—Variables: sex, age, Barthel index (BI), Charlson index (CI),

dementia, mean length of stay, admission service, Intensive Care Unit (ICU) stay, mortality at one year.
Results: 401 COVID patients, 88 died during admission, 93% ≥ 80 years. N 313: Mean age 73.8 ± 16.6. Women 50.6%. Mean IB 65.1 ± 36. Dementia 29.3%. Mean stay 12.5 days ± 11. Geriatrics 47.1%, Internal Medicine (IM) 52.9%. ICU: 3.2%, 100% MI and 100% survival at one year. Mortality at one year: 14.4%, 84.44% Geriatrics ($p < 0.05$). 57.77% die in the first 3 months. ≥ 80 years 86.66%. CI ≥ 3 33.1% (28.84% of them die ($p < 0.05$)).
Conclusions: Mortality during admission for COVID-19 high for patients ≥ 80 years. Absence of ICU admissions in geriatric patients perhaps due to comorbidities or functional deterioration. Significantly higher mortality in Geriatrics, probably due to older age and more associated comorbidities. More than half of the deaths at discharge occur in the first 3 months.

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Determinants of cause-specific mortality and loss of independence at six-month follow-up after hospitalization for COVID-19 in older patients. Results from the GeroCovid Outcomes Study

Abstract Area: COVID-19

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Background: Although older patients face the highest risk for poor outcomes following hospitalization, most research on COVID-19 has focused on in-hospital mortality and short-term follow-up. Little is known about the determinants of cause-specific mortality and loss of independence (LOI) following COVID-19 hospitalization.
Methods: In the GeroCovid Outcomes cohort, patients were re-evaluated six months after discharge through a comprehensive workup. The hazard ratio of six-month mortality (HR) was calculated for multiple covariates, after adjusting for confounders. To identify significant associations between LOI and covariates, we calculated the odds ratios (OR), using a multivariate logistic model.
Results: 193 patients [109 (56.4%) men, mean age 79.9 ± 9.1 years] were enrolled. During the six-months follow-up, 43 patients were deceased and 2 were lost at follow-up. The most common causes of death were cardiovascular disease (46.0%), respiratory failure (26.5%), and gastrointestinal and genitourinary disease (8.8% each). By Cox multivariate regression analysis, pre-morbid ADLs qualified as an independent mortality risk factor (adjusted HR 0.77; 95% CI: 0.63–0.95). Out of 132 patients, 28 lost at least one of the ADLs: bathing (29%), continence (16%), toileting (16%), and transferring (13%) being the most common. By logistic multivariate analysis, the adjusted risk of LOI declined with a lower frailty degree (adjusted OR 0.03, 95% CI: 0.01–0.32), assessed through a 30-item Frailty Index.
Conclusions: At six-month follow-up after hospitalization for COVID-19, more than 40% of older patients were deceased or experienced increased functional dependency compared to their baseline condition. The degree of pre-morbid disability and frailty resulted independent risk factors for overall mortality and LOI, respectively.

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Impact of frailty on the performance of the National Early Warning Score 2 to predict critical disease in patients hospitalised due to COVID-19

Abstract Area: COVID-19

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Introduction: The scoring tool National Early Warning Score 2 (NEWS2) predicts critical disease in patients hospitalised due to COVID-19. Older patients with frailty often present with atypical symptoms and have an increased risk of critical disease. We aimed to study the impact of frailty on the predictive abilities of NEWS2 in patients hospitalized with COVID-19.
Methods: Consecutive patients admitted to a local hospital in Norway with COVID-19 from March 9 2020 until December 31 2021 were included in this cohort study. All data were collected retrospectively through patient records. NEWS2 was scored based on the first vital signs recorded at hospital admission. We defined frailty as a Clinical Frailty Scale score of 4 or higher. Critical disease was defined as in-hospital mortality or treatment at the intensive care unit. The performance of NEWS2 score 5 or higher to predict critical disease was assessed according to frailty status.
Results: Out of 412 patients, 70 were 65 years or older with frailty. Frail patients more often presented with atypical symptoms. Critical disease occurred in 21 (30%) patients with frailty, and in 88 (26%) without frailty. NEWS2 at admission predicted critical disease with an area under the receiver operating characteristic curve of 0.74 (95% confidence interval (CI) 0.69–0.79) in patients without frailty, and 0.63 (95% CI 0.50–0.75) in patients with frailty.
Conclusions: While predicting critical disease with acceptable performance in patients without frailty, NEWS2 performed poorly as predictive scoring tool of critical disease in older patients with frailty hospitalised due to COVID-19.

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Depressive and anxiety symptoms in COVID-19 old survivors following intensive care hospitalization

Abstract Area: COVID-19

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Introduction: The worldwide spread of COVID-19 led to growing concerns regarding long-term effects on survivors' mental health, especially among vulnerable populations, such as older adults. In this context, this study aims to describe depressive and anxiety symptoms in older survivors of severe COVID-19 by comparing them to younger ones.

Methods: These findings are part of MAPA longitudinal project. Patients admitted with COVID-19 in Intensive Care Medicine (ICM) of a Portuguese University Hospital (October 2020 to August 2021) were included unless they had an ICM stay $\leq$ 24 h, terminal illness, major auditory loss, or inability to communicate at follow-up. Participants were assessed by telephone at follow-up appointments, with Patient Health Questionnaire (PHQ-9) and General Anxiety Disorder Scale (GAD-7). Scores $\geq$ 5 were used to ascertained depressive (PHQ-9) and anxiety symptoms (GAD-7). Comparisons were performed between age groups (< 65 vs $\geq$ 65 years).
Results: Overall, 131 patients were included (median age = 62 - years; 41% $\geq$ 65 years; 66% male). At follow-up (median = 46 days), 20.6% scored for depressive and 19.8% for anxiety symptoms. The older group presented less depressive (9.4% vs 28.2%, p = 0.009) and anxiety symptomology (9.4% vs 26.9%, p = 0.014).
Conclusions: Similar to previous studies, older survivors showed fewer anxiety and depression symptoms. Different reasons have been reported for this trend, including the higher resilience among older ages. Additionally, older survivors hold less demanding job responsibilities that may attenuate the effect of a hospitalization due COVID-19. These findings may be used to attune future care to be tailored to the different needs of these age groups.

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Laboratory parameters related to mortality in patients with COVID-19

Abstract Area: COVID-19

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Introduction: At the end of 2019 in Wuhan, China, a disease was originated due to coronavirus (COVID-19). Laboratory finding were also essential to predict severity, admission to intensive care unit (ICU) and even death.
Methods: we conducted a retrospective cohort study, we analyzed demographics and analytical variables of all patients diagnosed with COVID-19, who were hospitalized in Aragón (Spain) from the beginning of the current pandemic to 30 June 2020.
Results: There were 6286 adults diagnosed with COVID-19, only 2640 (42%) required hospital admission and from those, 268 (10% of total of hospital admission) were admitted in the ICU. The 2268 hospitalized subjects were significantly older, with 72.3 $\pm$ 16.7 years old, and predominantly male with 1393 subjects (52.8%) versus 3646 positive Covid-19 no-hospitalized adults, who had a mean age of 54,9 $\pm$ 21.5 years old and were predominantly female (63.2%) ($p < 0.001$ and $p < 0.001$, respectively). The hospitalized subjects who died were significantly older, with a mean age of 83.1 $\pm$ 10.3 years old. Multivariable regression model shows that higher concentrations of fibrinogen and leucocyte; and lower concentration of monocytes as well as older age and being male are risk factors for ending up in the ICU. Multivariable regression based on death showed that higher values of RDW, LDH, neutrophils, MCV and age and lower values of MCHC, eosinophils and female sex could explain up to 30% of the probability of death**Conclusions:** Laboratory findings may help the physicians predict severity of COVID-19, and subsequently improve prognosis and decrease mortality rates.

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Changes in the use of precautionary behaviours to limit COVID-19 amongst middle-aged and older adults from 28 countries in the WHO European Region during the first two years of the pandemic

Abstract Area: COVID-19

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Introduction: The first two years of the COVID-19 pandemic (2020/2021) presented major health and social challenges, especially to high-risk groups such as middle-aged and older Europeans. While recommendations and policies on preventative strategies varied greatly across the region and over time, their impact on individual behaviours is unclear.
Methods: Data from the 'Survey of Health, Ageing and Retirement in Europe COVID-19' questionnaires (June–August 2020 and 2021) were analyzed. Five precautionary behaviours were compared: 'never shopping', limiting contacts i.e. 'never meeting > 5 people outside household', 'frequent social distancing', 'covering coughs/sneezes more', and 'taking preventative drugs/medication'. Prevalence and mean differences over time were assessed using McNemar's test and paired t-tests.
Results: 47,421 community-dwellers from 28 countries were available, mean age 70.25 years; 58% were female. There were statistically significant reductions in behaviours including 'never shopping' (25% vs. 17%,$p < 0.001$), limiting contacts (64% vs. 42%,$p < 0.001$), social distancing (95% vs. 91%,$p < 0.001$), and 'covering coughs/sneezes more' (85% vs. 83%). The uptake of preventative medication increased significantly (7% vs. 13%,$p < 0.001$). Overall, the mean number of precautions reduced from 2.76 to 2.45/5,($p < 0.001$). Most (n = 24) countries showed statistically significant decreases in adherence (range: $-$ 0.89 in Israel to $-$ 0.07 in Greece). There was no significant changes in three (Latvia, Netherlands, Romania, p-values > 0.05) and Slovakia had a statistically significant increase (+ 0.66, $p < 0.001$).
Conclusions: Middle-aged and older community adults, on average, reported lower levels of adherence to strict isolation measures, social distancing and cough hygiene in the second year of the pandemic, likely reflecting vaccine availability. Significant differences across countries were observed.

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Physiotherapists' experiences of working in residential care in the Republic of Ireland During COVID-19

Abstract Area: COVID-19

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Introduction: COVID-19 was officially declared a pandemic in March 2020. Social distancing and visiting restrictions were introduced in Irish residential care units in March 2020. The impact of

COVID-19 and associated restrictions on physiotherapists working in residential care in the Republic of Ireland (ROI) is unknown. This study aimed to explore experiences of physiotherapists working in residential care in the ROI during the COVID-19 pandemic.
Methods: A qualitative phenomenological study design was used. Physiotherapists working in residential care were invited to participate in one-to-one semi-structured interviews from December 2021 to March 2022. Participants were recruited via purposive and snowball sampling. Data were analysed using reflexive thematic analysis by two independent reviewers **Results:** Seven one-to-one semi-structured interviews were conducted. Four major themes emerged: (i) service adaptation (ii) communication (iii) physical and emotional impact of COVID-19 pandemic on staff and (iv) physical and emotional impact of COVID-19 pandemic on residents. Participants experienced changes in service delivery including redeployment. Participants felt communication from managers could be improved through clarity regarding protocol changes. Participants were affected emotionally through increased stress experienced due to COVID-19 restrictions. Residents experienced isolation due to visiting restrictions. Due to reduced physiotherapy input participants observed reduced physical functioning among residents.
Key conclusions: COVID-19 and its associated restrictions had a profound impact on physiotherapists working in residential care as well as on residents. The extent of this impact is only beginning to emerge. Planning for future pandemics should consider the long-term physical and emotional consequences of restrictions on both physiotherapists and residents.

P-361

SARC-F but not hand grip strength are related to outcome in older hospitalised COVID-19 patients

Abstract Area: COVID-19

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Introduction: The aim of our study was to check which of the simple clinical biomarkers for the assessment of muscle-related health would determine the survival and the length of hospital stay in older patients with COVID-19.
Methods: The CRACoV study was a prospective single-center observational study of clinical outcomes in symptomatic COVID-19 patients aged $\geq$ 65 years that required hospitalization. We assessed muscular parameters in accordance with EWGSOP2, frailty with Rockwood clinical frailty scale. We used the data of the initial and 3-month assessment. Demographic characteristics, medical history, and laboratory values were gathered as a part of the routine care. We calculated sex and age, and additionally number-of-diseases adjusted odds ratios of mortality associated with studied factors and betas of the relation with these factors and the length of hospital stay.
Results: The mean (SD) age of 163 (44.8% women, 14.8% died) participants was 71.8 (5.6) years, age range 65–89 years. One score greater SARC-F was associated with 34% ($p = 0.003$) greater risk of death, and 16.8 h longer hospital stay ($p = 0.01$). One score greater Rockwood was associated with 86% ($p = 0.002$) greater risk of death, but was unrelated to the length of hospital stay. Hand grip strength and dynapenia were unrelated to mortality, but dynapenia was related to longer hospitalization. Probable sarcopenia was associated with 441% ($p = 0.01$) greater risk of death.
Key conclusions: The patient assessment with SARC-F and Rockwood clinical frailty scale may significantly improve the prediction in older patients with COVID-19 and by extension probably with other acute severe infections.

P-362

Relationship centered care: effects of the implementation of the model in relatives and professionals of a center for people with advanced dementia. gizarea study

Abstract Area: COVID-19

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Objective: to transform the care model in a unit for people with advanced dementia by building relationships between residents, their families and the professional team2. Methodology: The study involved 7 relatives (mean age, 61 years) and 17 care team members belonging to all professional categories (mean age, 51 years) from a unit of 23 people with dementia. Training intervention is carried out through Appreciative Inquiry. Evaluation in 3 moments: before and after the training and six months later, using a survey of satisfaction with care, the PERMA Prolifer in the families and in the professionals Utrecht Engagement Scale and Workplace PERMA and JSS Work Stress Questionnaire.3.
Results: In the families, improvement was observed in the level of satisfaction with care (initial 26.8; post-intervention 28 and at 6 months 29 points) and in well-being: positive emotions (7.6–7.53–7.87), negative emotions (4.87–4.73–3.93) and loneliness (4.2–2.8–3.0). In professionals there is a global improvement in personal well-being (7.40–7.41–7.8) improving positive emotions, meaning, accomplishment and engagement level (dedication: 4.47–4.69–4.85.). Finally, there has also been a decrease in the rate of work stress (63.5–50.3–51.2) and its severity (55.8–50.7–41.5) 0.4.
Conclusions: The implementation of the relationships centered care model in a unit of people with advanced dementia improves in the families the well-being and level of satisfaction with care, and in the professional team, the well-being, the work stress, and their engagement level, which leads to an improvement in the quality of care that receives the person with dementia.

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Psychosocial impact of Covid-19 pandemic on elders in the community: a qualitative approach

Abstract Area: COVID-19

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Introduction: In Portugal, the number of elderly people has been increasing, which at the same time leads to an increase in their social

and health needs. The COVID-19 pandemic has densified the vulnerability of the elderly population [1,2], so it is pertinent to explore its vulnerability in the life of the elderly, and the management of stress/anxiety, in order to enable early intervention.
Method: Descriptive qualitative study using semi-structured interviews. Eighteen Portuguese elderly people residing in the community were intentionally selected, aged between 65 and 96 years old (Mean = 79.34; SD = 6.75) to guarantee a greater wealth of information obtained.
Results: The results obtained by the interview allow us to show that the elderly suffered both socially and psychologically from the pandemic experienced, highlighting the categories of "changes in daily routines", "changes in social relationships", "fear", "worry", as well as the "lack of affectivity". Regarding the coping strategies, the "spirituality" and "coping" categories stand out, as they are the most referenced strategies when the elderly are faced with an adverse situation. The results showed that the participants had to make changes in their daily lives, as well as in their social relationships and forms of contact, and reveal that they needed to adapt, to try to maintain a good quality of life for as long as possible.
Conclusion: The results are in line with the literature analyzed, which states that the older the age, the greater the probability of presenting functional impairment, and in times of stress they find strength in coping and spirituality to mitigate these threats. Future studies should develop and evaluate the effectiveness of individual and/or group interventions in promoting coping and spirituality.
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Frailty and functional dependence in patients with COVID-19 in a Geriatrics service

Abstract Area: COVID-19

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Introduction: Geriatric patients have some degree of dependency and frailty, it is interesting to know its association with mortality and hospital stay.
Methods: Observational and retrospective epidemiological study. Over 80 years hospitalized in a Geriatric Service diagnosed with COVID-19, by positive PCR (Polymerase Chain Reaction) or antigen test, from 01-09-2020 to 3-15-2021. Approved by the Research Ethics Committee of Aragon. Functional status was assessed using the Barthel Index (BI) and frailty using the adapted Clinical Frailty Scale (CFS). Data were collected from medical records. Statistical analysis: SPPS v26.
Results: 150 patients. 34.7% died. 55.8% of the deceased had cognitive impairment, which is not associated with mortality ($p > 0.663$) or with average stay (p 0.89). Analysis by subgroups of functional dependence (BI) and average stay: patients with some degree of functional dependence versus totally independent (p 0.057); the relationship between average stay and total dependency is statistically significant (p 0.033) 0.82.7% of the deceased had some degree of frailty, and the prevalence of frailty was 64.3%. Mortality is related to the presence of some degree of frailty, whether mild, moderate or severe (p 0.018). The average stay was not modified by frailty (p 0.10).
Conclusions: Most patients are severely frail and totally dependent on basic activities of daily living and require a longer hospital stay. Frailty has influenced the mortality of more than half of our patients. Cognitive impairment was not directly related to the average length of stay or mortality.

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Clinical expression of SARS-CoV2 in people over 80 years of age, hospitalized in a Geriatrics service and its association with stay and mortality

Abstract Area: COVID-19

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Introduction: Knowing of clinical presentation of SARS-CoV2 would lead to better clinical management.
Method: Observational and retrospective epidemiological study. Over 80 aged inpatients in a Geriatric Service with SARS-CoV2 diagnosis, with positive PCR (Polymerase Chain Reaction) or antigen test, from 9-1-2020 to 3-15-202. Approved by Research Ethics Committee of Aragon. Variables: sociodemographic, analytical parameters, delirium, cognitive impairment. Statistical analysis: SPSSv26.
Results: 150 patients. 48% presented delirium, it was not associated with average stay (p 0.1), but did with mortality (p 0.021). Delirium was 61.5% of deceased, and 41.7% of those discharged. There was radiological pneumonia in 72.7%, associated with average stay (p 0.034), but not with mortality (p 0.3) 0.74% required supplemental oxygen and it was associated with mortality (p 0.001) and average stay (p 0.031). The need for oxygen flow was greater in deceased patients (p 0.001). In non-deceased, oxygen reservoir was used in 7.7%, and in deceased in 47.8%. Association among mortality and lymphocytes, APTT, glucose, urea, creatinine, GGT, LDH, CRP, PCT and proBNP ($p < 0.05$). Differences between D-Dimer and average stay (p 0.02). The mean of the Cumulative Rating Scale for Geriatric Diseases is 15.1(SD + − 5.9). It influences average stay (p 0.046) without modifying mortality (p 0.22).
Conclusions: 1. Delirium was a frequent complication and was associated with higher mortality, which expresses clinical severity.2. Radiological pneumonia caused longer hospital stay but not higher mortality. The need for a higher flow of oxygen did affect both.

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Mortality and average hospital stay conditioned by the clinical and functional status of the elderly with SARS CoV-2 in a Geriatrics service: multivariate analysis

Abstract Area: COVID-19

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Introduction: SARS COV-2 generates high mortality in elderly population. The geriatrician is interested in knowing the determining factors of clinical behavior.
Methods: Observational, descriptive and retrospective epidemiological study. All patients over 80 age admitted between 09-01-2020 and 03-15-2021 in a Geriatric Service, confirmed diagnosis of covid-19, positive PCR (Polymerase Chain Reaction) or rapid antigen test. Data from medical records were collected. Variables: sociodemographic, barthel index (BI), analytical parameters, Charlson Index (CI), Cumulative Illnes Rating Scale (CIRS). SPSS v26: Multivariate analysis.
Results: 150 patients: 34.7% mortality, 65.3% discharged, 31.3% BI < 20, 59.3% women, average age 88.2 years, 48.6% delirium, mean 15.95 in CIRS. Independent variables of mortality: total functional dependency (p 0.042), need for higher oxygen flow (p 0.00) and ear-nose-throat (ENT) comorbidity (CIRS p 0.017). High comorbidity showed no association with mortality (p 0.167) or hospital stay (p 0.077). D-Dimer (p 0.04) and high c-reactive-protein (CRP) (p 0.011) were independent variables for hospital stay.
Conclusions: The degree of functional dependence is an independent factor of mortality, but not of the average hospital stay. The need for oxygen and the radiological presence of pneumonia directly influence the prolongation of the average hospital stay, without determining mortality. This is directly associated with the need for a greater supply of oxygen flow. A higher score on the CI has not been shown to influence mortality, but does affect the average length of stay. Inflammatory clinical parameters such as D-dimer and CRP affect the hospital stay.

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The effects of vaccination against SARS CoV-2 on the survival of inpatients in a Geriatrics service during the second wave of COVID-19

Abstract Area: COVID-19

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Introduction: The SARS COV-2 pandemic is a challenge for health systems. Vaccination has made it possible to reduce mortality and its severity.
Methodology: Observational, descriptive and retrospective epidemiological study. All patients over 80 age were admitted between 09-01-2020 and 03-15-2021 in a Geriatric Service, confirmed diagnosis of covid-19, positive PCR (Polymerase Chain Reaction) or rapid antigen test. Databases from medical records were collected. Variables: sociodemographic, in-hospital and one-year mortality, and vaccination status. SPSS v26.
Results: 150 patients were included (59.3% women, average age 88.2) with an in-hospital mortality of 34.7% (52). 18 died in one month, 5 in 3 months and 10 in one year. Global mortality 52.6% of the study (79). During this study Pfizer and Moderna vaccines were administered, the most frequent was Pfizer (93.6%). 82.1% of the deceased had no dose of any of the vaccines, 9% had one dose and 9% had two doses. In contrast, of the surviving patients, 1.4% were not vaccinated and 98.6% had a complete schedule of vaccination. There is a statistically significant association between the complete vaccination schedule and overall mortality.
Conclusions: In-hospital mortality of our patients was high, taking into account only a small population had at least one dose of the vaccine. Vaccination data in one year were associated with lower mortality in those patients who have the complete schedule, while mortality increases in the rest of the patients.

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Post-acute COVID-19 syndrome (PACS) in critically ill older adults

Abstract Area: COVID-19

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Introduction: Long-term sequelae of COVID-19 that affect patient's life, last ≥ 4 weeks after initial infection and are not attribuatable to an alternative diagnosis compose post-acute COVID-19 syndrome (PACS). We aimed to identify the outcomes and prevalence of PACS in older patients being hospitalized with severe infection (need for high-flow oxygen or non-invasive ventilation) being treated with a biological agent, since literature lacks relevant sufficient data.
Method: A cohort of inpatients aged ≥ 70 years with severe COVID-19 infection who were given immunomodulators were studied retrospectively. Outcomes, vaccination status as well as PACS manifestations were recorded based on medical records and self-report by telephone contact with patients or relatives at least a month after discharge.
Results: Among 43 patients (mean age 78 ± 6SD years) 20.9% died—all unvaccinated. Only 25.6% were vaccinated. Among survivals all but 3 reported PACS symptoms. Fatigue (82.4%) and difficulty in mobilization (52.9%) were most commonly reported followed by weight loss (47.1%). 1 in 5 lost autonomy in activities of daily living (ADL) while 38.2% in instrumental ADL. 1/3 complained of cough while 1/5 needed long-term Oxygen-therapy. Half of them developed neuropsychiatric disorders, most commonly anxiety (44.1%) and cognitive impairment (32.4%), followed by depression (23.5%) and delirium (20.6%). 23.5% of patients developed a bacterial infection after discharge and 6 patients needed emergent healthcare services. In multiple regression models age was independently associated with the number of reported PACS symptoms (p-value: 0.01).

Conclusions: PACS is increasingly recognized among older patients and is associated with significant morbidity and quality-of-life impairment.

P-369

Improving patient safety: implementation of the hand hygiene action plan of the primary care management of Valladolid-ESTE (Spain)

Abstract Area: COVID-19

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Objective of the project: Design and implement an action plan in hand hygiene (HH) to identify and establish an improvement plan that allows improving adherence to this safe practice in Primary Care Teams of Valladolid-ESTE (Spain) impacting on an improvement in safety of our patients.
Method: Descriptive observational study with which an analysis of the adherence of HH in the professionals of our organization is obtained. An action plan is designed/implemented in HH to establish an improvement plan, for this: internal communication plan, internal audit procedure, specific training is systematized. The project begins in January 2019, it is developed and improved in 2020 and 2021. Currently in force.
Result: Results in leadership: the management and the leaders of Hm at 100%. Existence of reminders in the workplace: 100% of the centers and > 70% of the professionals. Training in > 70% of professionals. Correct adherence to the practice of HH evaluated by the consumption of Alcohol-Based Product (ABP): 2017:1.42L, 2018:2.1L of ABP/1000 consultations and after implementing the plan, 2019:5.76L, 2020:12.28L, 2021:23,32L.
Conclusions: The design and implementation of our 2019–2022 Primary Care project has allowed us to impact the 803 professionals in our organization as well as the citizens we serve (258.497 users). When Covid arrived we were already prepared. The practice of HH has been promoted, reducing the transmission of multi-resistant microorganisms and infections associated with health care, promoting the safety of our patients.

P-370

Hematological abnormalities in Covid-19 pneumonia in elderly

Abstract Area: COVID-19

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Introduction: The Covid-19 pneumonia has been spreading around the world since 2020. Leukopenia, lymphopenia and hypercoagulability with high level of D- Dimers have been described in COVID-19 patients. This study aimed to describe blood parameters in elderly admitted to our department of Internal Medicine with Covid-19 pneumonia. can be used as biomarkers to facilitate diagnosis and establish prognosis.
Methods: We selected 247 patients older than 65 years who had tested positive for SARS-CoV-2 and had a hemogram performed.
Results: Elderly patients (131 women and 116 men) admitted in our department presented an increase in leukocytes in 78 cases (31.5%), a lymphocyte decrease in 151 cases (61%) and a platelet decrease in 12 patients (4.9%). The hemoglobin and median globular volume tend to decrease and 56 patients (22.65%) were diagnosed with microcytic anemia. The lactic acid dehydrogenase (LDH) at admission was higher in 7 cases (2.8%). The age, lymphocyte count and D-dimers count were independently associated with poor prognosis ($p = 0.001$). Otherwise, the lupus anticoagulant was positive in76 patient (30%), the antibodies of anti-ß2 glycoprotein were positive in 15 cases (6%).
Conclusion: The hematological anormalities at admission in Covid-19 pneumonia can predict the poor outcomes and mortality of the SARS-CoV-2 infection.

P-371

Long-term survival of older patients hospitalized for COVID-19. Do clinical characteristics upon admission matter?

Abstract Area: COVID-19

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Older adults are particularly susceptible to COVID-19 in terms of both disease severity and risk of death. To compare clinical differences between older COVID-19 hospitalized survivors and non-survivors, we investigated variables influencing mortality in all older adults with COVID-19 hospitalized in Poznań, Poland, through the end of June 2020 ($n = 322$). In-hospital, post-discharge, and overall 180-day mortality were analyzed. Functional capacity prior to COVID-19 diagnosis was also documented. The mean age of subjects was 77.5 ± 10.0 years; among them, 191 were females. Ninety-five (29.5%) died during their hospitalization and an additional 30 (9.3%) during the post-discharge period (up to 180 days from the hospital admission). In our study, male sex, severe cognitive impairment, underlying heart disease, anemia, and elevated plasma levels of IL-6 were independently associated with greater mortality during hospitalization. During the overall 180-day observation period (from the hospital admission), similar characteristics, excluding male sex and additionally functional impairment, were associated with increased mortality. During the post-discharge period, severe functional impairment remained the only determinant. Therefore, functional capacity prior to diagnosis should be considered when formulating comprehensive prognoses as well as care plans for older patients infected with SARS-CoV-2.

P-372

Validation of two screening tools for detecting delirium in older patients in the post-anaesthetic care unit: a diagnostic test accuracy study

Abstract Area: Delirium

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Objective: To evaluate the diagnostic test accuracy of the Three-Minute Diagnostic Interview for Confusion Assessment Method (3D-CAM) and the 4A's Test (4AT) as screening tools for delirium detection in older people in the post-anaesthetic care unit (PACU). MethodA prospective diagnostic test accuracy study was conducted in the PACU and surgical wards of a university-affiliated tertiary care hospital in Victoria, Australia.
Results: A total of 271 patients were recruited: 16.2% (44/271) had definite delirium. The 3D-CAM (area under curve [AUC] = 0.96) had a sensitivity of 100% (95% CI 92.0–100.0) in the PACU and during the first 5 days post-operatively. Specificity ranged from 93% (95% CI 87.8–95.2) to 91% (95% CI 85.9–95.2) in the PACU and during the first 5 days post-operatively. The 4AT (AUC = 0.92) had a sensitivity of 93% (95% CI 81.7–98.6) in the PACU and during the first 5 days post-operatively, and specificity ranged from 89% (95% CI 84.6–93.1) to 87% (95% CI 80.9–91.8) in the PACU and during the first 5 days post-operatively.
Key conclusions: The 3D-CAM and the 4AT are sensitive and specific screening tools that can be used to detect delirium in older people in the PACU. Screening with either tool could have an important clinical impact by improving the accuracy of delirium detection in the PACU and hence prevent adverse outcomes associated with delirium.

P-373

Delirium screening tools in the Post-Anaesthetic Care Unit: a systematic review and meta-analysis

Abstract Area: Delirium

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Background Delirium is a serious neurocognitive disorder among surgical patients in the Post-Anaesthetic Care Unit (PACU). Despite the development of screening tools to identify delirium, it is not clear which tool is the most accurate in assessing delirium in the PACU.
Aim: To examine the diagnostic accuracy of delirium screening tools used in the PACU.
Methods: A systematic literature search of CINAHL, MEDLINE, Embase, PsycINFO and Scopus was conducted, using MeSH terms and relevant keywords, from databases establishment to 23 April 2021. Studies were assessed for methodological quality using the Standards for Reporting of Diagnostic Accuracy Studies (STARD) tool.
Results: A total of 1503 studies were screened from the database search, four studies met the inclusion criteria for this review. Six delirium screening tools used in the PACU were identified in the selected studies. Three studies evaluated screening tools in adult surgical patients without cognitive impairment and dementia. Two studies evaluated screening tools among patients who were scheduled for elective surgery. Review results indicated that two tools, the 4A's test (4AT; sensitivity: 96%; specificity: 99%) and the 3-min diagnostic interview for the Confusion Assessment Method (3D-CAM; sensitivity: 100%; specificity: 88%), had greatest validity and reliability as a screening tool for detecting delirium in the PACU.
Conclusions: Results indicate the 4AT and the 3D-CAM are most accurate screening tools to detect delirium in the PACU. Further research is required to validate those tools among a broader surgical population, including patients with cognitive impairment, dementia and those undergoing emergency surgical procedures.

P-375

Validation of two screening tools for detecting delirium in older patients in the post-anaesthetic care unit: a diagnostic test accuracy study

Abstract Area: Delirium

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Objective: To evaluate the diagnostic test accuracy of the Three-Minute Diagnostic Interview for Confusion Assessment Method (3D-CAM) and the 4A's Test (4AT) as screening tools for delirium detection in older people in the post-anaesthetic care unit (PACU). Design: A prospective diagnostic test accuracy study. Setting and participants: The study was conducted in the PACU and surgical wards of a university-affiliated tertiary care hospital in Victoria, Australia. A consecutive prospective cohort of elective and emergency patients (aged 65 years or older) admitted to the PACU were recruited between July 2021and December 2021 following a surgical procedure performed under general anaesthesia and expected to stay in hospital for at least 24 h following surgery. Outcome measures: Sensitivity, specificity positive predictive value and negative predictive value for 3D-CAM and 4AT.
Results: A total of 271 patients were recruited: 16.2% (44/271) had definite delirium. For a diagnosis of definite delirium, the 3D-CAM (area under curve [AUC] = 0.96) had a sensitivity of 100% (95% CI 92.0–100.0) in the PACU and during the first 5 days post-operatively. Specificity ranged from 93% (95% CI 87.8–95.2) to 91% (95% CI 85.9–95.2) in the PACU and during the first 5 days post-operatively. The 4AT (AUC = 0.92) had a sensitivity of 93% (95% CI 81.7–98.6) in the PACU and during the first 5 days post-operatively, and specificity ranged from 89% (95% CI 84.6–93.1) to 87% (95% CI 80.9–91.8) in the PACU and during the first 5 days post-operatively.
Conclusions: The 3D-CAM and the 4AT are sensitive and specific screening tools that can be used to detect delirium in older people in the PACU. Screening with either tool could have an important clinical impact by improving the accuracy of delirium detection in the PACU and hence prevent adverse outcomes associated with delirium.

P-376

The crucial factors determining the development and outcomes of postoperative delirium in proximal femur fractures

Abstract Area: Delirium

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Introduction: Delirium is common in elderly patients undergoing surgery for proximal femur fractures, the rates ranging from 4 to 53%. The aim of the study is to find the incidence, identifiable causes, reasons for prolonged length of hospital stay, calculate short and long term mortality and the factors contributing to mortality of post-operative delirium in proximal femoral fractures.
Methods: The data for the study was obtained from NHFD (National Hip Fracture Database) and internal hospital computer systems (Medway, ICE, Clinic letters) between Jan 2018 and Dec 2019. A total of 598 patients were admitted during the study period. After screening, 175 patients aged 65 years or above who sustained a proximal femur fracture and underwent surgery and scored ≥ 4 in the 4AT assessment were included in the study. The outcomes measured were post-operative anaemia, lower respiratory tract infection, urinary tract infection, acute kidney injury, urinary retention, cardiac event, and stroke, alcohol or drug withdrawal, length of hospital stay, 30 day and one year mortality. The effect of postoperative delirium on each of these outcomes was evaluated.
Results: The mean age for patients with delirium was 84.82 years. 124 patients (70.8%) had dementia (patients who scored ≤ 6 on AMT score) compared to 108(25.5%) patients without delirium ($p < 0.05$). The patients who developed delirium there were 68(38.9%) with ASA grade 4 and 94(22, 3%) without delirium ($p < 0.05$). The average length of stay after developing post-operative delirium was 19.69 days compared to 17.4 days for patients without delirium. The mortality at 30 days and one year was 10.9% and 37% in patients who had post-operative delirium compared 2.1% and 2.8% to those without delirium respectively.
Conclusion: Post-operative delirium is three times more common in hip fractures. Early detection and timely management is crucial in the improvement of outcomes and mortality.

P-377

Association between non-English preferred language and use of physical restraints, antipsychotics, and sedative-hypnotics among hospitalized patients with delirium

Abstract Area: Delirium

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Introduction: Patients with a non-English preferred language in English-dominant health care settings are at increased risk of adverse events [1]. We examined whether physical restraint, antipsychotic, or sedative-hypnotic use differed by language preference in patients with delirium.
Methods: This retrospective cohort study included medical inpatients aged 18 + admitted within a 5-year period at two academic hospitals in Toronto, Canada. A random sample of 997 charts were reviewed for a diagnosis of delirium using a validated abstraction tool [2]. We studied the association between self-reported language preference and orders for physical restraints, antipsychotics, and sedative-hypnotics with multivariable regression using log-link binomial generalized linear models to determine relative risks (RR), adjusting for potential confounding variables.
Results: Of the 997 charts screened, we identified 213 patients with delirium. Compared to those with English language preference ($n = 145$), patients with non-English language preference ($n = 68$) were older, with lower income, and more comorbidities. Patients with non-English language preference had an increased risk of receiving physical restraints (27.9% vs 11.7%, RR 2.90, 95% CI 1.58–5.33), and antipsychotics (41.2% vs 26.2%, RR 1.54, 95% CI 1.08–2.19) compared to those who reported English language preference. There was no difference in orders for sedative-hypnotics (27.9% vs 24.1%, RR 1.19, 95% CI 0.69–1.99).
Key conclusions: Patients with delirium who reported a non-English preferred language were more likely to receive physical restraints and antipsychotic medications compared to those who preferred English. Strategies to improve communication and support the non-pharmacologic management of delirium are required to address these linguistic inequities.1. Divi C, Koss RG, Schmaltz SP, Loeb JM. Language proficiency and adverse events in US hospitals: a pilot study. Int J Qual Health Care. 2007;19(2):60–67.2. Inouye SK, Leo-Summers L, Zhang Y, Bogardus ST Jr, Leslie DL, Agostini JV. A chart-based method for identification of delirium: validation compared with interviewer ratings using the confusion assessment method. J Am Geriatr Soc. 2005;53(2):312–318.

P-378

Improving delirium screening, diagnosis and management with development of a trust bespoke delirium screening and management bundle

Abstract Area: Delirium

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BackgroundDelirium is associated with increased mortality, length of hospital stay and risk of institutionalisation, yet is frequently unrecognised and mismanaged. This project aimed to improve early identification and management of delirium in older inpatients.
Methods: Quality improvement methodology was used with multiple Plan-Do-Study-Act cycles. Phase 1 focused on patients aged ≥ 75 years on acute medical and frailty wards, aiming to improve delirium screening using 4AT and evidenced-based management using TIME bundle. Data was collected over 6 months. Phase 2 focused on development and implementation of a bespoke 'Delirium Bundle' specifically for our Trust for inpatients. Data collected over 5 months assessed 4AT completion, delirium diagnosis and Delirium Bundle use on geriatric medicine wards.

Results: In phase 1, 4AT use improved from 75 to 85% and delirium diagnosis increased from 17 to 49% when 4AT $\geq$ 4. This improvement corresponded with encouraging registrars to promote delirium awareness in their clerking team. However, there was no TIME bundle uptake. In phase 2, across geriatric wards, 4AT use and delirium diagnosis was high (mean 73% and 80%, respectively). Delirium Bundle use on the geriatric wards increased to 15–46%; there was no corresponding further improvement in 4AT completion and delirium diagnosis rates.
Conclusion: Increased 4AT use lead to greater delirium diagnosis. We struggled to implement TIME bundle but had more success with a Trust-specific bespoke Delirium Bundle. Our Trust is changing to digital noting and we have developed a digital version of the Delirium Bundle as the next step on this improvement project.

P-379

Alpha-2-adrenergic Receptor Agonists for the Prevention of Delirium and Cognitive Decline after Open Heart Surgery (ALPHA2PREVENT): protocol for a multicentre randomised controlled trial

Abstract Area: Delirium

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Introduction: Postoperative delirium is common in older cardiac surgery patients and associated with negative short-term and long-term outcomes. The alpha-2-adrenergic receptor agonist dexmedetomidine shows promise as prophylaxis and treatment for delirium in intensive care units (ICU) and postoperative settings. Clonidine has similar pharmacological properties. We aim to study whether repurposing of clonidine can represent a novel treatment option for delirium, and the possible effects of dexmedetomidine and clonidine on long-term cognitive trajectories, motor activity patterns and biomarkers of neuronal injury, and whether these effects are associated with frailty status.
Methods: This five-centre, double blind randomised controlled trial will include 900 cardiac surgery patients aged 70 + . Participants are randomized 1:1:1 to dexmedetomidine or clonidine or placebo. The study drug is given as a continuous intravenous infusion from the start of cardiopulmonary bypass, at a rate of 0.4 μg/kg/h. The infusion rate is decreased to 0.2 μg/kg/h postoperatively and is continued until discharge from the ICU or 24 h postoperatively, whichever happens first.
Results: Inclusion started January 17, 2022. Primary endpoint is the 7-day cumulative incidence of postoperative delirium (Diagnostic and Statistical Manual of Mental Disorders, 5th edition). Secondary endpoints include the composite endpoint of coma, delirium or death, in addition to delirium severity and motor activity patterns, levels of circulating biomarkers of neuronal injury, cognitive function and frailty status 1 and 6 months after surgery.
Conclusions: This trial will provide evidence for prophylactic efficacy of dexmedetomidine and clonidine in reducing the incidence of postoperative delirium as well as decline in cognitive function 1 and 6 months postoperatively in older cardiac surgical patients. Inclusion of preoperative frailty assessments will provide evidence for frailty as a predictive marker of treatment effect. The analysis of biomarkers will provide insights into the neural mechanisms in postoperative delirium and long-term cognitive dysfunction. The analysis of activity by accelerometers will provide insight into motor activity patterns in subtypes of delirium.

P-380

Electronic cognitive assessment bundle

Abstract Area: Delirium

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Introduction: The National Audit of Dementia Care published in 2019 by the Royal College of Psychiatrists demonstrated that University Hospitals of Leicester NHS Trust (UHL) was underperforming compared to peer trusts regarding cognitive assessment of older patients admitted to hospital [1]. The audit demonstrated that initial assessment for delirium occurred in 47% of patients at UHL compared with 58% nationally. NICE guidance recommends screening for delirium in patients over 65 years [2]. Practice across UHL was highly variable with no agreed policy on how to undertake this screening.
Methods: Through the Dementia Strategy and Action Group and liaison with the Emergency Department (ED); a standardised approach for cognitive assessment was agreed. This was formalised electronically in the Cognitive Assessment Bundle (CAB) on NerveCentre, accessible to all healthcare professionals working at the trust. Initially it launched in the ED and subsequently on the medical admission wards.
Results: Baseline data demonstrated that 28% of patients being admitted had any form of cognitive assessment in ED; a deterioration since the 2019 data. Also, only 30% of patients with delirium were identified in the ED. Following our interventions, 17% of patients attending ED had a CAB completed and identification of delirium improved to 38% of cases admitted to hospital.
Conclusions: Using an electronic CAB has allowed practice to be standardised across our trust and made it auditable. The CAB forms the basis of our wider project at UHL to improve the prevention, assessment and management of patients presenting with delirium.
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P-381

Delirium and fall in an 83 year old patient

Abstract Area: Delirium

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Introduction: An autonomous woman arrived at the emergency department 2 months ago with a femoral fracture secondary to a fall

and was operated on with a gamma nail. She presented a confused state postoperatively, a cerebral CT scan was performed and showed a left temporal expansive process surrounded by slight oedema. An brain MRI is performed and describes a brain abscess. The EEG showed no seizures. A drainage with sampling was realised and the cultures came back negative. We are always actually waiting for culture in special media. Prolonged incubations period could be needed.
Materials and methods: A review of the literature on brain abscesses in the elderlywas conducted using Pubmed and Google Scholar.
Results: The causative organisms of a brain abscess were described in litterature; the primary causative organisms from dental caries were Streptococcus viridians or milleri, and Fusobacterium nucleatum. In addition to infectious tuberculosis, rarer related species such as Nocardia infections may occur. Fever, headache and sensorial involvement were the main clinical manifestations. Temporal and frontal lesions were predominant. Microbiological information was available but not always.
Conclusion: This is a rare infection in geriatrics, especially without prior immunosuppression. A search for an outbreak (including endocarditis) should be considered. The first manifestation could be just a delirium butthe prognosis of brain abscess appears to be mainly determined by the rapidity of progression of the disease before hospitalization and the patient's mental status on admission.

P-382

Improving prevention of delirium in elderly hospitalized

Abstract Area: Delirium

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OBJECTIVES: 1) To know the factors with more probability to suffer delirium 2) To know the impact of the prevention measures implanted in assistance.
Metodology: Case–Control retrospective study. Period: first trimester 2022, discharged revised. Case: CAM + . Control CAM- (CAM screening). Variables: age, sex, stay, discharge motive, institutionalization, ADL dependency, dementia, visual o hearing problems, medication, pain, infection, constipation, surgical therapy, dehydration, bedridden, type of diet, mortality. SPPS program used**RESULTS:** N = 232 mean age: 88.4 ys. Case group(1): n = 116 CAM + ; women/man 50/50; mean age: 88.3; median 89.01. Control group(2): n = 116; women/man 50/50; Mean age: 88.44 median 88.92. Barthel index > 60: In (1) 44 In (2): 58 OR 1.63 (0.97–2.76) Signification 0.064. Dementia No In (1): 47 In (2) 80. OR 3.26 (1.9–5.6) Signification 0.000. Dehydration + : In (1): 26 In (2): 15. OR 1.94 (0.97–3.9). Signification 0.058. Psychopharmacology + In (1): 96 In[2]80. OR 2.16 (1.16–4.02) Signification 0.014. Adapted diet + In (1): 61 In (2): 42. OR 1.954 (1.15–3.3) Signification 0.012. Mortality In[1]92 In (2): 24. OR 2.71 (1.23–5.97) Signification 0.011. No difference in the others. **Conclutions:** 1.Delirium is more probable in patient with dementia, dehydration, ADL dependency and adapted diet.2.There is more psychopharmacology prescription in delirium 3.Mortality is more frequent in delirium patient.4.General measures implanted in Geriatric Units are useful because there is no different in age, visual or hearing handicap, new infection, constipation, surgical therapy, and bedridden.

P-383

Association between neutrophil-to-lymphocyte ratio and the development of delirium in older adults hospitalized for hip fracture

Abstract Area: Delirium

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Introduction: The neutrophil-to-lymphocyte ratio (NLR) derived from a differential of two types of white blood cell count is a simple and easy-to-apply biomarker of inflammation [1]. Due to inflammation being a relevant factor in the pathophysiology of delirium [2,3], we hypothesized that NLR will be elevated in older adults with hip fracture and delirium.
Methods: In this prospective, case–control study we included older adults (> 65 years old) hospitalized for hip fractures. Baseline characteristics and laboratory data like C-Reactive-Protein and NLR were determined in the first twenty-four hospitalization hours. Differences in NLR between groups were analyzed using Pearson´s chi-squared test, the relationship between delirium and risk factors was determined by univariate and multivariate analysis.
Results: Forty subjects were included, twelve had delirium, the median NLR level for delirium and non-delirium groups was 8.2 and 7.3, respectively (p = 0.768). There was a significant difference in age (p = 0.02), cognition (p = 0.004), and activities of daily living (ADL) (p = 0.004) between groups. In the univariate analysis age > 80 years old (OR: 4.22; 95% CI: 1.0–17.79; p = 0.05) moderate-severe cognitive impairment measured by Short Portable Mental State Questionnaire (OR: 27.0; 95% CI: 2.72–267.79; p = 0.005) and a Lawton and Brody test < 3 score (OR: 13.8: 95% CI: 2.71–7.12; p = 0.002) were associated with an increased risk of delirium. However, in the multivariate analysis, there was a non-significant difference.
Conclusions: We did not find an association between the elevated NLR and the development of delirium in older adults hospitalized for hip fractures. We found that older age, cognitive impairment, and diminished ADL performance were associated with a major risk for delirium.
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2017 Dec 26. Key wordsDelirium, Neutrophil-to-lymphocyte ratio, Hip Fracture

P-384

The impact of single-bedrooms for admitted Geriatric patients from the nurses' perspective

Abstract Area: Delirium

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Introduction: Globally, there is an increasing number of single-bedrooms in new hospital buildings, which is based on political decisions and strategies for the healthcare system. However, there is a lack of knowledge regarding the nurses' perspective on the importance of single-bedrooms in nursing care for geriatric patients. We aimed to gather an understanding of nurses' experience with the use of single-bedrooms when nursing geriatric patients at a geriatric ward.
Methods: A Hermeneutical study based on data from three semi-structured qualitative interviews withgeriatric nurses, who worked at a geriatric ward that had been moved from an old building with a mix of multi-bedrooms and single-bedrooms to a new building with only single-bedrooms. The data material was analyzed inductively, based on Graneheim and Lundmann's content analysis.
Results: Three categories were identified; 1) The physical environment within single-bedrooms supports the patients' integrity; 2) Open conversation in the lonely room—the Complexity of the psychosocial aspect and 3) The nurses' ability to observe the patient. Based on these categories, the cross-cutting theme of the analysis was interpreted; Single-bedrooms have significance meaning for the relation between the nurse and the patient.
Key conclusions: Single-bed rooms provides an opportunity to safeguard the integrity of patients and allow for an open and confidential communication,, which has a positive effect on the patient-nurse relationship. However, the possibility for contact with other patients are reduced, whichimpacts the psychosocial patient aspect. Patient monitoring in single-bedrooms are also reduced, which is why greater breaches of patient safety are experienced.

P-385

The efficacy of performing CT brain scans for patients with delirium: an audit of 102 inpatients from January to March 2021 in a London hospital

Abstract Area: Delirium

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Introduction: Delirium is an acute clinical syndrome that can result in global cognitive impairment. There are many underlying aetiologies of acute delirium in older adults. Many patients presenting with delirium undergo a CT brain (CTB) scan, despite there being another clear aetiology.
Methods: This retrospective analysis, of older adults presenting to the Emergency Department with acute delirium, explores the clinical utility of CTB scans. Delirium was screened for using abbreviated mental test-4 and abbreviated mental test scores.
Results: Subjects included 102 patients (mean 82.3 years $\pm$ 11.2SD; 35 females, 67 males), from January to March 2021.65 (63.7% $\pm$ 0.48SD) patients received an inpatient CTB, 8 (12.3% $\pm$ 0.33SD) had pathology, but only 1 (0.015% $\pm$ 0.12SD) changed clinical management. Those undergoing CTB or not in the presence of mild (CRP $<$ 100, clinical focal infective symptoms, started on oral antibiotics) or severe (CRP $>$ 100, clinical focal infective symptoms, radiological findings, started on intravenous antibiotics) infection was no different, 32.3% $\pm$ 0.47SD vs 35.1% $\pm$ 0.48SD ($p > 0.05$), 36.9% $\pm$ 0.48SD vs 37.8% $\pm$ 0.49 SD ($p > 0.05$) respectively. CTB was more common in men (58.5% vs 41.5%), increasing age, mean 83.4 years ($\pm$ 7.73SD) vs age 82.5 years ($\pm$ 8.24SD), ($p > 0.05$). Of those with no acute CTB findings, 63.1% $\pm$ 0.45SD already had pre-existing evidence of infection.
Conclusion: CTB scans for patients may not always change management, even if there are new brain pathology findings, and could be avoided in patients with alternative explainable causes for delirium. This study highlights the importance of clear criterion for requesting CTB scans to decrease unnecessary radiation and to improve management of patients with delirium.

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Single-bedrooms reduce length of stay in geriatric patients with delirium

Abstract Area: Delirium

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Introduction: Delirium is a frequent and serious condition in older frail adults. The primary management is multicomponent, nonpharmacological intervention, key elements is to ensure uninterrupted sleep and reducing noise at night. In June 2021 the geriatric ward was moved to a new building with all single rooms, prior to moving the ward consisted of multi-bedrooms. There were no changes to admission criteria, catchment area, staff or routine management of delirium. The aim of this study was to evaluate whether use of single-bed rooms had an influence of the occurrence and management of delirium compared to multiple-bed rooms.
Methods: We included patients aged $\geq$ 65 years admitted at the geriatric ward between 1 March 2021 and 1 January 2022 in an observational retrospective cohort study. Delirium was diagnoses by trained nurses and doctors using the Confusion Assessment Method (CAM) twice a day. Data was collected from the electronical patient records.
Results: We included 1149 patients. The mean age was 85 years, 54% were women. Patients' characteristics were similar prior to, and after moving to the new building. Delirium occurred in 149 patients (13.0%), 12.0% in multi-bedrooms vs 13.7% in single bedrooms, $P = 0.71$. Patients with delirium in single bedrooms had a significantly shorter mean length of stay 6.9 (0.8) days vs 9.9 days (sd 2.7), $P < 0.001$ and significantly fewer patients were treated with antipsychotic drugs 26.4% vs 44.8%, $p = 0.02$. There were no differences in mortality, readmissions, or other registered patient outcomes.

Key conclusions: Single bedrooms for frail old patients with delirium in the geriatric ward was associated with shorter length of stay and reduced use of antipsychotic drugs compared to multi-bedrooms.

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The role of preoperative anxiety in the development of postoperative delirium in older surgical patients: a systematic review and meta-analysis

Abstract Area: Delirium

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Introduction: Postoperative delirium (POD) is a common complication following surgery, being associated with multiple adverse outcomes and higher health care costs. Preoperative anxiety has been suggested to precipitate POD. We aimed to explore the association between preoperative anxiety and POD in older surgical patients.
Methods: Electronic databases were systematically searched to identify prospective studies examining preoperative anxiety as a risk factor for POD in older surgical patients. Quality was assessed using the Joanna Briggs Institute Critical Appraisal Checklist for Cohort Studies. The association was summarized with odds ratios (ORs) and 95% confidence intervals (CIs) using random-effects meta-analysis.
Results: Eight studies with a total of 1140 participants aged between 63.1–82.3 years proved eligible. Four studies theoretically defined preoperative anxiety, and the most utilized assessment instrument for preoperative anxiety was Anxiety subscale of Hospital Anxiety and Depression Scale (HADS-A). Preoperative anxiety was significantly associated with POD when using dichotomized measures (OR = 2.17, 95% CI: 1.01–4.68, I2 = 53.9%, n = 5) and the subgroup analysis of HADS-A (OR = 3.23, 95% CI: 1.70–6.13, I2 = 0, n = 4). No association was found when using continuous measurements (OR = 1.00, 95% CI: 0.93–1.09, I2 = 0, n = 3), nor in the subgroup analysis of STAI-6 (six-item version of state scale of Spielberger State-Trait Anxiety Inventory, OR = 1.07, 95% CI: 0.93–1.24, I2 = 0, n = 2). The overall quality of included studies was moderate to good.
Conclusions: There is an uncertain association between preoperative anxiety and POD in older surgical patients, and the results need to be interpreted cautiously due to the ambiguity in conceptualization and measurement instruments used for preoperative anxiety.

P-388

Implementing a digital pathway for daily delirium screening and management: a quality improvement project

Abstract Area: Delirium

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Introduction: Delirium is common in older patients presenting to hospital and can develop later during admission. Studies have evaluated delirium screening on hospital admission,[1] but few have explored daily screening to ensure recognition of delirium throughout admission. The simple screening tool 'Single Question in Delirium (SQiD)' is a cue for clinicians to ask, "Is this patient more confused than before?". This project aimed to implement daily delirium screening into routine practice.
Methods: Single centre prospective project conducted across four geriatrics wards at Manchester Royal Infirmary between 01/03/2022–22/05/2022. We incorporated a delirium screening tool into software used daily by nursing staff. Positive SQiD results prompted 4AT testing and initiation of a delirium bundle comprising seven tests to identify possible causes. Quantitative data were collected weekly for 12 weeks. Plan-Do-Study-Act (PDSA) methodology identified areas for improvement.
Results: Data were sampled from 1032 patients. At baseline, 0% of patients received SQiD screening despite Trust guidance. During weeks 1–6, 10% of patients were screened daily and 30% were screened throughout admission. At this point, PDSA cycles were initiated including World Delirium Day events, awareness posters and board-round inclusion. During weeks 6–12, 45% of patients were screened daily and 65% were screened throughout admission. 16% of patients were identified with new confusion and 47% had the delirium bundle completed.
Key conclusions: It is possible to implement daily electronic delirium screening on geriatric wards, identifying many patients with features of delirium. To improve compliance and facilitate wider use across adult specialties, further PDSA cycles are required.
References:
1. E. Vardy et al., "Use of a digital delirium pathway and quality improvement to improve delirium detection in the emergency department and outcomes in an acute hospital", Age and Ageing, vol. 49, no. 4, pp. 672–678, 2020, https://doi.org/10.1093/ageing/afaa069.

P-389

Delirium bay: beyond the specialised geriatric ward

Abstract Area: Delirium

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Introduction: A delirium bay is a specialised unit with a standardised approach to comprehensive geriatric assessment for older adults with delirium. Delirium bays are centred in specialised geriatric wards where delirium management should be independent of patient's allocation. The aim of this study is to determine the efficacy of a delirium bays beyond the specialised geriatric ward. Method: We analysed 30 patients admitted in a geriatric ward at Peterborough City Hospital between 15/10/2020 to 15/01/2021 0.14 patients were admitted to a Delirium Bed (DB) and 16 patients to Non Delirium Beds (NDB). Delirium was defined by 4-AT screening tool or "Delirium" as diagnosis in clinical notes. Length of stay, falls, catheterisation, pressure sores, mortality and new placement of discharge were the outcomes analysed. The statistical analysis was performed using Chi-square test**Results:** Age in DB was 80.2 yo (95% CI [76.332–84.068]) vs 83.8 yo (95% CI [78.774–88.826) in NDB. Length of stay DB = 26.9 days (95% CI [17.447- 36.353]) vs 31 days (95% CI [22.01, 39.99]) in NDB. Falls in DB 28% vs 25% NDB (p = 0.82). New Pressure Sores DB 7% vs 43% NDB (p = 0.023). Urethral Catheterisation DB 7% vs 37% in NDB

($p = 0.049$) Mortality DB 8% vs 37% NDB ($p = 0.049$) New discharge destination DB 28% vs 25% NDB ($p = 0.82$).
Conclusions: Delirium bed has shown to be more effective when compared with non-delirium beds showing reduction in length of stay, risk of pressure sores, catheterisations and reduced mortality.

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Delirium masking syndrome

Abstract Area: Delirium

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CASE DESCRIPTION89-year-old male, independent for basic and instrumental activities, without cognitive impairment, former smoker and polymyalgia rheumatica in treatment with corticotherapy. Visits emergency room due to a fall with pertrochanteric fracture on left femur. He was admitted for osteosynthesis through proximal femoral nailing. In orthogeriatric unit, presented an acute hyperactive delirium. He was discharged with an acute confusional syndrome controlled with neuroleptics. Three months later reconsults due to functional impairment, parkinsonism and nocturnal agitation. Wrongly diagnosed during recurrent visits as post-surgical delirium and recurrent urinary infections, was admitted for study and functional recovery. Physical examination revealed mild parkinsonism, drowsiness and evening agitation with unremarkable laboratory tests. head computed tomography (CT) shows a right frontal metastatic lesion. BodyCT shows a mass in the right upper lobe of the lung. In conclusion, both the cognitive disorder, the functional deterioration and even the initial fall could be attributed to the diagnosis of metastatic pulmonary neoplasia.
Key conclusions: Delirium is a multifactorial syndrome with organic basis, potentially reversible, characterized by an alteration of the fluctuating state of consciousness of acute onset. Very frequent in orthogeriatrics patients, with prevalence of 40–60%. Exacerbated by hospitalization and other intercurrent processes. The Confusional Assessment Method (CAM) test allows screening altered level of consciousness, useful tool to start diagnosis. It is important to highlight the multifactorial cause of delirium, and even if a probable cause is found, we must not forget to individualize it, as our case, where an underlying organic process that triggers it can be masked.

P-391

Prevalence and incidence of delirium among older people living at home

Abstract Area: Delirium

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Introduction: Delirium is a common and serious geriatric syndrome. It is caused by somatic dysregulation, which can often be treated. It is generally assumed that the prevalence of delirium among community-dwelling older people is low. However, it may be difficult to recognize, like in hospitalized and institutionalized populations. The primary aim of this study was to assess the prevalence and incidence of delirium among older people living at home.
Methods: We performed a literature search using four databases (PubMed, Embase, CINAHL and Google Scholar), combining synonyms for 'delirium', 'prevalence' and 'community-dwelling'. We will include studies reporting prevalence or incidence of delirium among older people living at home. We will extract relevant characteristics, such as number of participants, population characteristics, delirium assessment and time frame, and appraise the risk of bias. If data cannot be pooled for meta-analysis due to heterogeneity, a narrative synthesis will be conducted.
Results: The systematic review is currently ongoing. So far, we identified fifteen studies, which were primarily performed in Europe and North-America. The preliminary results show that the estimated prevalence ranged from 0.1% to 34.5% depending on population frailty and diagnostic procedure. We have not yet identified a study that reported an incidence of delirium in community-dwelling older people. The definitive results will be presented at the conference.
Conclusions: The results of this review will be important for healthcare professionals in primary care. More insight in the prevalence of delirium amongst community-dwelling older people will raise alertness of healthcare professionals working with these patients.

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Delirium or 'Delerium': confusion amongst NCHDs

Abstract Area: Delirium

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Background: Delirium is an acute confusional state that is common, particularly among older adults, and is associated with poor outcomes including prolonged length of hospital stay, mortality and institutionalisation. As well as often being misdiagnosed, delirium is also often misspelled, for example in the academic literature [1].
Methods: We conducted an electronic survey of all non-consultant hospital doctors from medical specialties. Participants were asked to select the correct spelling of the syndrome which is "defined as an acute fluctuating syndrome of altered attention, awareness, and cognition". Participants' grade and speciality were recorded.
Results: 80 doctors completed the survey, and the response rate was estimated (some being away or having incorrect addresses) to be 30%. The completion rate was 100%. 87.5% ($n = 70$) spelled delirium correctly. 12.5% ($n = 10$) spelled delirium incorrectly; 11.3% ($n = 9$) selecting 'delerium'. Of those who spelled delirium incorrectly 60% ($n = 6$) were registrars/SpRs, 30% ($n = 3$) were SHOs, 10% ($n = 1$) were interns.
Conclusions: Delirium is commonly misspelled, even among medical healthcare professionals. Delirium derives from the Latin 'de lira' or 'off the tracks' which still seems a useful analogy and a reminder that the condition is often reversible, and the patient may be put back on the tracks (even if for some the cognitive tracks ultimately lead downhill). It is important that delirium is recognised and accurately documented. This is particularly essential as we move into an era of electronic medical records with potential for retrospective searches for patients with delirium.
References:

1. Reddin C, Koay WJ, Mulkerrin EC, OKeeffe ST. Misspelling of Delirium as "Delerium" in the Academic Literature. J Am Geriatr Soc. 2020 Mar;68(3):660–1.

P-393

Frailty and hyperactive delirium in hospitalized older patients with COVID-19: an insight from GeroCovid

Abstract Area: Delirium

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Objective: To identify biological correlates of hyperactive delirium at hospital admission and to assess the independent effect of delirium and physical frailty on in-hospital mortality in hospitalized older patients with COVID-19. Design: The GeroCovid Observational is a multicenter, multinational longitudinal observational study carried out between March 1st, 2020 and December 31st, 2020. Hospitalized patients aged 60 years or more with confirmed SARS-CoV-2 infection were consecutively enrolled. Setting and Participants: Hospitalized COVID-19 patients aged 60 years or more enrolled in the GeroCovid study with a minimum dataset of pre-specified variables recorded, including physical frailty assessment, comorbidities, inflammatory markers and presence or absence of hyperactive delirium.

Methods: The presence of hyperactive delirium at admission was clinically diagnosed and recorded as a categorical variable (yes/no). Patients were considered delirious if they showed increased motor activity, restlessness, agitation, aggression, wandering, hyper alertness. A restricted cubic-spline logistic regression was employed to assess the relationship between selected biomarkers and hyperactive delirium. A Cox multivariate regression model was assessed to verify the independent effect of hyperactive delirium, physical frailty, and their combination on in-hospital mortality.

Results: The study population consisted of 337 older adults, [mean age (SD) 77.1 (9.5) years, 50.1% females], thirty-nine (11.5%) presented with hyperactive delirium at admission. A non-linear association of both PaO2/FiO2 ratio and serum LDH with delirium at admission was observed, only significant in the subgroup without physical frailty. By Cox multivariable regression analysis, frail patients with hyperactive delirium had a 3.79 higher mortality risk and non-frail patients with delirium had a 1.68 higher mortality risk as compared with non-frail, non-delirious patients.

Conclusions: Hyperactive delirium at hospital admission is associated with markers of lung failure among older adults, especially when clinical frailty coexists. Delirium is associated with increased in-hospital mortality risk, which is doubled by the coexistence of physical frailty.

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Cognitive outcomes after a first episode of delirium in hospital—results from an Advanced Nurse Practitioner Delirium Clinic

Abstract Area: Delirium

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BackgroundCognitive outcomes for frail older adult inpatients with a first episode of Delirium are unknown.

Aim: To determine cognitive outcomes of frail older inpatients after a first episode of Delirium.

Methods: Consecutive frail older inpatients with a 4AT score > / = 4, without a previous history of cognitive impairment, over a 12 month period (January to December 2021) were invited for formal cognitive assessment 8–12 weeks after their delirium occurred. Collateral history, medication review, Addenbrookes (ACE III), bloods and CT brain were undertaken. Data was prospectively entered onto Excel and analysed using descriptive statistics.

Results: Fifty-one patients with a mean age of 82 years (SD = 6) were referred to the Advanced Nurse Practitioner (ANP) Delirium Clinic. Median Clinical Frailty Score (CFS) was 6 with a male: female ratio of 1:2. Forty- seven percent (n = 24) attended; 35% (n-18) did not attend; 18% (n = 9) died prior to assessment. The ratio of male to female attendees was 1:2.4. There was no difference in CFS or age between attenders and non-attenders. Sixty-seven percent (n = 16) were diagnosed with Dementia at the Delirium Clinic; 16.6% (n = 4) were diagnosed with Mild Cognitive Impairment; 4% (n = 1) had a resolved Delirium; 8% (n = 2) were referred to consultant Memory Clinic and one patient remained too unwell to assess. The median ACE III score of patients diagnosed with Dementia was 54/100 (SD = 18).

Conclusion: Pro-active follow up of patients with a first episode of Delirium led to early diagnosis of Dementia and Mild Cognitive Impairment with supportive interventions.

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Design and implementation of the Delirium Code

Abstract Area: Delirium

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Introduction: delirium is a common condition among elderly hospitalized patients and is often an atypical clinical manifestation of severe illness. Its prevention and early detection is crucial [1]. The aim of our study is to implement the "Delirium Code" (DC) in a high-level hospital to determine its prevalence and to provide early and standardized intervention.

Method: We developed an assessment and intervention protocol for all patients aged 65 years or older who are admitted to the emergency department and to any ward (medical or surgical) and who develop delirium during hospitalization. This was communicated to all healthcare personnel and a training course on delirium was provided to all healthcare personnel.
Results: The CD has been implemented in the hospital as a key strategic measure. The nursing staff were responsible for determining a positive, intermediate, or negative result using the Confusion Assessment Method scale and by activating the CD by means of an alert in the patient's electronic medical record. The CD team (a geriatrician and specialist geriatric nurse) proactively assessed positive or inconclusive patients. The nurse reviewed the predisposing and contributing factors in a standardized way and provided non-pharmacological recommendations. If necessary, they notified the geriatrician that a medical assessment was required and provided support to said physician.
Conclusions: It is possible to implement a screening and intervention program for the early detection of delirium and to offer support physicians and nurses in the treatment of the condition in a standardized manner, thus bringing about a change in culture.1.—Inouye SK, Westendorp RG, Saczynski JS. Delirium in elderly people. Lancet. 2014 Mar 8;383(9920):911–22. https://doi.org/10.1016/S0140-6736(13)60688-1. Epub 2013 Aug 28. PMID: 23992774; PMCID: PMC4120864.

P-396

Prevention of delirium in hospitalised elderly patients. A systematic review

Abstract Area: Delirium

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Introduction: Delirium is an acute disorder of attention and consciousness. It is the most common complication in elderly hospitalised patients and increases the risk of worsening their clinical condition and death. This review summarises and rates the main interventions found in the literature to prevent the development of delirium in hospitalised elderly patients.
Methods: Systematic review of all relevant articles in PubMed in English language between the years 2010–2022. Different types of articles were collected: randomised controlled trials, systematic reviews, reviews, cohort studies and clinical guidelines.
Results: 19 studies were selected finally selected, which were stratified into two main prevention groups: non-pharmacological and pharmacological. In the former, 6 measures were described and examined, the "HELP method" being the first to be implemented and the one with the most evidence in reducing the incidence of delirium; including multiple adaptations. Four different pharmacological measures were analysed. Results for Haloperidol were not statistically significant; however, treatments for insomnia and sleep disturbance seem to have some evidence in favour of its use.
Conclusions: Non-pharmacological measures have shown the greatest efficacy in the prevention of delirium in elderly hospitalised patients.

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Streamlining and translating a patient information leaflet for delirium into other languages

Abstract Area: Delirium

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Introduction: Whipps Cross Hospital is a large university hospital in east London with a patient population of 350,000. The proportion of people in the area served by the hospital who do not speak English as a first language is 24%—considerably higher than the national average of 8% [1]. Despite the prevalence of delirium in hospital, and the importance of written information in supporting patients and families with delirium, the hospital's patient information leaflet (PIL) for delirium is only available in English. This project sought to update the existing leaflet and make it available in other languages to better serve the patient population.
Methods: A translation company was approached, who advised criteria for translating the leaflet, including a focus on brevity. The existing PIL was reviewed and felt to be overly long and dependent on jargon. The PIL was then updated through an iterative multidisciplinary process to produce a version which would be suitable for translation. This was then submitted to a patient panel for approval. Finally, admissions data over a 3-month period were used to identify the three most commonly spoken languages by patients in the hospital.
Results and conclusions: The new leaflet was well-received by the patient group and fit the brevity criteria for translation to the identified candidate languages. It was formally approved for publication and the process of translation is underway. Further work is planned for multimodal promotion of the new leaflet within the hospital, and collection of patient and clinician experience data.
References:
Office of National Statistics, "2011 Census—Key Statistics tables and Quick Statistics tables," 2011

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Awakening

Abstract Area: Delirium

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Introduction: This case highlights a case of initial hyperactive delirium which managed with chemical restraint. This later transformed into hypoactive delirium for a number of weeks. Case Description: Ms G was a 63 year old lady with a history of severe dementia and trigeminal neuralgia who was admitted to Saint Vincent de Paul Residence (SVP) from the acute hospital. She was admitted to hospital with agitation without organic cause and managed with olanzapine. At SVP she was noted to be very lethargic, being only responsive of pain. However she was haemodynamically stable and examination was unremarkable. She had urgent blood investigations which were unremarkable. She was reviewed by the inter-disciplinary team. Her treatment included olanzapine 10 mg nocte and Tegretol 200 mg twice daily (bd). It was decided to tail down olanzapine to 5 mg and eventually stop. This resulted in minimal improvement in

her alertness. Ms G looked comfortable and not in pain, so it was decided to tail down tegretol. This resulted in steady improvement of the patient. In fact she slowly regained her mobility and improved her score on the Barthel index.
Discussion: Delirium is a common occurrence in older adults and might be complex to resolve. In this case, treatment review and deprescirbing was key to the management of the patient.
Key points: Management of delirium can be complex. Deprescribing and team approach is useful.
Key words: delirium, deprescribing, inter-disciplinary team.

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Delirium duration predicts 1-month and 6-month mortality in septic patients admitted to an Acute Geriatrics Unit

Abstract Area: Delirium

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BACKGROUND AND AIMSDefining the short-term prognosis of older patients admitted with sepsis to acute medical wards is challenging. Previous studies suggest using tools to measure organ failure or markers of inflammation. Recently, it has been suggested that delirium duration can predict mortality in older patients with acute illnesses. We aim at comparing the ability of both delirium duration and the Sequential Organ Failure Assessment (SOFA) score to predict 1-month and 6-month mortality among older patients admitted with sepsis to an acute geriatrics unit (AGU).
Methods: We performed an observational cohort study recruiting all patients consecutively admitted to San Gerardo hospital AGU (Italy) between March 2017 and January 2020, aged 70 years and older, who were diagnosed with sepsis according to 2016 Sepsis-3 criteria. All patients underwent a comprehensive geriatric assessment, including the SOFA score on admission and delirium twice a day until discharge. Outcomes were 1-month and 6-month mortality rates.
Results: Among 3,326 hospitalized patients, 235 were included in the study (median age 84 years, 42% females). Delirium accounted for 71.9% (169 patients, median duration 3 days). One-month and 6-month mortality rates were 32.3% and 55.3%, respectively. Age, albumin, hemoglobin concentration, and PCR levels were associated with mortality and included as covariates in our Base Model. We performed pairwise comparison between c-indexes of the Base Model vs. Base + delirium duration (in days) vs. Base + SOFA. The increment of predictive performance of model including delirium duration was statistically significant (c-index: 0.67 vs. 0.75 when considering 1-month mortality; 0.70 vs. 0.75 for 6-month mortality). Base + delirium duration performed better than Base + SOFA, although the difference was not significant.
Conclusion: Delirium duration performs as well as SOFA score in predicting 1-month and 6-month mortality among older patients admitted with sepsis to acute medical wards.

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Prevalence and 6 months outcomes of delirium in patients admitted to an acute Geriatric ward

Abstract Area: Delirium

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[1]Hospital Vall De Hebrón

Introduction: The aim of the study was to examine prevalence and outcomes of delirium in patients admitted to acute geriatric Ward of Vall de Hebrón Hospital in Barcelona-Spain**Methods:** Prospective observational study of patients with acute illness admitted from the emergency room during 3 months. We collected demographic data and comprehensive geriatric assessment was performed. We used 4AT to detect delirium. Mortality, hospital readmission and emergency admission within 6 months was recorded.
Results: Of the 92 included patients, 17 (18.47%) developed delirium, mean age + SD = 83 + 8.44; 58.82% women, mean Barthel Index + SD = 77.35 + 16.7, mean Charlson Index SD = 3 + 2, and mean CFS SD = 3.71 + 1.4. Compared with no delirium patients, delirium patients showed higher prevalence of dementia (70.58%vs 13.3%, $p < 0.001$), higher risk of falls (82.33% vs 44%, $p = 0.0.4$) and higher social risk (47.05% vs 18.66% $p = 0.013$). At discharge, delirium was associated with a reduced chance of returning home (47% vs 69.33%; $p = 0.030$) and lower emergency admission within 6 months (10% vs 62%$p = 0.002$) There were no significative difference in 6 months mortality (35.29 vs 32% $p = 0.79$) and hospital readmission (46% vs 61% $p = 0.303$).
Conclusions: In our sample, delirium had low prevalence and it was significantly associated with dementia, greater risk of falls and worse social support. Patients with delirium had lower emergency admission within 6 months probably due to they returned home less and were transferred to intermediate care centers or nursing homes.

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Delirium is under-reported in discharge summaries and in hospital administrative databases: a systematic review of published studies

Abstract Area: Delirium

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Objective: Accurate recording of delirium in discharge summaries and hospital administrative systems is critical for patient care and service planning. This is a systematic review of published studies that have reported rates of delirium documentation in healthcare systems.
Method: Ovid Medline, Ovid Embase, Ovid PsycINFO and Web of Science databases were searched from inception to 23 June 2021.

Inclusion criteria included use of the term delirium in discharge summaries or hospital administrative coding systems, with other documentation in medical records alone not eligible for inclusion.
Results: The 23 studies included were heterogeneous in design and size (N's = 25 to 80,951). 20 studies used additional delirium ascertainment methods to provide a comparison with delirium documentation rates. Most showed discharge summary or administrative coding rates of less than one-third of the measured rates, with only one study showing rates of above 50%. The remaining three reported delirium rates in large scale databases, with delirium coding rates of < 2% of the whole population, indicating striking under-documentation compared with expected rates.
Conclusion: Delirium is one of the most common medical emergencies yet it remains widely under-documented impacting patient care and service planning. Healthcare systems take action to reach satisfactory delirium detection and documentation rates.

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Improving delirium assessment in acute hospital admissions

Abstract Area: Delirium

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Background: Delirium is common, seen in 11–25% of new admissions [1]. It is important to diagnose due to increased hospital complications and worse outcomes, yet the diagnosis is frequently missed, in up to 42% of patients [2]. Patients with delirium on hospital wards are at 3.18 times increased risk of mortality compared to non-delirious controls [3]. As per guidelines from the National Institute of Clinical Excellent (NICE), all patients above 65 should be assessed for indicators of delirium via a validated tool such as the 4As test (4AT), [4].
Methods: This prospective study included six cycles of data collection with five rounds of interventions. Each round, the clerking notes of 50 consecutive patients over 65 years old on the medical take were reviewed for delirium screening and subsequent management. Interventions included implementation of an online clerking system, a Trust poster campaign, reminder emails, presentations in meetings and teaching sessions for both junior doctors and the wider multidisciplinary team.
Results: Screening for delirium was initially lower than expected, with 4AT use in 6% of patients. Overall, subsequent interventions showed a near stepwise improvement up to 56%. Those with delirium mentioned in the diagnosis and on discharge letters remained low throughout the project.
Conclusions: Initial assessment with a validated delirium screening tool was poor. Limited knowledge of 4AT and staff pressures may have contributed. However, an accumulation of varied educational interventions and involving a multidisciplinary approach resulted in the most improvements.
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P-403

Insulinoma in patient with diabetes mellitus—case report

Abstract Area: Diabetes

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Introduction: Symptomatic hypoglycemia is an uncommon clinical problem among diabetic elderly patients who is not taking insulin or insulin secretagogues medications.
Methods: Clinical case analysis of a 68-year-old female with a history of type 2 diabetes mellitus (DM2) and insulinoma.
Results: A 68-year-old female with a history of DM2 presented with weight gain, persistent episodes of sugar craving associated with severe dizziness and profuse sweat. During these episodes, patient had plasma glucose concentration of 2.2–2.4 mmol/l measured by home glucose monitor. After taking carbohydrate rich food, patient had symptoms relief and raise in serum blood glucose. For diabetes control, patient was taking only metformin 1000 mg a day. In the settings of low rate of hypoglycemia due to metformin, further evaluation was performed. 72-h fast test was terminated after 18 h due to hypoglycemia (2.3 mmol\l) and severe neuroglycopenic symptoms including dizziness and sweatiness; blood test results revealed hyperinsulinemia 34.3 mcU/ml (2.7–10) and elevated C-peptide level 1860 pmol/l (260–1700); computed tomography showed tumor at the head of pancreas. The diagnosis of insulinoma was established and patient underwent removal of the tumor which lead to full resolution of symptoms.
Conclusion: Insulinoma is a rare pancreatic islet cell tumor not limited to any age or ethnic groups, characterized by hypoglycemia associated with neuroglycopenic symptoms. Symptomatic hypoglycemia should be evaluated in diabetic patients who does not take insulin or insulin secretagogues medications.

P-404

Nivolumab-induced autoimmune diabetes in older patients: case series

Abstract Area: Diabetes

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Nivolumab is a monoclonal antibody that increases the immune system's response to tumor cells bypassing their killing escape ability.

It is an adjuvant treatment for several advanced-stage cancers and it is associated with reactions related to the dysregulation of the immune system. The development of autoimmune diabetes mellitus (DM) has been reported in 1% of treated patients. Case 1 76 years male, in Nivolumab for 6 months for a metastatic melanoma, was admitted to the Emergency Department with a hyperglycemic hyperosmolar state (glycemia: 642 mg/dL; osmolarity: 846 Osm/L, glycated hemoglobin: 8.2%; C-peptide: 0.08 ng/mL). Case 2 73 years male, receiving Nivolumab for 12 months for an advanced melanoma, was diagnosed with a Diabetic Ketoacidosis (glycemia: 700 mg/dL, lactic acidosis, ketonuria, HbA1c: 9.6%, C-peptide: 0.41 ng/mL). Case 3 63 years male, after two months of treatment with Nivolumab for metastatic renal cell carcinoma, showed asthenia, polyuria and vomiting (glycemia: 744 mg/dL, lactic acidosis, Glutamic AcidDecarboxylase65 Antibodies > 26 IU/mL). All the patients presented with acute onset of DKA, after the treatment with Nivolumab; they all developed an insulin-dependent DM, showed a severe instability of glycemic values and needed a strict diabetes monitoring. None of them had a family history of DM; only two were previously affected by impaired glucose tolerance. Geriatricians should suspect an autoimmune pathogenesis of DKA also in older patients receiving immunotherapy and oncologists should exclude the diagnosis of DM before the beginning of immunotherapy and cooperate with other specialists such as diabetologists in the follow up of these patients.

P-405

Endothelial dysfunction in type 2 diabetes mellitus as a predictor of sarcopenia

Abstract Area: Diabetes

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Introduction: The prevalence of metabolic diseases is increasing. Type 2 diabetes is characterized by insulin resistance, inflammation, advanced glycation end-product accumulation and increased oxidative stress. These characteristics can negatively effect of muscle mass, strength, and function. Sarcopenia is a term used to describe age-related loss of skeletal muscle mass and function, which is considered both a cause and a consequence of type 2 diabetes mellitus.
Methods: A review of the literature of leading medical publications was made. Evidence suggests that sarcopenia may contribute to the development and progression of type 2 diabetes mellitus by altering glucose utilization due to low muscle mass. Lifestyle modification is important for improving and maintaining metabolic health in patients with type 2 diabetes mellitus diabetes mellitus and sarcopenia. However, evidence for the most effective exercise and dietary interventions in this group of patients are lacking.
Results: For the elderly, the recommended daily protein intake should be approximately 1.2–1.6 g/kg/day. Protein intake is predominantly from plant sources. Maintaining adequate serum vitamin D levels is important. Omega-3 supplements can be used alone or in combination with exercise.
Conclusion: There is an association between type 2 diabetes and sarcopenia and having one condition can increase your risk of developing the other. The use of different definitions of sarcopenia clouds our understanding of this relationship, so developing a consensus definition is of paramount importance. Evidence suggests that lifestyle interventions can maintain and even improve functional and metabolic health in elderly patients with type 2 diabetes mellitus or sarcopenia, but there is no evidence of the most effective intervention in patients with a combination of both conditions.

P-406

Polypharmacy in elderly with type 2 diabetes mellitus: the sore points in clinical practice

Abstract Area: Diabetes

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The aim of this cross-sectional study was to describe therapy patterns in elderly with type 2 diabetes mellitus (DM).
Methods: All patients with type 2 DM aged 65 years and older, who were on a planned admission in endocrinology department of University Hospital N°2 were included. All participants underwent examination according national DM guidelines with extra interview on medication history.
Results: Between December 2019 and December 2021, we enrolled 332 patients in age 71 [68–75] years, mostly retired (86%) woman (69%) living in Moscow (53%). Mean DM duration was 13 [9–20] years. Almost all (95.2%) got antidiabetic therapy consisted of 2 [2–3] drugs, mainly metformin (57.9%), basal insulin (38.8%) or sulfonylureas (33.7%). The prevalence of rest antidiabetic drugs was: DPP-4 inhibitors 24.7%, prandial insulin 20.8%, SGLT-2 inhibitors 16%, premixed insulin 7.5%, GLP-1 receptor agonists 5.4%. Average HbA1c was 8,5% [7,2–10,0], and only 46,7% patients were in the target HbA1c. Every third patient mentioned hypoglycemia over the year. Most patients were hypertonic (92.4%). Antihypertensive therapy received 88,2% with 2 [2–3] drug: RAAS blockers (75.2%), beta-blockers (51.8%), thiazide diuretics (36.9%). Blood pressure targets archived 62,8%. Only half of patients with dyslipidemia (97%) received lipid-lowering therapy, while only 14.4% achieved LDL target. In patients on antiplatelet therapy (41,7%), more than third had no indications. Polypharmacy was in 74% of patients. In average they get 7 [4–9] medications, but can name only 5 [3–7] of them. Only 52.3% use medication checklist. Over-the-counter drug used 23% patients. At least once discontinued the drug 37%.
Conclusion: Polypharmacy in elderly with DM is unavoidable, so deprescribing of unacceptable antidiabetic drugs and unnecessary antiplatelet therapy both with lipid-lowering therapy initiation or intensification are pressing task.

P-407

Elderly diabetes patients in long-term care facilities: a single center experience

Abstract Area: Diabetes

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Introduction: To choose treatment goals and optimal antidiabetic drugs in elderly patients with type 2 diabetes (T2D) geriatric state should be taking into account. We aimed to explore the

dialectological and geriatric characteristics of patients with T2D living in long-term care facilities.
Methods: It was a pilot cross-sectional study including medical records analysis, comprehensive geriatric assessment, and interviewing of patients with previously diagnosed T2D living in the A.A. Yablochkina House of Veteran Stage. The study was approved by the local ethical committee of Sechenov University. The data were processed in the IBM SPSS Statistics 26 program. Quantitative variables are presented in the form of Me [Q1-Q3]. The Mann–Whitney criterion was used to compare nonparametric values. Pearson's chi-squared test and Fisher's exact test were used to analyze nominal variables.
Results: One-fourth of patients had previously diagnosed T2D ($n = 21$, 66.7% women, mean age 83 y.o. [73–87]), all were included in this study. Mean diabetes duration were 11 years [5–17]. Mean HbA1c level was 6,4% [5,5–7,2] and 85.7% patients had HbA1c below individual target taking 1 [1–2] antidiabetic drug (52.3% received metformin, 43% sulfonylureas, 28.6% basal insulin). Hypoglycemia episodes were reported by one-third respondents. Most patients had frailty (67%). There was no difference in HbA1c level and number of antidiabetic drug between patients with frailty and without. Moderate cognitive impairment was found in 52%. One-third was at risk of depression. Each five had at least one fall in the previous year. The most common comorbidities were: hypertension, dyslipidemia, atherosclerotic cardiovascular disease, chronic kidney disease, osteoarthritis. In average patients take 7 [8–10] drugs: 2–3 antihypertensives, antiplatelet, statins, antiarrhythmics, and sleeping pills.
Conclusion: Observed group was fragile and overtreated with inadequate antidiabetic drug.

P-408

Are SGLT-2 inhibitors safe and effective in older adults living with frailty? Real-life experience: a retrospective study from University Hospital

Abstract Area: Diabetes

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Introduction: SGLT-2 inhibitors (SGLT2-I) are second-line therapy in type- 2 diabetes mellitus (DM) with or without metformin based on glycemic needs, and appropriate initial therapy for at high risk for atherosclerotic cardiovascular disease, heart failure, and/or chronic kidney disease. However, safety and efficacy of SGLT-2 inhibitors in older adults are controversial and not sufficient evidence.
Methods: Forty-one patients with DM, who were started on a new SGLT2-I between 2019 or 2021, were included in the study. Patients' records were reviewed retrospectively. Demographic features, components of comprehensive geriatric assessment, laboratory values including glycosylated hemoglobin (HbA1c), renal functions and urinary analysis were recorded. Complications regarding genitourinary infections, acute renal failure and admission of emergency department with euglycemic ketoacidosis or serious infection related to SGLT2-I were also documented.
Results: The mean age of participants was 69 ± 5.3 and 20 patients were living with frailty via clinical frailty scale. The median follow-up time were 5.0(3.0–7.0) months. The mean ± SD HbA1c before SGLT-2 inhibitors was $8.56 \pm 2.12\%$ and after treatment, it was $8.13 \pm 1.25\%$ in patients living with frailty ($p > 0.05$). HbA1c level before treatment was observed as $8.87 \pm 2.08\%$ and it was $7.44 \pm 0.87\%$ after treatment among robust patients ($p < 0.05$). Complication rates related to SGLT2-I were significantly higher in frail group than in robust group (40% vs 9.5%, respectively p-value: < 0.05).
Conclusion: Patients living with frailty are more vulnerable to adverse effects of SGLT2-I and their benefits are limited. therefore, it should be used with caution in older adults with frailty. Further longitudinal prospective studies should be conducted to support our findings.

P-409

Is the increased risk of fractures in dabetics modulated by obesity in older Chileans?

Abstract Area: Diabetes

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Background: Although higher bone density, increased risk of fractures has been observed in Type2Diabetes (T2D) Objective To study if obesity has a modulating factor in the increased risk of fractures in T2D
Methods: A cross-sectional study in 733 people (71.3% women, mean age 70.9 ± 6.47) from the Alexandros cohort, was designed to study disability associated with obesity in community-dwelling people 60y and older living in Santiago/Chile. Socio-demographic characteristics, DEXA scan, anthropometric measurements and Self-reported Fractures in the last year were registered.
Results: T2D was present in 24% of the sample, similar in both sex. The frequency of obesity was higher in diabetics than in non-diabetics (43.75% vs 34.9%, $p = 0.04$) but no difference between diabetics and non-diabetics was observed in the lean/fat mass Index. Osteoporosis was identified among 13,9% of people with diabetes and 25.1% of non-diabetics ($p < 0.0001$). Fractures in obese subjects (35.5%) were lower than in the Normal BMI (42.3%) and in people underweight (73.8%), $p = 0.005$ and fractures were reported in 42.6% diabetics and 36.6% in non-diabetics ($p = 0.154$). After logistic regression analysis, no interaction between obesity and diabetes was observed. In the age and sex-adjusted regression analysis, fractures were higher in diabetics (OR 1.44; 95% CI: 1.001–2.060). When osteoporosis and nutritional status were included in the analysis, the risk of fractures in diabetes was OR = 1.54; 95% CI: 1.061–2.224, $p = 0.023$, and obesity was not significant.
Conclusion: This study confirms the increased risk of fractures in T2D, but this increase is not modulated by obesity.

P-410

Diabetes management in cognitively impaired older persons: still not on target?

Abstract Area: Diabetes

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Introduction: Most current guidelines recommend to manage diabetes in older persons according to their health profile, especially in those with neurocognitive impairments. However, it remains unclear how well these guidelines are applied in the real world.
Methods: Retrospective case series of type II diabetic patients over 60 years from an academic memory clinic. Patients were stratified according to their health profile as Dependent or Vulnerable. Glycated hemoglobin (HbA1c) within 3-month before or 12-month after the visit was used to examine whether on target or not. Factors associated with over- and under-treatment were investigated.
Results: Among 161 patients (median age 76.8 years, range 60.8–93.3 years, 32.9% female), 29.8% had their HbA1c on target according to their profile, 54.0% were over-treated, and 16.2% under-treated. Among Dependent patients, only 9/26 were on target and almost all the other (16/26) over-treated. Neither age, nor the severity of cognitive or functional impairment were associated with under or over-treatment. Patients with treatment regimen at high-risk of hypoglycemia (i.e. insulin therapy, sulfonylureas, glinides) were both at increased risk of under-treatment (adjRRR 11.8, 95% CI 2.4–57.8, $p = 0.002$) and decreased risk of over-treatment (adjRRR 0.3, 95% CI 0.1–0.6, $p = 0.002$).
Key conclusions: Guidelines recommendations about glycemic targets were not well applied in these older diabetic patients with cognitive impairment. More than one in two patients were over-treated, even though physicians seemed aware of the risk of hypoglycemia associated with insulin therapy and high risk oral antidiabetics. Training in diabetes management of older patients with cognitive impairment is further required.

P-411

High-throughput drug screening models of mature adipose tissues which replicate the physiology of obesity and type 2 diabetes

Abstract Area: Diabetes

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Introduction: Most elderly people have a lower basal metabolism than before and gain weight with aging. This, combined with a lack of exercise, can lead to obesity and often metabolic diseases such as diabetes. Unfortunately, current drug screening strategies for these diseases mostly rely on immature in vitro adipose models that cannot recapitulate properly. We developed a statistically validated high-throughput screening model to address this issue by seeding human mature adipocytes from patients encapsulated in physiological collagen microfibers.
Methods: An optimal combination of collagen microfibers, adipose-derived stem cells, adipocytes, and human umbilical vein endothelial cells created vascular-rich adipose drop tissues. The adipocyte viability and functionality for controlling glucose and fatty acids uptake, as well as glycerol release, of this in vitro engineered tissue were investigated. Correlations between BMI and insulin sensitivity and sensitivity to diabetic medications were analyzed in detail. In addition, the usefulness of vascular addition in terms of adipokine release in these drop tissues was examined.
Results**:** These drop tissues ensured the maintenance of adipocyte viability and functionality. Patients' BMI and insulin sensitivity displayed a strong inverse correlation. Insulin sensitivity recovery was possible with two type 2 diabetes treatments. Finally, adding blood vasculature to the model seemed to more accurately recapitulate the in vivo physiology.
Key conclusions: This new model of vascularized adipose drop tissues should be compatible with high throughput formats for adipose-targeting drug screening and validated as a robust model for HTS applications for type 2 diabetes and obesity drug development.

P-412

Profiles of patients to be targeted by de-intensification of glucose-lowering treatment in older people with type 2 diabetes: a systematic review of clinical practice guidelines recommendations

Abstract Area: Diabetes

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Introduction: Overtreatment by glucose-lowering treatment (GLT) is frequent and harmful in older people with type 2 diabetes (T2D), making de-intensification of GLT essential. This systematic review aimed at comparing recommendations defining profiles of older patients to be targeted by de-intensification of GLT.
Methods: Using a comprehensive search of the literature, we included all clinical practice guidelines (CPGs) providing recommendations for de-intensification of GLT in older patients ($\geq$ 65 years), published in English, after 2015 and supported by European or North American scientific societies or expert groups were included. Of these, we extracted all recommendations defining profiles of patients to be targeted by de-intensification of GLT.
Results: Five CPGs of good methodological quality were included, most of which were supported by North American scientific societies. They all recommend a list of different profiles of patients for whom de-intensification of GLT should be proposed, either because those patients have an important risk of hypoglycaemia (e.g. advanced age, severe glycaemic control, multiple co-morbidities, frequent hypoglycaemia), or because the benefit of GLT is uncertain (cognitive impairment, frailty, or patients at the end of life). There are important differences between CPGs, but they all recommend to de-intensify GLT in patients with cognitive impairment or frailty. The extracted recommendations were mainly expert opinion-based, explaining partly these differences between CPGs.
Conclusion: Given the challenge of avoiding overtreatment in older patients with T2D, it is crucial to improve the quality of recommendations for de-intensification of GLT, and in particular the definition of patients to be targeted by de-intensification.

P-413

Nursing and dental students' and their educators' experiences of an interprofessional gerontological clinical education pilot course

Abstract Area: Education and training

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Introduction: Interprofessional care improves older adults' health outcomes, safety and satisfaction. High quality teamwork training should start early in the health sciences students' education. The purpose of this study was to evaluate a dental and nursing novel interdisciplinary gerontological education course by the students' and educators' point of view.
Methods: A pilot interprofessional clinical education course in older adults' care took place in the spring semester 2018–19 in a nursing home in Athens. It involved 8 pairs of nursing and dental students as well as 7 educators. For the evaluation of the pilot programme students had to complete the Gibbs reflective practice diary while educators had to complete an evaluation questionnaire with open ended questions. Content analysis was performed in order to analyse data.
Results: Themes that emerged from students' diaries were: teaching and learning from each other, benefits for elderly care, in depth understanding of older person's needs, holistic care. With regard to educators' data, themes that emerged were: communication skills, teamwork, improvement in interprofessional skills, benefits for elderly care, creation and sustainability of collaborative behaviors in the workplace, institutional support.
Key conclusions: Students and educators' evaluation of this novel pilot interdisciplinary education program revealed very positive outcomes. According to students' recommendations there is a need for further development of interdisciplinary education programmes to ensure continuity of holistic care. Moreover, educators stated that there is a demand for institutional support and staff development as well as involvement of more disciplines in order to broaden the perspectives of trainees in gerontological interprofessional care.

P-414

Empowerment, priorities and needs defined by the elderly. Qualitative study

Abstract Area: Education and training

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We must cover the rest of the concerns that the elderly person may have. Within the social sphere, those over 80 years of age consider of special relevance to preserve their own role in a safe and collaborative environment, free of ageism, that promotes their participation in the community, requiring higher levels of care to ensure that they maintain their network of contacts, thus emphasizing the importance of listening to their needs and working in a patient-centered way, allowing them to make their own decisions. They give importance to the ability to take advantage of the experiences acquired throughout life, reflect on the benefit of hindsight, being one of the most used personal resources together with the ability to adapt to change, take advantage of the present and focus on the "here and now". This study with a sample of 10 patients showed after a clinical interview that patients gave priority to: maintaining their role in society (10/10), avoiding dependence and maintaining their autonomy (8/10) with special attention to maintaining their urinary continence and avoiding hospital admissions and worsening of their comorbidity (7/10). Many of those who had experienced an illness described loss of confidence and self-control with the appearance of fear of leaving home alone due to the appearance of feelings of vulnerability and thus suffered a significant negative impact on recovery after the pathology. Health professionals must respect the values and attitudes of each older person and advising them.

P-415

Safer cycling in older age (SiFAr): a randomized controlled trial

Abstract Area: Education and training

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Background: The risk of older adults being injured or killed in a bicycle accident increases significantly due to the age-related decline of physical function. To counteract this trend, targeted interventions for older adults to improve safe cycling competence are urgently needed.
Methods: The "Safer Cycling in Older Age" (SiFAr) randomized controlled trial aims to investigate if the provision of a progressive multi-component exercise program related to cycling for older adults improves cycling competence. Participants are recruited between June 2020 and May 2022 by addressing community-dwelling persons aged 65 years and older who are either 1) beginners with the e-bike or 2) feeling self-reported unsteadiness when cycling or 3) uptaking cycling after a longer break. Participants are either randomized 1:1 to an intervention group (IG; receiving cycling exercise program, 8 sessions within 2 months) or an active control group (aCG; receiving health recommendations). The cycling competence as primary outcome is tested in a standardized cycle course prior and after the intervention period, which consists of various tasks requiring skills related to daily traffic situations (e.g. riding curves, mounting/dismounting, turning).
Expected results and conclusion: We hypothesize that the cycling competence of the IG will improve compared to the aCG. To date, 118 participants are included (61% female, 73.3 $\pm$ 5.2 years). Study results will be available at the end of the last intervention cycle (August 2022). If proven effective, the SiFAr concept could easily be made available to a broad public through the standardized structure and a train-the-trainer approach.

P-416

The Geriatric 5Ms: a communication tool to help explain what Geriatric medicine is about

Abstract Area: Education and training

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How do you explain to others what Geriatric Medicine is and what it does? In 2017 the "Geriatric 5 Ms" framework was launched at the Canadian Geriatrics Society Annual Scientific meeting in Toronto, Canada. The 5 Ms are: Mind, Mobility, Medications, Multi-complexity, and what Matters most. This communication tool was developed to broaden the understanding of what the specialty of Geriatric Medicine does. Worldwide dissemination has been enabled by the Canadian, American and British Geriatric Societies, the International Association of Gerontology and Geriatrics, as well as a Letter to the Editor of The Journal of the American Geriatrics Society. The text has also been translated from English to French and Spanish. The U.S. National Library of Medicine which manages the PubMed database lists 27 citations of the original letter (PMID: 28586122). A casual Google search yielded 33 websites that refer to the Geriatric 5Ms. Countries around the world including Canada, United States, United Kingdom, Australia, New Zealand, Costa Rica and Kenya have used this tool. The authors of the Geriatric 5Ms are optimistic that the more this simple message is spread its users can facilitate the understanding of our specialty to enhance our visibility and to forge a stronger identity. Uncertain about what geriatrics does? Try using the words: Mind, Mobility, Medications, Multi- complexity and what Matters most!

P-417

Towards national dementia strategy: lithuanian experience and development

Abstract Area: Education and training

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Introduction: The Glasgow Declaration 2014 called for the creation of a European Dementia Strategy and national strategies in every country in Europe. The WHO's Global action plan on the public health response to dementia 2017–2025 was adopted stating that 75% of Member States must develop a tailored response to dementia by 2025. In 2021, Association "Dementia Lithuania" began a project "Towards a Dementia Strategy: Situation Analysis and Public Awareness"*, with one of the objectives being to produce recommendations for a national dementia strategy in Lithuania.
Methods: The project applies qualitative, quantitative and creative research methods aiming to: 1) evaluate legal bases, related to dementia; 2) assess the services for persons with dementia, their caregivers; 3) assess the epidemiological situation; 4) map the institutions related to the dementia services; 5) develop recommendations for the national dementia strategy and 6) raise awareness of the society towards dementia.
Results: Evaluation of legal documents, service provision and current practices was performed. The association "Dementia Lithuania" was founded advocating persons with dementia and their caregivers. In 2021 the association launched multifaceted World Alzheimer Month programme, which preceded by ongoing events, seminars and meetings, aiming to disseminate care related knowledge and reduce dementia related stigma; in 2022 piloted carer support group programme; implemented dementia risk factors awareness campaign. Advocacy in dementia led to founding cross-disciplinary and cross-sectorial dementia working group by the Ministry of Health of the Republic of Lithuania in 2022.
Key conclusions: The project activities campaign the awareness on dementia and contributes to the development of national dementia strategy in Lithuania.

P-419

Gender distribution among geriatricians: perspective from an ageing and developing country

Abstract Area: Education and training

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Introduction: Geriatrician numbers are increasing year by year in Turkey. We aimed to obtain information on licensed geriatricians, trainees, and board of directors of the societies in Turkey and compare this information with other countries' data.
Methods: The study was conducted as a cross-sectional study. The gender, institution, and title of licensed geriatricians and trainees were documented by scanning websites of university, training and research, state hospitals, and the website of Academic Geriatrics Association. Information about the board of directors of the societies was obtained from the websites of the societies. The last day for data inclusion was August 31, 2021.
Results: There were 90 licensed geriatricians and 77 trainees in Turkey as of 31 August 2021. While 52.2% ($n = 47$) of licensed geriatricians were female, the ratio of females among trainees was 76.6% ($n = 59$). The ratio of females among trainees was statistically higher than licensed geriatricians ($p = 0.001$). Females constitute 88.9% of the board of directors of the Academic Geriatrics Association and this ratio was higher than the ratio of females on the board of directors of local and international journals.
Conclusion: Best of our knowledge, our study is the first to examine the gender distribution in geriatrics. The dominance of females in geriatrics is very important in countries where geriatrics is relatively newly established as even countries with a deep-rooted history and structure in geriatrics are trying to increase the number of female geriatricians under their new administrations.

P-420

Effect of online education on physician knowledge and confidence regarding the risk of Herpes Zoster in older adults with comorbidities

Abstract Area: Education and training

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Introduction: Herpes Zoster (HZ) incidence increases with increasing age. Potentially serious consequences of HZ highlight the importance of prevention by vaccination. Certain comorbidities, such as rheumatoid arthritis, have been found to increase the risk of HZ. We assessed whether an online independent medical education activity could improve the knowledge of primary care physicians (PCPs) and neurologists regarding comorbidities associated with an increased risk of HZ and HZ vaccine recommendations.
Methods: Educational effect was assessed using a repeated-pairs design with pre-/post-assessment. Three multiple choice questions assessed knowledge, and one question assessed confidence. Statistical tests to assess significance included the Paired samples t-test for overall average number of correct responses and confidence and the McNemar's test for individual questions and learning objectives ($P < 0.05$). Cohen's d estimated the effect size impact on number of correct responses (< 0.20 modest, 0.20–0.49 small, 0.59–0.79 moderate, $\geq$ 0.80 large). Data were collected from 1/4/2022 to 3/29/2022.
Results: From a total audience of 3608 physicians, 632 were assessment completers. Overall, there was a significant increase ($P < 0.0001$ for both) with a large impact (PCP 1.05; neurologist 0.83) in PCP and neurologist knowledge gains. Both PCPs and neurologists reported an increase in confidence (PCP 66%; neurologists 61%) with a total average confidence shift of 92% and 96%, regarding their knowledge of HZ vaccine recommendations for older adults, respectively. Furthermore, both specialties had highly significant knowledge gains concerning specific comorbidities that are associated with an increased risk of HZ.
Key conclusions: Online medical education significantly improved physician knowledge and confidence regarding comorbidities associated with an increased risk of HZ.

P-421

Significance of 2nd year medical students participating in the 48 hour Hospice Home Immersion Project, 2017–2018

Abstract Area: Education and training

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Medical education on palliative medicine and end-of-life care is generally lacking in the medical curricula. The University of New England College of Osteopathic Medicine (UNECOM) Learning by Living: 48 Hour Hospice Home Immersion Project is an immersion-based learning model whereby UNECOM 2nd year students live in an18-bed acute care hospice house to care for dying patients, provide family support, and conduct post-mortem care. This project determined if and in what ways immersion experiences were valuable in augmenting student medical end-of-life care education during AY 2017–2018. Retrospective ethnographic/autobiographic data were analyzed from the eight randomly selected student hospice immersion journals (approx. 200 pages) who participated during academic year 2017–18. Pre-fieldwork, fieldwork, post-fieldwork journals were reviewed and analyzed using manual content analysis followed by NVivo 12 + analysis. Thematic coding resulted in representative quotes, key words, and native concepts. Inter-rater reliability was established with the use of a codebook and agreed upon thematic definitions. Four key themes included: Subversion of End of life (EOL) Expectations; Character Development/Introspection; Exposure to Diverse Cultural/Spiritual Perspectives; and Skills to Bring into Future Practice. Proximity to death/dying resulted in reflections on values and priorities, and a renewed sense for compassionate patient care. Students developed skills for future practice, including competency in EOL and post-mortem care, navigating difficult, emotionally laden family dynamics, and contributing to an interprofessional staff team even in uncomfortable situations. This immersion positively affected student perspectives about death and end-of-life care; creating life-altering experiences in patient-centered-care. Students stated significant impacts to employ as a physician.

P-422

Developing a virtual course of interdisciplinary geriatric oncology for students: experience from EUniWell 'Onco-Aging' project: Smart health community for older patients with cancer and interdisciplinary interactions with medical education for future ger.

Abstract Area: Education and training

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Introduction: Onco-Aging is a joint project supported by EUniWell seed funding. The aim is to initiate a pilot program which will bridge the gap between patient needs and usual care by bringing the most urgent challenges for cancer care in advanced age to the attention of students within the fields from healthcare.
Methods: We designed an online survey and distributed in local partner universities. Collected data will be analyzed for the identification of students' perspective about the needs for curriculum activities specialized on geriatric oncology (GO). A video is created for an interactive conversation among a patient with cancer in old age, a physician and a medical student. A series of E-class videos were recorded covering the topics of purpose, content of GO, role of person-centered approaches in GO, human development, and capability approach for training in GO, potential of virtual Reality and Augmented Reality in GO training and treatment as well as GO case studies (Breast cancer, Melanoma and GI Cancer).

Results: Survey, Mini-movie, E-classes and one international workshop are the main milestones of Onco-Aging. All of them are multidisciplinary. The international workshop, in particular, gained attention and positive feedback for the high level of competence of the invited specialists but most importantly for the active involvement of representatives of NGOs (SIOG and CARG) patients/civil organizations. The latter shared updates and needs of cancer patients with advancing age. To improve awareness, general knowledge and attention, a mini movie was produced focusing on the unavoidable, important interactions between GO patient, student, and physician for management success in three different biological age scenarios independent of chronological age.
Conclusion: We are delighted that all the Onco-Aging plans could be translated into practice and hope that they will constitute a source of inspiration and engagement at the international level.

P-423

Snapshot of an internal medicine ward in Portugal. No need for geriatric medicine?

Abstract Area: Education and training

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Introduction: Even though Portugal is the 4th country with the eldest population in Europe, most doctors and medical students don't have training in geriatric medicine. Geriatric medicine is not recognized as a specialty or subspecialty in Portugal.
Methods: Observational, retrospective, longitudinal study of patients 65 or more years old admitted to an internal medicine ward of a central hospital in Portugal in 2019.
Results: In 2019 the internal medicine ward admitted 2841 patients, of which 2309 (81.3%) were 65 years old or older, and 532 (18.7%) were younger than 65. Of the elderly group, 2133 were included in the statistical analysis. The mean age was 80.98 ± 7.78 years, with octogenarians representing 46.6% of the sample size. Even though the majority lived at home (81.8%), most (54.7%) scored 5 or more in the Clinical Frailty Scale. Advancing age was significantly associated with being frail, institutionalized and dependent for activities of daily living. Patient complexity was high, with 6.14 ± 2.82 comorbidities, 7.43 ± 3.70 medications taken daily and a CIRS-G score of 14.52 ± 5.26 points. In-hospital mortality was 14.1%. In the year following hospitalization, 675 patients were readmitted, and 645 patients died.
Conclusions: Given that most patients admitted to internal medicine wards in Portugal are elderly and complex, there is an urgent need to invest in geriatric medicine training, particularly for those working in internal medicine wards.

P-424

Educational programs for healthy nutrition for the aging adygs population

Abstract Area: Education and training

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Introduction: Decreased levels of functionality and resilience are one of the common problems in geriatric practice, which is practically not solved among population of small peoples. In order to improve the indicators of resilience, an educational program has been developed for the Adygs—the indigenous people of the North Caucasus.
Methods: The program included 135 elderly and senile people (the main group of 72 people (34 men and 38 women) and the control group of 63 people (29 men and 34 women)) from 65 to 92 years old. All participants identified their nationality as Adygs. All participants were examined according to a five-stage algorithm developed by us (nutrition assessment, comprehensive geriatric assessment (CSA), bioimpedance measurement, assessment of the level of knowledge about healthy nutrition, repeated CSA). After that, all participants with disabilities were offered to complete an educational program presented in the form of online lectures and publications on the Internet (website www.docalex120.com), TikTok (@doc_alex120) and Instagram (@doc_alex_life), which are close to the life scenario with the simplest possible perception at any age. A month later, the survey algorithm was repeated with an program effectiveness analysis.
Results: In the control group, nutritional disorders were detected in 96.1 + 6.5% of cases, and in the study group − 23.6 + 2.5% ($p < 0.05$). Also, positive dynamics was obtained in increasing of resilience. 67.1 + 2.5% of the control group had a reduced level of resilience, 21.3 + 2.1% in the group of intervention ($p < 0.05$).
Key conclusions: The proposed educational on-line programs for healthy nutrition proved their effectiveness among aging adygs population with increasing of functionality and resilience.

P-425

Improving interprofessional education (IPE): evaluation of IPE in medical school and preparedness for multi-disciplinary working in UK graduates

Abstract Area: Education and training

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Introduction: In the context of an ageing population, there is increasing demand on the multidisciplinary team (MDT) to provide holistic care to elderly patients presenting with complex health and social needs. To promote effective and cohesive MDT care of patients, interprofessional teamwork and communication skills should be developed early in training. Interprofessional patient management is listed as a key requirement in the GMC Outcomes for Graduates [1]. Interprofessional education (IPE) has been identified as an

effective form of learning with the potential to encourage cultivation of such skills [2].
Methods: In a single-centre analysis of quantity and effectiveness of IPE at medical school, an anonymous online questionnaire was distributed to graduands (graduating in 2021) from the University of Oxford Medical School. Data were collected in July 2021.
Results: All respondents acknowledged the importance of effective interprofessional working, yet only 14% felt medical school had prepared them well. A key issue identified was insufficient understanding of the specific roles of MDT members. A majority of participants felt that increased IPE at medical school with more clinical team integration, longitudinal MDT placements, and structured learning with an interprofessional cohort, would help challenge this. When asked about drawbacks, students highlighted potential difficulties in finding shared learning outcomes relevant to all participants and a lack of relevance to assessment content.
Conclusion: This work has identified a need for the further expansion of IPE to improve students' understanding of MDT roles and better equip graduates for future interprofessional working.

P-426

Introduction of geriatric work methods in an Infectious Medicine Department improved patient involvement and inter-sectoral coordination during hospitalization and discharge. A Quality Improvement intervention.

Abstract Area: Education and training

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Introduction: Hospitalized co-morbid patients often present complex medical problems and need high level of interdisciplinary and inter-sectoral coordination at discharge. Comprehensive Geriatric Assessment (CGA) is a patient- and relative-centered multidisciplinary diagnostic and treatment process used to develop a coordinated plan and improve overall health in aging patients. Family conferences (FC) are used to facilitate patients and relatives' involvement (PRI) and discharge planning in the CGA. The National Danish Survey of Patient Experiences (SPE) is annually performed by the Danish Government and Danish Regions, and presents inpatients experiences at national, regional, hospital, and department level. An Infectious Medicine Department aimed to improve the five lowest scores of the 2020 SPE by 10%. These scores were related to PRI during hospitalization and to inter-sectoral coordination at discharge. A geriatric team (GT) was invited to observe usual practice, analyze needs, and organize teaching in FC, PRI, and coordination of complex discharges. Method The Model of Improvement was applied to frame the intervention from October 2020—June 2021. The GT visited twice weekly to identify possible target areas and provide educational support. FC with shared goal setting was introduced and staff were trained in coordination of complex discharges aiming to improve SPE scores of 2021 compared to 2020.
Results: 2021 SPE scores were increased by 50% (from mean 3–4.5, maximum 5). Staff experienced less calls from relatives than before introduction of FC.
Conclusion: Interdisciplinary GT support can be a resource to improve quality of discharge coordination and PRI in other medical specialties.

P-427

Teaching geriatric ultrasound in the hospital with a learning method based on problem solving

Abstract Area: Education and training

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Introduction: Ultrasound (US) is a very useful diagnostic technique in internal medicine and geriatrics for making an early and correct diagnosis in elderly patients with several and complex diseases. It is often difficult for the physicians to learn effectively ultrasonography since most of the courses are structured with many hours of theoretical teaching and with few hours of US practise. In US courses ultrasound scans are performed, in most cases, on normal people without clinical problems and diseases. In real life, however, the doctor, especially if he is a general practitioner (GP), will have the opportunity very often to visit patients over the age of 65, suffering from some chronic diseases, who will complain signs and symptoms related to chronic diseases and signs and symptoms related to the exacerbation or to unknown acute diseases. Therefore the GP will often feel the need to have an instrumental diagnostic method and skills in order to perform US personally to confirm or deny his own diagnostic hypotheses. The aim of the work is to illustrate a teaching and learning methodology for US courses based on US practise considering the signs and symptoms and the real clinical problems of elderly patients admitted to the Geriatrics ward. In addiction aim of the work is to confirm that physicians can learn geriatric ultrasound faster if they can perform personally US practise on complex elderly patients with multiple diseases and several signs and symptoms. Materials and **Methods:** In the Geriatrics ward a theoretical and practical course of ultrasound (course lasting 20 days, three hours a day) was carried out for 10 physicians using interactive methods from the first day of attendance in the ward: discussion of clinical cases of elderly patients with the teacher, evaluation of signs and symptoms and US practise on real patients with the tutors. From the first day of course the physicians, two for each tutor and ultrasound equipment, performed US examinations on elderly patients under the supervision of the tutor. They reviewed at least 8 real clinical cases every day. Patients were studied clinically and then examined with ultrasound. The main clinical cases with real health problems were: heart failure, obstructive jaundice, non-obstructive jaundice, abdominal colic, renal colic, haematuria, mass of the upper abdomen, mass of the lower abdomen, ascites, dyspnea, severe anemia, palpable superficial lymph nodes, increased abdominal volume, neck volume enlargement, fever of unknown cause, blood vomiting, severe constipation, severe diarrhea, heart rhythm disturbances, acute retention of urine, palpable breast mass, abdominal trauma, enlargement of the scrotum. The physicians learners performed every day of US course also two ultrasound scans in two elderly patients for whom no clinical results were given and without learning method based on problem solving.
Results: Each clinical case of a real patient with symptoms and with laboratory tests, radiological examinations and therapy was evaluated by the physicians learners together with the US teachers and tutors and then all patients were examined with complete ultrasound of the abdomen, chest and neck. The learners correctly identified 80% of the

diseases in all patients with ultrasound examination using together the informations of the clinical examination, the data of the laboratory tests and other diagnostic tests and also the ultrasound examination lasted the time adequate. The learners performed the ultrasound examination correctly and completely if they knew all the clinical data of the elderly patients and the ultrasound report was complete. In patients for whom no clinical informations were given, the learners performed an incomplete ultrasound examination, identified only 60% of diseases, the ultrasound report was unsatisfactory in 40% of cases and the duration of the ultrasound examination was greater than 50%.
Conclusions: Our study has shown that if ultrasound teaching learning objectives are well established based on problem solving and real clinical cases of elderly patients with several acute and chronic diseases are selected, learners physicians can perform very accurate and complete ultrasound scans and can quickly identify almost any disease if they know some clinical data and if they preliminarily perform the physical examination of the elderly patient. In conclusion, the diagnostic accuracy of the ultrasound examinations performed by learners is higher and the effectiveness of US course in greater if interactive teaching methods are preferred with an appropriate selection of patients for US practise, preferably elderly over 65 years of age, with several cilinical problems and acute and chronic diseases with multiple signs and symptoms.

P-428

Interdisciplinary training in acute geriatrics: improving staff knowledge and behavior in a specialized dementia unit

Abstract Area: Education and training

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Introduction: Demographic changes have resulted in increasing numbers of older patients admitted to hospitals with an acute medical illnesses and concomitant dementia. Such patients often present with delirium and behavioral and psychological symptoms of dementia (BPSD). To provide appropriate care for this population we created a special interdisciplinary program (SOMADEM) in an 18-bed acute geriatric unit. Interdisciplinary training is a basic component of this approach to increase the quality of care for hospitalized dementia patients. We investigated the impact on staff knowledge and behavior of an educational intervention developed for this specialized dementia unit.
Methods: All 34 members of the interdisciplinary team (nurses, nurse's aides, junior and senior physicians, physical and occupational therapists, psychologist, social worker, dietician and the cleaning lady) completed a 3-day training program comprising lectures, workshops and team-building activities centered on dementia, delirium and BPSD management. Pre and post-training questionnaires assessing knowledge and behaviors towards patients with dementia were compared using Wilcoxon's signed-rank test for Likert scales and McNemar's test for dichotomous answers.
Results: The team averaged 17 years of professional experience (5 years in SOMADEM), for 16 of the 34 members (47%) it was the first specific education program on dementia care. We observed significant improvement in attitude and confidence self-assessments post-intervention, measured by the Confidence in Dementia scale, the Approaches to Dementia questionnaire and the Approaches to Disruptive Behavior questionnaire. Similarly, knowledge of dementia, delirium and associated risk factors improved. Participants reported the training was excellent (97%), helped them learn strategies to deal with difficult behaviors (88%) and recommended it for general geriatric units (100%).
Conclusion: Interdisciplinary training improved staff knowledge, attitude and skills in acute care of dementia patients. The next step is to evaluate its impact on the length of stay, use of psychotropic medication and physical restraints and its potential application in other acute geriatric settings.

P-429

Delivering in-situ multidisciplinary simulation training on an acute care of the elderly ward: overcoming the challenges of bedspace and staffing pressures

Abstract Area: Education and training

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Introduction: Simulation training (sim) promotes learning amongst healthcare professionals (HCPs). In-situ sim takes delivery to the point of care, providing a more realistic opportunity for systems evaluation, error prevention and multidisciplinary teamworking [1–3]. Sim is routinely incorporated in medical training but features less regularly in the training of other HCPs, and is not always interprofessional. We sought to establish regular multidisciplinary in-situ sim on an acute geriatrics ward in an East London District General Hospital.
Methods: In-situ sim was delivered regularly on an acute geriatrics ward and involved two medical trainees, one nurse, one healthcare assistant and occasionally a physiotherapist. The scenario bank was adapted to overcome bedspace pressures and included a fall away from the bedside. Sessions lasted one hour, including a debrief, and were facilitated by a senior trainee and simulation fellow. Posters of key learning points were distributed to the wider MDT.
Results: 10 sessions, involving over 30 different HCPs, have been delivered to date. Prior to these sessions, 87% of doctors and 25% of nursing staff had done simulation training before. Feedback was universally positive with 100% of attendees reporting that their education would benefit from further in-situ sim. Improvements were seen in self-rated measures of clinical, communication and teamworking skills.
Conclusions: Amid ever-increasing bed and staff pressures, we have demonstrated that in-situ multidisciplinary simulation training can be delivered on an acute geriatrics ward and provides a supportive learning environment enjoyed by the MDT. Distribution of key learning points promotes shared learning amongst the wider team.
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P-430

Strategies for engaging senior citizens and their informal caregivers in health policy development: a scoping review

Abstract Area: Education and training

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Introduction: Encouraging senior citizens' participation through active engagement in the policy-making process enhances the creation of responsive policies and the provision of better services and improved health outcomes [1–3]. Nevertheless, approaches for engagement in policy development have not been explored extensively for senior citizens and informal caregivers. This review aims to address the key question: "What is known in the literature about strategies for engaging senior citizens and informal caregivers in health policy development?

Methods: As part of the European Union TRANS-SENIOR program, a scoping review was conducted using the Joanna Briggs Institute's methodology [4]. PubMed, Embase, CINAHL, Health Systems Evidence, and Health Evidence were searched and eligible studies were screened. Data were extracted from included studies and mapped to the elements of the Multidimensional Framework for Patient and Family Engagement in Health and Healthcare [5].

Results: Of 10,909 studies identified, 26 were included. Seventeen unique strategies were identified. Most studies engaged seniors/caregivers on the consultation level of the engagement continuum. None of the articles reflected participants' recommendations as being used for policy development. All strategies were used in the agenda/priority setting phase of policy development, and no factors were reported to influence policymakers to create opportunities for engagement. Participants had the opportunity to learn more about the policy issues discussed.

Key conclusions: There is a dearth in the literature on the involvement of seniors and caregivers in health policy development. Understanding engagement strategies will help guide researchers aiming to design studies to identify effective engagement strategies.

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P-431

Promoting geriatrics using comics: let's collaborate with artists!

Abstract Area: Education and training

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BackgroundAs a young medical specialty, Geriatrics remains poorly known and understood by untrained healthcare professionals. Comics are an attractive and educational way to communicate and to raise awareness of the reader about complex topics, using story telling and identification with characters. Our objective was to explain Geriatrics (when and why refer to a geriatrician/a geriatric team) to untrained healthcare professionals.

Methods: A 4-geriatricians working group chose 8 topics that geriatric teams are experts in: falls, delirium, depression, dementia, multimorbidity/polypharmacy, decision making for invasive care, nursing home entry, end of life. They determined key messages to provide to the target audience. Messages were provided to comics artists through short texts and explained during online meetings. Additionally, artists met geriatric teams on the spot. Scenarios were built through collaboration of the scriptwriter and the working group.

Results and perspectives: For each topic, a one-page comic was produced. The working group wrote a text explaining the added value of a geriatric team in each situation. Feedback from other geriatricians and representatives of the target audience was used to improve texts. Diffusion is planned as booklets and single pages through specialized press, healthcare professionals schools and professional networks. Collaboration between healthcare professionals and artists is feasible and should be encouraged to increase knowledge of specific roles and care activities, and to disseminate public health messages.

P-432

Vitality in later years—nutrition recommendation for older people to practice

Abstract Area: Education and training

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Introduction: The Finnish Nutrition Council is carrying out a project called "Vitality in later years 2021–2023" aiming to implement recently published nutrition recommendations for older people. The main objective of the project is to improve nutrition of older people by raising awareness about the significance of good nutrition in older age. The project concedes timing of service structure reform of social welfare and health care taking place in the beginning of 2023. Thus, we also aim to spread good nutritional practices and assist regions to establish and standardize protocols to prevent and treat malnutrition.
Methods: The project includes three work packages (WP). In the first WP we will carry out nutrition seminars in different regions in Finland and design an online course for professionals. The second WP includes creation of a portal for reliable nutrition information aimed at older people. The portal can be linked to municipalities' pages complemented with local nutrition-related services. In the third WP we will carry out a nutrition campaign in co-operation with non-governmental organizations targeting older people and their family members.
Results: Almost all health care districts in Finland have been willing to participate in the regional seminars. We will carry out at least 18 seminars during the project. The portal will be located within the Finnish Food Authority official pages. The campaign will take place in autumn 2023.
Key conclusions: The project is timely and important. Prevention and managing nutritional problems are cost-effective and help to maintain quality of life of older individuals.

P-433

Understanding ageing in the tales of Hans Christian Andersen

Abstract Area: Education and training

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Introduction: It is increasingly recognised that geriatricians need to develop a greater sense of how our mission must align more closely with the priorities of older people, and in particular to value the richness and significance of our gain in life span, the longevity dividend.
Method: Close reading of the 212 tales written by Hans Christian Andersen, intended for adults as well as children.
Results: Ageing and older people figure prominently in the tales by Andersen,. Common to these tales is the sense of re-evaluating the possibilities of life when the object has been apparently removed from the economy from which they were intended, and expositions provide a potent rejoinder to the failure model of ageing. the protagonists in the tales belong to an unprecedently large range of forms, not just humans but also mythical beings, plants, animals, insects and birds, and most intriguingly, inanimate objects. Common to these latter tales is the sense of re-evaluating the possibilities of life when the object has been apparently removed from the economy from which they were intended, and expositions provide a potent rejoinder to the failure model of ageing.
Conclusion: If geriatricians and trainees can allow themselves to escape from the notion of Hans Christian Andersen as purely a writer of children's tales and embrace his work as the product of a sophisticated, witty and wise modern author, they will discover a treasure trove of material to better understand the longevity dividend.

P-434

Geriatrics as a grey spot in the medical curriculum. Are we in danger of an educational frail?

Abstract Area: Education and training

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Introduction: As the World population is ageing, there is a great need of well-trained geriatricians. They should be trained according to the thoroughly thoughtful curriculum. The aim of this study was to analyse curricula from Polish medical programmes.
Methods: We requested information concerning curriculum of geriatrics from all Polish higher education institution (HEI) that offer medical programme. Later, we analysed them in terms of the number of contact-hours, planned topics, learning objectives (LO) and recommended literature. We prepared the summary of the most common topics, those which may be missing (comparing to the international recommendations) and the most popular literature positions.
Results: We received answers from 11 out of 22 HEIs. Six curricula were available online. We did not obtain detailed curriculum from 5 HEIs. Every medical programme in Poland includes courses covering topics related to geriatrics. The median number of hours is 30 (IQR 45–21.25; max 70, min 11). Students are expected to achieve LO in knowledge, less often in skills. Recommended literature positions were published between 1995 and 2021, while most of the curricula includes those published in 2016 and 2017.
Key conclusions: Geriatrics curricula vary among programmes offered by HEIs, including number of hours, topics, and literature positions. There is a need of a national-level uniform undergraduate curriculum, to minimise the differences of graduates' knowledge in geriatrics.

P-435

A review of healthcare professionals' knowledge of Parkinson's disease and its treatment in an inpatient setting

Abstract Area: Education and training

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Background: Studies have shown that patients with Parkinson's disease (PD) have a higher rate of hospitalization and longer lengths of stay than their age matched controls. Patients with PD are often on multiple time sensitive medications. This study aims to assess healthcare workers knowledge of PD, the medications used to treat it and how they should be prescribed and administered.
Methods: A convenience sample survey was distributed to health care professionals over a five-week period. This survey included multiple choice questions and open-ended short answer questions. Results were analysed on Microsoft Excel.
Results: 71 surveys were returned—34 from doctors, 23 from nurses and 14 others from pharmacists, physiotherapists and dieticians. Sinemet was the most recognised PD medication (n = 68) with only 11 participants (15%) correctly identifying all PD medications listed. 32 participants (45%) were unable to correctly identify when to administer PD medications in relation to mealtimes. 29 participants surveyed (41%) would consider inserting a nasogastric tube (NGT) for a patient who was fasting and unable to take oral medications. 12 participants (17%) did not know that Sinemet could be given via NGT.
Conclusion: Results of this survey highlight a lack of knowledge around PD and its management. This was particularly evident around timing of PD medication, and the management of patients who are fasting. Results suggest that there is a role for hospital specific PD medication with the aim of improving patient outcomes.

P-436

A comparative analysis of the Irish post-graduate Geriatric training scheme with the European post-graduate curriculum in Geriatric medicine

Abstract Area: Education and training

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BackgroundMinimum training recommendations to become a specialist geriatrician in the EU have been published. In this study we sought to evaluate the curriculum of the higher specialist training scheme in Geriatric Medicine in Ireland and examine how it compares with the knowledge recommendations from the European post-graduate curriculum in Geriatric medicine, which is endorsed by both the European Geriatric Medicine Society (EuGMS) and the European Academy of Medicine of Ageing (EAMA).
Methods: In this study we examined the content of didactic study-day lectures given over a five-year rolling period which is the minimum duration of the higher specialist training programme in Geriatric medicine in Ireland. We also examined the published Irish curriculum and compared how both the Irish curriculum and content of the study-days matches up with the 36 items that are identified as the core knowledge content in the European post-graduate curriculum.
Results: There were 24 study days delivered over a five-year time period. The Irish geriatric medicine curriculum formally outlined that 30 of the 36 knowledge areas proposed in the European curriculum should be formally covered during post-graduate geriatric training in Ireland. The European curriculum recommended formal teaching in sarcopenia, sleep disorders, tissue viability, iatrogenic care delivered disorders, sexuality in older adults and gerotechnology/e-health, none of which were referred to in the Irish curriculum. However despite this discrepancy formal teaching was delivered on 92% (n = 33) of proposed areas. Pain assessment, sleep disorders and tissue viability were areas not covered in Irish didactic study-days. 24 of 36 topics were covered at least twice.
Conclusion: There was high concordance between the content of the Irish and European post-graduate curriculum in Geriatric medicine. Benchmarking against European training standards is an opportunity to ensure that parity of education and training is achieved across the EU.

P-437

An experimental education project for consultations of older adults during the pandemic and healthcare lockdown

Abstract Area: Education and training

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Objective: To develop a mentor-supervised, interprofessional, geriatric telemedicine experiential education project in response to the COVID-19 pandemic.
Method: Medical and pharmacy students collaborated via remote consultations to address the coexistence of multimorbidity and polypharmacy in geriatric patients. In-depth interviews of students and patients as well as Likert scale-based telephonic survey were performed for a comprehensive evaluation of the project's significance.
Results: To date, 49 consultations have been conducted. Remote consultations performed by medical and pharmacy students working collaboratively were beneficial for both students, participants.
Conclusions and practice implications: This experimental education project provided students with authentic challenges while simultaneously delivering care to the older adults who are susceptible to disruption of care associated with the pandemic. Further development and expanded implementation of such approaches may be a post-pandemic practice to provide more accessible care for senior patients while incorporating interprofessional education.

P-438

An innovative Pan-European professional profile and curriculum designed for chefs working in health and social care: the Nectar project

Abstract Area: Education and training

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Introduction: Delivering adequate nutritional care for older people with complex care needs in health and social care settings requires standards, education, training and integration of different professions. Main objective of the NECTAR project is to overcome the identified mismatch between skills currently offered by chefs working in these settings and those actually demanded.
Methods: Based upon a systematic literature review, a search for best practices in Europe and a survey among projects partners, a new professional profile for chefs was developed using a co-creation approach. Furthermore, a learning outcome-oriented curriculum was created by a consultation process, with learning outcomes based on knowledge, skills, personal and transversal competences.
Results: The Curriculum presented builds on a defined Occupational Profile composed by 29 Core Competences, characterizing the chefs' profile for healthcare at EU level. It includes 70 Learning Outcomes grouped into 7 Units and is compliant with the main EU standards and tools for vocational education and training (VET) (e.g. ECVET, EQAVET, ESCO, EQF). Overall, it has been designed as general and "across-the-board" to play a reference role for any VET designer in the EU.
Conclusion: The work presented offers an innovative, EU-based and learning outcome- oriented curriculum for chefs. Due to its structure, it can be offered modular and flexible for various contexts and rules across the EU. It strengthen the role of chefs in health and social care and enables attendees of the curriculum to play a pivotal role in future Primary Food Care, targeting broad population segments for healthy nutrition.

P-440

End-of-life cares and guidelines for withholding and withdrawal of life-sustaining treatments in long-term care facility: an assessment of professional practices

Abstract Area: Ethics and end-of-life care

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Introduction: Half of patients admitted in long-term care (LTC) facilities will die in the following year. Moreover, most of them is no longer in capacity to write advance directives. Thus, we did an assessment of professional practices in the aim of improving palliative care quality in our LTC facility by implementing guidelines for withholding and withdrawal of life-sustaining treatments (WWLST).
Methods: We conducted 2 retrospective clinical audits in 2018 and 2021 with implementation of a practice improvement plan in 2019 based on the establishment of guidelines for WWLST and care protocols.
Results: We observed that 31.58% of patients benefited of a WWLST in 2018 versus 72.73% in 2021 ($p < 0.001$). Moreover, cessation of treatment was effective in 27.63% in 2018 versus 59.09% in 2021 ($p < 0.001$) and transfer to Emergency Room (ER) or medicine department decreased from 17.11% in 2018 to 3.03% in 2021 ($p = 0.003$).
Key conclusion: The increase of redaction of WWLST in 2021 brought our LTC facility in the upper part of the average of literature data, which are encouraging **Results:** Moreover, it seems to be correlated to tangible improvement of palliative care quality (cessation of treatment, decrease of transfers in ER or medicine department). Caregivers and patients' families seem to give positive feedbacks. It would be interesting to make another study on these feedbacks. LTC facilities will receive more and more residents with end-of-life cares. It is crucial to sensitize caregivers and improve palliative care quality in LTC facilities, particularly using WWLST.

P-441

Not all fallen leaves are destined for roots——the preferred place of death and dying among Chinese older adults

Abstract Area: Ethics and end-of-life care

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Introduction: Many traditional Chinese cultures emphasize home death because "fallen leaves should return to the roots". However, in big cities with abundant medical resources, more people died in hospitals compared in rural areas. In this study, we aimed to investigate the preferred place of death and dying among older adults who have access to multiple choices.
Methods**:** A secondary analysis of a cohort study in a continued care retirement community in Beijing, China. Residents who moved into the community in 2018 were recruited consecutively and received comprehensive geriatric assessment annually. Participants were included in the analysis if they completed a survey of preferred places of death and dying and personal need for medical services during the 2019–2020 follow-up. Multivariable logistic regression investigated factors associated with a preference for hospital death.
Results: 174 participants were included in the analysis (Mean/SD age = 85.2 ± 4.7; 70 male). Most participants (146, 83.9%) had a college degree or above. More people (99, 56.9%) preferred to die in a hospital than at home (26, 14.9%). Some (49, 28.2%) said the place didn't matter. The preference to die in a hospital was not associated with participants' age, gender, education, Charlson Comorbidity Index, activities of daily living, or the current need for medical services ($P > 0.05$).
Conclusions: Older Chinese adults do not necessarily prefer to die at home when having access to multiple choices. Individual needs

should be discussed rather than assumed. The role of medicalization of death should be investigated in future.

P-442

Rethink about gastrostomy in older adults: perspective from Japan using the national data

Abstract Area: Ethics and end-of-life care

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Introduction: Since the previous studies showed that gastrostomy might not be beneficial for frail older adults, the rate of gastrostomy decreased in Europe. Similarly, the rate has markedly decreased in Japan after 2011. The recent trend after 2016 is yet to be analyzed, thus, the study aimed to evaluate temporal trends in gastrostomy (mostly percutaneous endoscopic gastrostomy (PEG)) in older adults in Japan in more recent years.
Methods**:** We extracted data on the numbers of gastrostomy, using the national aggregated open data (National database (NDB)) from 2014 to 2019. We estimated the number of gastrostomy performed in 100,000 individuals (in total and by sex) according to age group.
Results: A decreasing trend in the total number of gastrostomy was observed in older adults from 57,103 in 2014 to 47,228 in 2016, but became almost stable thereafter (47,944 in 2019). The age group-stratified numbers of gastrostomy per 100,000 individuals decreased by -33.9% ($\geq$ 90 years group) to $-$ 6.1% (65–69 years group) from 2014 to 2019.
Key conclusions: The study showed that the total number of gastrostomy remained almost stable after 2016 despite population aging, suggesting that the avoidance of gastrostomy in frail or disabled older adults, especially for those aged $\geq$ 80 years. Reduction of medical fees as well as societal change towards gastrostomy might explain the decrease. Although rapid population aging may delay solving the problems surrounding older adults, clinicians must continue their efforts to improve the quality of care.

P-443

Clinical practice case of palliative care: practice of multidisciplinary collaboration and case management model in palliative care in general hospital

Abstract Area: Ethics and end-of-life care

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Case reportA 68-year-old man was diagnosed with lung adenocarcinoma for 4 years. The main clinical manifestations were cough, dyspnea, and hyperhidrosis for 1 month. After admission, the doctor in charge communicated with the patient to clarify the treatment goal is to relieve pain and control symptoms. Medical social worker visited him to understand his wishes (back to hometown), built a bridge for in-depth communication between the patient and his daughter (afraid to communicate with the patient), completed psycho-social spiritual assessment. Based on the above assessment, we organized a multi-disciplinary team (MDT) of palliative care consultation and formulate care plans for this patient, including the application of Morphine and Lorazepam to relieve dyspnea, traditional Chinese medicine to relieve hypersweating and constipation, and aromatherapy. The patient's symptoms improved significantly. He was discharged and returned to his hometown accompanied by her daughter. He was followed up with an online outpatient of palliative care and received in-patient support from his hometown hospital. He died peacefully 2 months later.
Discussion: MDT is a clinical treatment model in which multiple clinical disciplines formulate optimal treatment plans for diseases through interdisciplinary comprehensive discussion. The palliative care MDT consists of doctors, nurses, social workers and religious personnel to provide holistic care. Medical social workers in hospice care teams use case management skill to deal with the psychosocial problems of patients and their families, serving as a link between doctors and patients. Therefore, case management combined with multidisciplinary team work model is an important practical method to develop palliative care.

P-444

A case of self neglected elder female, what extent to force help?

Abstract Area: Ethics and end-of-life care

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Most people who do not seek treatment—most probably do not want treatment, what is our role in this situation?A 74-year-old widower woman, Holocaust survivor, lives alone. Her sister, following a telephone conversation with her about a story of a fall, ordered an ambulance for her, which brought her to a general hospital after they broke the door of her house. The ambulance team noted that the house was cluttered and contained piles of rotting food, peeled walls, mold and even cockroaches etc. At the emergency department a deep infected wound in the lower back that involves the bone structures was diagnosed. She was admitted to the department of internal medicine, but refused inquiries and treatments. The first psychiatric check found her mentally competent. Later however, because of Impairment of judgment and insight, in addition to paranoid personality disorder, a Judge ordered her to be transferred to our center against her will to continue medical treatment. For six months our teams learned to deal with refusal to treatments and even aggression against them, but finally after complete wound healing, she was transferred to a long term care facility. I will discuss the main topics: Types of neglect, The size of the problem and health impact, Common signs of self-neglect (signs to look for), Identification, Ways to deal with itKnowing the established risk factors for self-neglect, I would like to offer a vision for how healthcare providers can take when a reasonable suspicion of elder self-neglect arises, intervene, and engage other community partners to develop and improve clinical

interventions, allowing them to help mitigate the negative health impacts of elder self-neglect. Spot it and stop it, or at least try!

P-445

Coordination of palliative care in two EU countries… is it possible?

Abstract Area: Ethics and end-of-life care

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Introduction: Harmonisation of practices in medical care remains a challenge for European Union. Mentality differences between populations must be known, especially in terms of ideology. Palliative care remains a speciality where homogenisation is difficult.
Methods: May 2022, a home hospitalization network contacted us to facilitate the last travel in Poland of a patient with a metastatic neoplastic disease in sub-occlusion to see his young child and settle his family affairs. He is aware of his condition and palliative care principles. We contacted the biggest centre near his home… and the difficulties multiplied: Palliative care is different… in case of decompensation, the patient would be re-operated…We cannot predict where the patient will be admitted if decompensation. The patient wants to die in France, Polish physicians are sceptical about emergency transport given the risk of death in transit. Lack of ambulatory palliative care, access to private nurse, and obtaining medication in the continuum of care were also problems.
Results: Making contact and providing information about context in Poland only took half a day using unofficial contacts. The patient's ex-wife was essential (organisation with the private nurse, "on-call" in case of emergency to contact the medical staff). The patient bought a camper to stay in his environment. We supplied the patient with medication and will remain at his disposal 24/7. The journey is currently being organised.
Conclusions: Despite many European cooperation, practices are not standardised. Public health policies are destined to change. This leaves a huge field of work for young geriatricians.

P-446

COVID-19 patient and palliative care: decision-making and relationship difficulties with the family

Abstract Area: Ethics and end-of-life care

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Introduction: Tensions during the COVID-19 crisis (particularly in the geriatric population) posed the problem of limiting care for older, frail and polypathological patients. The unpredictable evolution of the COVID-19 infection made decision making difficult, especially for physicians not familiar with geriatric practice, which often resulted in difficult communication with families.
Methods: Mrs L, 91 years, polypathological, suffering from hippocampal advanced neurocognitive disorders, loss of autonomy transferred from the emergency department for COVID-19 infection, desaturation at 88% on a pulmonary embolism. After 7 days, the patient still in poor general condition, congested, difficult to swallow per os, still on 2L oxygen, was transferred to palliative care. Despite the patient's condition, the unfavourable evolution and her transfer to palliative care, no discussion on the limitation of care and possible palliative management if decompensation is mentioned in the patient's file.
Results: Mrs L, arrived on a Friday evening, had a precarious condition. Despite curative management with monitoring of the biological balance, the patient's condition remained stationary and she finally died on Sunday morning. During these few hours of hospitalisation in palliative care, her family was very demanding, not seeming to understand the seriousness of her condition, and the possibility of limiting care to avoid unreasonable obstinacy and relentless treatment.
Conclusions: This case study of a polypathological COVID + patient demonstrates the importance of anticipating what to do in case of aggravation and decompensation. Communication with relatives seems to us to be essential for optimal management.

P-447

SPICT as a predictive tool for palliative care needs of older patients admitted to the emergency department: a bicentric cohort study in Belgium

Abstract Area: Ethics and end-of-life care

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Introduction: Emergency clinicians are increasingly encountering older patients with multi-morbidities, including advanced chronic diseases. The decision to pursue life-prolonging treatments or to initiate a palliative care approach is a challenge in the emergency department (ED). The Supportive and Palliative Care Indicators Tool (SPICT) could support physicians to identify older patients at risk of deteriorating and timely address palliative care needs, but its diagnostic characteristics have not yet been tested in ED for older patients.
Methods: Prospective bicentric cohort study of older patients ($\geq$ 75 years) admitted to two EDs in Belgium in 2020. SPICT variables were collected along with socio-demographic, medical and functional data. The palliative profile was defined as a positive SPICT assessment. Survival, symptoms and health degradation were followed at 12 months by phone. Main outcome measures were sensitivity, specificity and likelihoods ratios (LR); cox regression; survival analysis, using the Kaplan Meier method; and ordinal regression.
Results: Out of 352 patients (mean age 83 $\pm$ 5.5 years, 43% male), 167 (47%) had a positive SPICT profile. At one-year follow-up, 81 patients had died (23%). Palliative profile was correlated with 1-year health degradation (OR 4.9; $p < 0.001$). SPICT sensitivity and specificity to predict health degradation were 0.65 (95% CI, 0.57–0.73) and 0.72 (95% CI, 0.64–0.80) respectively, with a negative LR of 0.48 (95% CI, 0.38–0.60) and a positive LR of 2.37 (1.78–3.16).
Key conclusions: Although SPICT diagnostic characteristics showed moderate results, SPICT identified older patients at higher risk of health degradation for whom ED clinicians may reassess the care's intensity and palliative care needs.

P-448

More older persons died at their place of preference after implementation of a transmural palliative care pathway: a before-after study

Abstract Area: Ethics and end-of-life care

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Objectives: To improve transmural palliative care for older adults acutely admitted to hospital, the PalliSupport intervention, comprising an educational programme and transmural palliative care pathway, was developed. With this study, we evaluate its effects on patient-related outcomes and transmural collaboration.
Methods: We conducted a before-after study, in which we compared 1) unplanned hospital admission and death at place of preference and 2) transmural collaboration before implementation, up to six months, and six to 18 months after implementation. Data from palliative care team consultations were collected between January 2017 and March 2020 in a teaching hospital in the Netherlands.
Results: The palliative care team held 752 first-time consultations. The pathway had no statistically significant effect on unplanned hospitalization but associated positively with death at place of preference more than six months after implementation (during/short-term OR 1.48; 95% CI: 0.62–3.56; p-value: 0.38, long-term OR 2.83; 95% CI: 1.39–5.78; p-value: 0.004). Effects on performance of the pathway were found up to six months after implementation, but not later.
Conclusions: implementation of the pathway did not result in improvement of all outcomes. However, implementation of the pathway promoted a hospital-based approach that helped in facilitating death at place of preference. To prevent unplanned hospital admissions, a more timely and more transmural approach is needed.

P-449

Multiple cerebral meningiomatosis: a case report

Abstract Area: Ethics and end-of-life care

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Introduction: sporadic, radioinduced or familial multiple meningiomatosis (MM) is defined as the presence of 2 or more separate synchronous lesions [1,2] and occurs in 10% of patients with meningioma. [1,2,3,4,5,6]
Method: We present the case of a 61-year-old male admitted to the Palliative Care Unit (PCU) of our hospital, with atypical MM type II of 20 years of evolution, operated on 6 occasions, with adjuvant radiotherapy (RT) in 2002 and radiosurgery (stereotactic RT) in 2018 due to recurrence and appearance of new lesions and placement of ventriculoperitoneal shunt valve (VDP) in 2019. As repercussions, he presented with established tetraparesis without dysphagia, limited but understandable speech, seizures, spasticity and insomnia. He was admitted for fluctuations in the level of consciousness, increased dysphagia and mixed confusional disorder with no response to valve pressure readjustment. During the admission, the patient presented neurological worsening (comic seizures and cerebral oedema refractory to treatment), dying in 18 days due to a nosocomial pneumonic episode.
Results: MM is usually an incidental diagnosis as it behaves asymptomatically. [1,3,4,5] With survivals of 5–10 years [5, 7], a decades-long evolution or the need for PCU admission for symptomatic control is uncommon.
Conclusion: the management of MM represents a unique challenge for Neurosurgical and Palliative Care Services. Research in genetics, radiodiagnostics and systemic therapies allow the design of promising clinical trials. [2,5,8].

P-450

Mapping challenges and strengths in inpatient end of life care

Abstract Area: Ethics and end-of-life care

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Introduction: Death is one of the most challenging medical conditions, experienced by the dying person, his family, and the medical teams. It poses various challenges (physical symptoms, mental and spiritual difficulties) [1]. In developed countries, many deaths occur in hospitals[2]. The quality of care during the dying process is inconsistent and depends on the attitudes and medical and communication skills of the healthcare providers. In order to improve this multidimensional event, identification of challenging domains is required [3].
Methods: Data was collected from 3 groups 1) Patients identified to be at high risk of death during admission, 2) Family members of deceased patients (interviewed 3 months following the patient's death) 3) staff members. The study took place in internal, Acute geriatric, general surgery, Oncology, and ICU wards.
Results: Patients and families interviews are currently underway (pending data). 81 staff members replied to the questionnaire. 57% physicians, 38% nurses, and 5% paramedical. Quality of care for pain, nausea, shortness of breath, and constipation was rated as good or excellent. Quality of care for fatigue, anorexia, dry mouth, and patient and family emotional distress were rated as suboptimal. Communication between the staff and patients and families was viewed as positive. 66% of the participants found the overall end-of-life care as good or excellent.
Conclusions: While the overall rating of end-of-life care by healthcare personnel was mostly positive, various physical symptoms and emotional distress were rated as suboptimal. These results call for targeted interventions to improve end-of-life care in a general hospital.
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P-451

End of life in acute geriatric care

Abstract Area: Ethics and end-of-life care

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Introduction: The growth in life expectancy, added the chronicity of diseases and the progressive aging supposes an increase in the vulnerability to suffering illness and evolving towards death. Elderly patients at the end-of-life situation suffers more complications, risk of dying with poor symptoms control, long agony with a hardest and painful transition than in cancer patients. It is necessary an adequate and early assessment in the old patients with multimorbidity's.
Methods: We analyzed from the worst health outcome, mortality, if, patients admitted to Acute Geriatric Care have received an adequate Planning Counsel and Palliative Care approach, proportional to the degree of advanced disease. Observational, cross-sectional study, descriptive retrospective study carried out in patients died, between October 1, 2021 and December 31, 2021. Data collected from the CGA: demographic data (age, sex, place of residence), clinical data collected, readmissions, medium stay, main admission diagnosis, (dementia, cancer, organ failure and multimorbidity), Charlson index adjusted for age, drugs, cognitive assessment, Barthel Index, NECPAL 4.0.2021©1, Frágil-VIG index(severe frailty > 0.6)2.
Results: This present study included 40 patients (mean age: 89.3 years (SD 3.9), 57.5% men), 60% readmissions n the last three month; severe functional impairment (BI < 20) in32 cases (80%), cognitive impairment in 32 cases (80%), comorbidities: 5.45 (Charlson index of 11.05 (SD $-$ 2.96); mean drug: 8.28 (SD: 2.9). Mean hospital stay: 20.20 days (SD $=$ 13.5). All the cases were NECPAL positive; frail-VIG index: 0.81 (SD $=$ 0.1).
Key conclusions: A good control of symptoms in advanced stage of non-oncological diseases, requires early intervention and monitoring. 1 https://segurospaliativos.info/herramienta-necpal-4-0-estimar-necesidades-paliativas-y-pronostico. 2-https://es.c3rg.com/index-fragil-vig

P-452

Experiences with acute hospitalization of older adults with palliative care needs and their informal caregivers: a qualitative study

Abstract Area: Ethics and end-of-life care

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Introduction: Acute hospitalizations in the last phase of life of older adults are common. The prevention of acute hospitalizations is often considered to be an indicator of high quality of palliative care. However the extent to which older adults perceive these hospitalizations as unwanted and preventable is unknown. Therefor the aim of this study is to provide more insight into experiences with unplanned hospitalizations from the perspective of older adults with palliative care needs and their informal caregivers.
Methods: We conducted a qualitative study trough semi-structured interviews. We included adults (aged $\geq$ 65 years) who [1]experienced an unplanned hospital admission and (2) received specialist palliative care or were marked as in need of palliative care, and their informal caregivers (aged $\geq$ 18 years). Data were recorded, transcribed and analysed using thematic analysis.
Results: We held 7 interviews with 7 patients and 7 informal caregivers/relatives. The following themes emerged: [1]anticipation to symptoms, (2) expertise care, and (3) improving health and quality of life.
Key conclusions: While most participants noted symptoms in the days or weeks before hospitalization, there was no anticipation to prevent this. All participants preferred to stay at home, but did not regret going to hospital, nor believed this could be prevented. Benefits of hospital care were improved quality of life and getting better. Older adults and informal caregivers should be informed about possible symptoms, treatment options at home, and ways to better anticipate to unplanned situations.

P-453

Are emergency care plans filled out ReSPECTfully? An audit of nottingham care home residents ReSPECT forms

Abstract Area: Ethics and end-of-life care

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Introduction: Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) forms document recommendations about care for a person in a future emergency. Admission to a care home should prompt a ReSPECT discussion. All new care home residents in Nottingham city are reviewed by a member of the care homes team who check if a RESPECT form has been discussed.
Methods: 62 ReSPECT forms were reviewed by 4 auditors assessing for completeness against guidance published on the ReSPECT website. Due to the subjectivity in assessing free-text responses, each form was audited twice and discrepancies resolved by group consensus.
Results: Overall, 60% of forms were deemed to be inadequately or poorly completed. The completeness of individual sections varied significantly. Patient details were documented in 100% of forms whereas patient wishes were only documented in 15%. Documentation of capacity was completed on 94%, although the actual Mental Capacity Act assessment was only completed in 60%. Clear clinical guidance for care was lacking in a significant proportion, with 47% audited as partially or incomplete.
Key conclusions: This audit demonstrates that ReSPECT forms are not consistently completed to a high standard. A key issue noted by

the auditors was the lack of consensus regarding the free-text description on clinical guidance for care. Previous studies have demonstrated that there are conflicting ideas about the purpose of a ReSPECT form [1,2]. Further work is needed to establish best practise when completing the ReSPECT form considering the diverse environments and patients these forms are used for.

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P-454

Occupational therapy and physiotherapy interventions in palliative care: a cross-sectional study of patient-reported needs

Abstract Area: Ethics and end-of-life care

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Introduction: An interdisciplinary team approach to patients in specialised palliative care is recommended; however, the composition of the professionals tends to vary, and the roles of physiotherapists and occupational therapists may be underestimated. We aimed to investigate patient-reported unmet needs, which potentially could benefit from physiotherapy and occupational therapy interventions in a specialised palliative care team.

Methods: Adult patients with chronic advanced diseases referred to the Specialised Palliative Care Team at Copenhagen University Hospital, Rigshospitalet were enrolled in the study. The Three-Levels-of-Needs Questionnaire was used as primary outcome to assess symptom/problem intensity, symptom/problem burden and felt needs for 12 commonly reported symptoms/problems for patients referred to a specialised palliative care team. Furthermore, participants' level of distress, fatigue and physical activity, symptoms of anxiety and depression, and barriers towards the rehabilitation programme were registered with other measures.

Results: In total, 43 of 67 (64%) patients participated. The majority of participants reported severe symptoms/problems concerning fatigue (81%), impaired physical activities (77%), carrying out work and daily activities (77%), pain (72%), and worries (58%). Furthermore, need for help was expressed concerning physical activities (79%), work and daily activities (77%), fatigue (70%), pain (65%), concentration (58%) and worries (51%). On average the patients characterised 6 (out of 12) symptoms/problems as severe.

Key conclusions: Patients referred to a specialised palliative care team reported extensive unmet needs concerning physical activities, work and daily activities, fatigue, pain, concentration and worries. Unmet needs that potentially could be alleviated by physiotherapists or occupational therapists implemented in the interdisciplinary team.

P-455

Descriptive study of long term care patients in Qatar

Abstract Area: Ethics and end-of-life care

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Introduction: Long term care (LTC) in Qatar is provided through Hamad Medical Corporation. We describe the clinical profile of the inpatient LTC patients at Rumailah hospital, and the uptake of advanced care planning among them.

Methods: A total of 140 records of patients currently admitted to the main long term inpatient hospital were reviewed to get relevant clinical and demographic information. Rumailah hospital houses mostly fully dependent patients.

Results: Among the patients included in the current study, 19.6% were $\geq$ 75 years, 62.3% men, 37% Qatari nationals, 21.0% had anoxic brain injury as primary diagnosis, 25.6% were ventilator-dependent and 53.6% had a Glasgow Coma Scale (GCS) score 8 or below. Full code status was assigned to 62.3% of patients whereas 37.4% of patients were DNAR (do not attempt resuscitation), as a medical decision or after discussion with family. Among full code status patients, 19.8% were assigned this status after discussion based on family preferences whereas 80.2% were assigned full code status as the default option. The following factors were predictors of choosing full code status: gender (69.8% in men vs. 50.0% in women, $p = 0.02$), nationality (76.5% in Qatari vs. 54.0% non-Qatari, $p = 0.009$), GCS score > 8 (78.13% GCS > 8 vs. 48.7% GCS ≤ 8, $p = 0.0004$).

Key conclusions: Our data show that in this group of patients with severe brain damage, advance care planning discussion need to be strengthened, along with better education of patients and families regarding prognosis.

P-456

Differentiation of palliative care phases of nursing home clients—introduction of a new questionnaire

Abstract Area: Ethics and end-of-life care

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Introduction: Palliative care in nursing homes has irreplaceable role, but not all clients need it. 80% of clients want to die in nursing homes, but 80% of them die in hospital. We searched for tool to help determine which clients are suitable for palliative care and to distinguish phases of palliative care (compensated disease, irreversible progressive disease, terminal phase).

Patients and methods: We created questionnaire distinguishing phases of palliative care, adapted to nursing home clients. Questionnaire consists of 3 groups of indicators with different significance. As pilot project, we tested questionnaire in Dvur Kralove nursing home. We examined all 83 clients, 5 clients died during project.

Results: Using questionnaire, we distinguished 8 clients in the 3rd phase (3 clients died), 19 clients in the 2nd phase (2 clients died), 56 clients in the 1st phase or frail (it was not possible to distinguish clients in phase of compensated disease and frail seniors).

Key conclusion: Differentiation of palliative care phases has key role in approach to nursing home clients. In the first phase of palliative care, nursing home staff talk to clients in general to find out their future wishes and preferences. In the 2nd phase, general practicioner talk to clients about their current preferences, limitation of care in event of further deterioration, with geriatrician adjust medication and re-evaluate nursing plan. For clients in the 3rd phase, general practitioner with paliatr, prepares palliative care planning focused on maximum client comfort.

P-457

Meaning and experience of dignity in advanced respiratory disease: a qualitative study

Abstract Area: Ethics and end-of-life care

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Introduction: Human dignity has an essential relational component that may be translated into the valorising, and promotion of freedom, individuality, autonomy, and respect, as well as the development of training and positive coping in vulnerable situations [1]. Severe COPD presents itself as a threat to physical and social existence, amputating or redefining the roles we assume as socially integrated individuals, leading to a heavy (de)construction of the everyday world [2]. Although the significance of dignity has been established, dignity-conserving care in advanced COPD is constrained by the ambiguous construct of dignity. Therefore, our aim was to explore the meanings and experiences of dignity among severe COPD patients.
Methods: A sample of convenience was chosen, and patients ($n = 20$) were recruited from one hospital centre in Portugal. Using a narrative approach each advanced-stage COPD patient completed an in-depth qualitative semi-structured interview. Thematic analysis of the data was performed using WebQDA software.
Results: Three broad themes were generated from the analysis: (a) concepts of dignity, (2) barriers of dignity and (3) sources/strategies that promote dignity. The findings highlight that sense of dignity is related to various interlinked factors, such as independence, physical symptoms, communication, and attitudes.
Conclusion: In sum, several aspects connected to the illness itself, personal attitude and behaviour, and the social environment all have an impact on COPD patients' sense of dignity. Understanding dignity from the palliative care perspective may allow healthcare practitioners to develop strategies to better foster dignity in the terminally ill.

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P-458

Falls assessment and prevention in the health and aging unit (HAU) in a Large Central London Teaching Hospital

Abstract Area: Falls and fractures

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Introduction: Falls are a common in the ageing population, with 30% of over 65 s and 50% of over 80 s suffering with at least one fall a year. NICE has produced guidelines advising on the multifactorial assessment that should be carried out in patients presenting to hospital who have had a fall in the community. We aimed to evaluate how well the HAU department at King's College Hospital was meeting the NICE guidelines and identify specific areas for improvement.
Method: A retrospective review of 80 inpatients admitted on a randomly chosen week into the HAU at King's College Hospital. Clinical notes were reviewed for evidence of eight specific assessments and four interventions. An electronic proforma was created and posters were displayed in key clinical areas. Staff were surveyed for perceived barriers to the completion of the assessments and interdepartmental education was provided to overcome these. We then re-audited our performance following our interventions and tested for statistical significance change using a chi square test.
Results: Following our interventions, we demonstrated a statistically significant improvement in the percentage of patients receiving the full multifactorial risk assessment, particularly an increase in visual assessment (29–36%) and FRAX score calculation (21–34%)
Conclusion: In HAU at KCH, falls assessment are generally carried out thoroughly. There were identifiable assessments that were repeatedly not performed. However following interdepartmental discussions and teaching we demonstrated an improvement in our performance.

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Pain due to vertebral fracture

Abstract Area: Falls and fractures

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Background and aims: Clinical evaluation of a patient with pain due to vertebral fracture.
Method: Review of the care process. A 93-year-old female patient, with a history of arterial hypertension, chronic low back pain, who had been treated with dexketoprofen 25 mg/24 h and tramadol 50 mg/8 h, reported progressive low back pain that had intensified in recent days, without previous trauma. Examination, assisted gait, no apophysalgia, generalized paravertebral contracture, preserved sensitivity. X-ray of the spine, fracture with vertebral crushing of vertebra 11 dorsal and 2 lumbar. Descarthrosis and multilevel discopathy.

Result: Low back pain due to vertebral fracture. Fentanyl 50 mg/72 h is prescribed. Local heat, normal life without effort, control of the general condition, urgent evaluation by traumatology is requested. The warning signs are explained, if you present them you should go to the emergency room.
Conclusions: We must be attentive to the risk factors associated with fragility fractures, such as age, having had a previous fragility fracture, family history (of osteoporosis or fragility fractures), significant weight loss or treatment with corticosteroids. chronic form. Also being a woman, early menopause. It is very important, as always, to perform a good history and physical examination, since nutritional deficiencies, low physical activity of the patient or vertebral collapse and hyperkyphosis characteristic of vertebral collapse due to bone fragility may be suspected. The doctor, assessing these risk factors, may suspect osteoporosis or a high risk of fragility fracture, and may then request a densitometry or calculate a FRAX in the consultation itself.

P-460

Protective or harmful? A qualitative exploration of older people's perceptions of worries about falling

Abstract Area: Falls and fractures

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Background: Worries about falling are common in older people. It has been suggested that these worries can reduce balance safety by acting as a distracting dual-task. However, it is also possible that worries may serve a protective purpose. The present work adopted a qualitative approach to conduct an in-depth exploration of older people's experiences of worries about falling.
Methods: Semi-structured interviews were conducted with 17 community-dwelling older people (mean age = 79 years; males = 5/17) who reported experiencing worries about falling. Reflexive thematic analysis was used to analyse the data.
Results: Experiencing a fall—or otherwise recognising one's balance limitations—brought the physical realities of participants' ageing bodies to the forefront of their awareness. This led to the recognition of their susceptibility for an injurious fall, which triggered worries about falling in situations that threatened their balance. When preventing the subject of their worries (i.e. an injurious fall) was perceived to be within the individual's locus of control, worries led to protective adaptations to behaviour. In contrast, when the subject of their worries was perceived to be outside their control, worries triggered feelings of panic—leading to unhelpful changes in behaviour.
Conclusion: These findings provide novel insight into the development and consequences of worries about falling in older people. They highlight the importance of considering an individual's perception of control before deciding to clinically intervene to reduce worries about falling.

P-461

The role of hip fracture in trajectories of depressive symptoms among older adults: analysis from the english longitudinal study of ageing

Abstract Area: Falls and fractures

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Aims: This study aimed to determine trajectories of depressive symptoms among older adults in England, overall and for those after hip fracture, and identify characteristics defining trajectory membership.
Methods: Analysis of adults aged 60 years or more ($n = 7050$), including a hip fracture subgroup ($n = 384$), from the English Longitudinal Study of Ageing. Latent class growth mixture modelling was completed. Depressive symptom prevalence was estimated at baseline. Chi-squared tests were completed to compare baseline characteristics across trajectories.
Results: Three trajectory groups were identified overall and for those with hip fracture: no-, mild-, and moderate-severe-symptoms. The moderate-severe group comprised 13.7% and 7% of participants for overall and hip fracture populations respectively. Overall, the proportion of participants with depressive symptoms were 0.4%, 12.4% and 65.4% for no-, mild-, and moderate-severe-symptom groups, respectively. For the hip fracture subgroup, these proportions were 0.7%, 28.8%, and 85.2%. Depressive symptoms were stable over time, with a weak trend towards increasing severity for the moderate-severe group. Individuals with moderate-severe trajectories were older, more likely to be female, live alone and had worse health outcomes ($p < 0.001$).
Conclusions: Older adults, and those after hip fracture, follow one of three trajectories of depressive symptoms which are broadly stable over time. Depressive symptoms' prevalence was lower for those with hip fracture however, when present, the symptoms were more severe than the overall population. Results suggest a role of factors including age, gender, and marital status in depressive symptoms trajectories.

P-462

Giant bladder stone triggering falls

Abstract Area: Falls and fractures

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Introduction: Falls represent a major public health problem among older persons because they are associated with significant morbidity [1, 2].
Case report: A 71-year-old male, arrived at the emergency department after falling from height with subsequent limitation of mobility,

intense pain and external rotation of the left lower limb. For the last 2 years dependent for basic activities of diaries, presence of 4 falls from height, which has conferred periods of sadness and emotional lability. Blood tests at admission shows a normochromic normocytic anemia, a glomerular filtration rate of 6 ml per minute, hyperuricemia, hyperphosphatemia and hyperkalemia. Venous blood gases with severe metabolic acidosis, as well as a pathological urinalysis. Acute renal replacement therapy was initiated with subsequent clinical and electrolyte improvement. The radiography shows a radiopacity in the pelvic area of 9 cm (cm) in maximum diameter, as well as a transcervical left hip fracture. Open cystolithotomy, drainage of bladder abscess and cystorraphy was performed; lithiasis with a maximum diameter of 9 cm and a weight of 149.2 g was extracted. Analysis of its composition revealed that it was made up of uric acid and calcium oxalate. After surgical intervention and significant clinical improvement, he was discharged. Currently the patient is asymptomatic, with improvement of its functionality and stable emotional state.

Conclusions: In fragile and individuals with high comorbidities, falls are most often of multifactorial etiology. It is mandatory to perform complete geriatric assessment to improve quality of life and make appropriate interventions.

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P-463

CNN-based evaluation of bone density improves diagnostic performance to detect osteopenia and osteoporosis in patients with non-contrast chest CT examinations

Abstract Area: Falls and fractures

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Introduction: As osteoporosis is still underdiagnosed by clinicians and radiologists, the aim of the present study was to assess the performance of an Artificial intelligence (AI)-based Convolutional Neuronal Network (CNN)-Algorithm for the detection of low bone density on routine non-contrast chest CT in comparison to clinical reports using DEXA scans as reference.

Methods: This retrospective cross-sectional study included patients who underwent non-contrast chest CT and DEXA between April 2018 and June 2018 ($n = 109$, 19 men, mean age: 67.7 years). CT studies were evaluated for thoracic vertebral bone pathologies using a CNN-Algorithm, which calculates the attenuation profile of the spine. The content of the radiological reports was evaluated for the description of osteoporosis or osteopenia. DEXA was used as the reference standard. To estimate correlation the Spearman test was used and the comparison of the different groups was performed using the Wilcoxon rank sum test. Diagnostic was evaluated by performing a receiver operating characteristic curve analysis.

Results: The DEXA examination revealed normal bone density in 42 patients, while 49 patients had osteopenia and 7 osteoporosis. There was a moderate correlation between the mean CNN-based attenuation of the thoracic spine and the bone density measured on the DEXA in the hip ($r = 0.51$, $p < 0.001$) and lumbar spine ($r = 0.34$, $p = 0.01$). The mean attenuation was significantly higher in patients with normal bone density (172 ± 44.5 HU) compared to those with osteopenia or osteoporosis (125.2 ± 33.8 HU), ($p < 0.0001$). Diagnostic performance in distinguishing normal from abnormal bone density was higher using the CNN-based vertebral attenuation (accuracy 0.75, sensitivity: 0.93, specificity: 0.61) compared to clinical reports (accuracy 0.51, sensitivity: 0.14, specificity: 0.53).

Conclusion: CNN-based evaluation of bone density may provide additional value over standard clinical reports for the detection of osteopenia and osteoporosis in patients undergoing routine non-contrast chest CT scans. This additional value could improve identification of fracture risk and subsequent treatment.

P-464

Improving the diagnosis and treatment of osteoporosis in a community falls service

Abstract Area: Falls and fractures

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The fracture liaison service database predicts nationally there are over 90,000 individuals who should be on anti-osteoporosis therapies but are not receiving it, resulting in thousands of avoidable admissions for fractures and long-term loss of independence. Prior to the introduction of an advanced clinical practitioner (ACP) role across three integrated community teams, a weekly multi-disciplinary meeting discussed each new patient who had previously fallen. When FRAX indicated measuring bone mineral density (BMD) it was highlighted to the GP for further action. With the ACP in post all DEXA scans were requested internally, with the results and suggested interventions communicated to the patient and GP. Baseline data highlighted 22 patients over a 6-month period required BMD assessment. Of these only 9 DEXA scans were requested by the GP, with only 5 attending. Osteoporosis was diagnosed in 2 patients. In a 6-month period with the new pathway 159 DEXA scans were requested. Results are back for 117 patients, with a new diagnosis of osteoporosis in 36 patients and osteopenia in a further 39. Non-attendance rates remained high initially but improved with a second intervention of sending a letter to the patient highlighting the purpose of attending. In being more proactive the number of DEXA scans being requested where indicated has increased (from 41 to 100%), improved the attendance rate (44–84%) resulting in better diagnoses of both osteoporosis and osteopenia. A repeat study looking at the number of patients taking bone protection and rates of future fragility fracture is planned.

P-465

Hyponatremia and aging-related diseases: key player or innocent bystander?

Abstract Area: Falls and fractures

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Introduction: hyponatremia is the most common electrolytic disorder amongst adults aged 65 years and older. It is defined as a serum sodium concentration lower than 135 mEq/l. Amongst factors associated with unhealthy aging, hyponatremia has been identified as a possible determinant of comorbidity and poor quality of life. Increasing evidence suggested that hyponatremia may be associated with poor clinical outcomes in older subjects including falls, osteoporosis, fractures, neurocognitive disorders, increased morbidity, and mortality.
Objectives: To investigate whether hyponatremia may be considered a key player, a surrogate marker, or an innocent bystander in the occurrence of falls, fractures, and cognitive impairment.
Methods: To further understand the role of hyponatremia in falls, osteoporosis, fractures, and cognitive impairment in old patients, we conducted a systematic literature review based on the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) method.
Results: The majority of the studies found a significant association between hyponatremia and falls even after correction for confounding factors. Some studies suggested an association between persistent hyponatremia and increased osteoporosis and fracture risk. On the contrary, the evidence of an association between hyponatremia and cognitive impairment is lacking.
Key conclusions: We suggest that hyponatremia may be regarded as a marker of general unhealthy aging and a confounder rather than a causal factor or an innocent bystander for falls and fractures. As regards cognitive impairment, the evidence provided until now, are not sufficient to explain a real role of hyponatremia that may be regarded rather as an innocent bystander in neurodegeneration.

P-466

Prevalence and determinants of falls in community-dwelling older adults: a population based cross-sectional study

Abstract Area: Falls and fractures

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Rationale: Falls are a common public health problem in older adults regarding increased morbidity, mortality andhealthcare costs. Determining the factors associated with falls is of utmost importance for detecting at-risk people. We present here a field study conducted to examine the prevalence of falls and the associated factors among community dwelling older adults.
Methods: 203 older adults residing in the specified addresses in the Fatih district of Istanbul province were selectedthrough a simple random sampling method. The demographics, fear of falling, falls, number of diseases and medications,presence of diabetes, hypertension, dyslipidemia, geriatric syndromes, frailty, functional status and quality-of-lifemeasures were evaluated, and a multivariate logistic regression analysis was used to determine the factors related tofalls.
Results: The prevalence of falls was 28.5% [mean age 75.4 ± 7.3 (range 61–101 years), 53.6% female], and a significantassociation was identified between falls and the number of diseases and medications, diabetes, chronic pain, frailty,activities of daily living (ADL), instrumental activities of daily living (IADL), and European quality-5 dimension (EQ-5D)score, dementia, geriatric depression scale-short form (GDS-SF) score and level of ambulation in univariate analyses ($p = 0.001$, 0.030, 0.030, 0.010, 0.004, 0.040, 0.007, 0.003, 0.030 and 0.007, respectively). In the multivariate analysis,positive dementia (OR 3.66, 95% CI 1.40–9.53; $p = 0.010$) and frailty screenings (OR 1.47, 95% CI 1.05–2.06; $p = 0.020$)were identified as associates of falls.**Conclusion:** Falls were independently associated with positive dementia and frailty screenings. These results will helpdevelop specific and tailored precautions for at-risk groups to prevent the negative outcomes of falls.

P-467

Multidisciplinary approach to falls in orpea residences

Abstract Area: Falls and fractures

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Introduction: Falls are events with a high incidence in institutionalized elderly. Advanced age, prevalent pathologies that affect mobility and cognitive performance, added to the pharmacological effects of prescribed treatments, increase their prevalence. In addition, recurrent falls affect health and functional performance.
Method: Risk Assessment: A clinical, functional, cognitive, emotional, and social examination of the resident will be performed. Scales to consider: MNA, Tinetti, Up and Go, Guralnik, Barthel, Lobo, GDS, Yesavage, NPI. Approach to the event by the Center's Multidisciplinary Team: analysis of the fall (how, when and in what way it occurred), control predisposing and risk factors, adaptation of the environment, review of coexistence units more in line with the baseline situation (UPAD, UGA, PSICOGERIATRY) and/or consensual preventive action plans. Transdisciplinary approach: Consultant rehabilitative physician, Consultant Psychogeriatrician for the assessment of the most complex cases with repeated falls. Specialized approach: Reference Hospital for the treatment of complications, if any, and their follow-up.
Results: This joint approach modality focused on planning the care required by the user of the services manages to reduce the risk factors of presenting new falls and their consequences.
Conclusions: The multidisciplinary approach ensures that all possible risk factors are taken into account, and how to reverse them, to jointly agree on the actions and care necessary to prevent further falls. Reducing or avoiding the recurrence of falls is essential to prevent the progression of functional decline in older people, improve their quality of life and protect their autonomy for as long as possible.

P-468

Fall prevention by perturbation treadmill training: is it feasible for frail geriatric patients?

Abstract Area: Falls and fractures

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Introduction: Frail geriatric patients have a high risk of falling [1]. While various training concepts demonstrate a moderate reduction of falls [2], training with unannounced gait perturbations seems to be highly effective. While previous studies examined perturbation training in elderly subjects in relatively good functional condition [3], there are no studies on frail geriatric patients. The aim of the present work is to characterize the geriatric study population in whom training on a perturbation treadmill was feasible in an ongoing pilot study.
Methods: The assessor blinded RCT is recruiting patients with at least one fall event in the past year (age > 70 years). The patients complete a minimum of 60-min treadmill training with/without perturbations on minimum 4 occasions.
Results: Until now, 96 patients (68% females), took part in the study. The mean age is 80 years (SD ± 5) with a mean Barthel Index of 70 (± 13). 60% of the patients are classified as "frail" (Frail-Scale) and 68% have a high risk of sarcopenia (SARC-F). More than half of the patients have a cognitive disorder (MoCA 20 ± 4). The short physical performance battery (SPPB) is 8 points (± 3). The drop-out rate was initially 24%, and was reduced to 6% after adding a short pre-test on the treadmill.
Conclusions: Perturbations treadmill training is feasible for frail geriatric patients. Its effectiveness in fall prevention needs to be proven.
Keywords: Falls, Older, Cognitive function, Exercise
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P-469

4.5 Tonnes of food wasted across a hospital ward: a service evaluation of dietary intake and food waste

Abstract Area: Falls and fractures

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Introduction: Malnutrition is a debilitating condition in hospitalised older people. Studies on dietary intake and oral nutritional supplements (ONS) compliance are limited. This service evaluation aimed to observe daily energy and protein intake, plate waste and ONS compliance and to report food waste at ward level.
Methods: Three-day food intake and plate waste of 19 older people (mean age 84 ± 9 years) on a hospital trauma and orthopaedic (T&O) ward were assessed. Patients were categorised as 'nutritionally well' or 'nutritionally vulnerable' as per British Dietetics Association's (BDA) criteria. Dietary intake was compared with adjusted BDA standards to exclude energy and protein from drinks. Ward plate and food trolley waste were weighed after lunch and supper for five days. Waste from 33 ONS was weighed.
Results: Hip fracture (68.4%) was the most common injury. Mean intake for 'nutritionally well' was 1592 kcal/day and 65.7 g/day protein and 'nutritionally vulnerable' (n = 15) 643 kcal/day and 24.8 g/day protein. Plate waste for 'nutritionally well' was 4.1% at main meals and 1.7% at pudding and for 'nutritionally vulnerable' 53.1% at main meals and 38.6% at pudding. Compliance (amount consumed relative to amount prescribed) to ONS was 28.3%. The combined mealtime plate waste weighed 6.2 kg/day and food-trolley waste 6.2 kg/day. This equates to approximately 4526 kg/year (4.5 T).
Conclusions: Dietary intake and compliance to ONS in older T&O patients is sub-optimal and food waste is high. Interventions to improve dietary intake and reduce food waste in hospital and research exploring the acceptability of alternative ONS food/drink styles is warranted.

P-470

The development of an in-patient fall acute management guideline

Abstract Area: Falls and fractures

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Introduction: In-patient falls are a very common clinical problem, especially in older adults. Once a patient has had one fall in hospital, they are at higher risk of further falls. The hospital setting is associated with an increased prevalence of falls due to additional risk factors, both from illness and an unfamiliar environment. Falls are not only associated with morbidity and mortality but also linked to poorer overall functioning, length of stay and hospital costs. The Maltese national hospitals lacked an in-patient falls guideline, therefore the aim was to create an acute management guideline for such incidents.
Methods: A multidisciplinary team consisting of doctors (geriatric, internal medicine, radiology), nurses, physiotherapists and occupational therapists came together to create the best guideline for our local national hospitals. A prototype was created and reviewed by medical professionals outside the guideline team, before its implementation.
Results: The guideline consists of a brief introduction, the definition of a fall, and its possible causes. Management is split into sequential steps to be followed; assessment, classification of the fall, safe

recovery from the floor, history and examination, acute treatment, monitoring, investigation and minimizing risk factors. Appendages to the guideline are a post fall documentation sheet, observation monitoring sheet, as well as a doctors, nurses, physiotherapists and occupational therapists checklist.
Key conclusion: Falls are a common occurrence in a hospital; a guideline serves to aid medical professional deliver the best care and to safeguard the patient from further harm.

P-471

Inpatient falls resulting in serious incidents (SIs): a trust-wide review

Abstract Area: Falls and fractures

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Background: Inpatient falls are the most frequently reported safety incident in NHS hospitals. 30–50% of falls result in physical injury [1]. The human cost of falling is physical, psychological, and financial. Multifactorial assessments should be performed to identify an individual's risk of falling in hospital as per NICE guidance.
Aims: To audit the number of inpatient falls causing injury and/or death in our Trust, reviewing compliance and quality of multifactorial assessments as per NICE guidance (> 65 or those with co-morbidities which increase falls risk).
Methods: A retrospective study of inpatient falls leading to serious incidents in the Trust between January 2019 and September 2021, based on the National Audit for Inpatient Falls (NAIF) proforma.
Results: 42 patients were included in the data analysis. All sustained injury. Most common were wrist fractures and soft tissue injuries, with 1 death reported. The average age of the patients was 76.4. 60% of patients had a cognition care plan, 70% had a mobility care plan and 32.5% of patients had a continence plan. Delays were seen in 44% of cases and average time for assessment post-fall was 211 min. 3-month mortality following a fall was 64% and 1-year mortality was 86%.
Key conclusions: Results identified that improvement is required in all domains of assessment to ensure 100% compliance in preventing inpatient falls. Our findings highlighted the need for a more robust falls pathway with re-development and education of assessment tools within our Trust's electronic system, which we are implementing as a result of our review.
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P-472

Improving the assessment and prevention of falls and fractures on a rehabilitation ward

Abstract Area: Falls and fractures

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Background: The National Steering Group and The National Institute for Health and Care Excellence provide guidelines on medical assessment and prevention of falls and fractures [1, 2]. This audit assesses and compares quality of practice on an Age-Related rehabilitation ward against these guidelines.
Methods: A retrospective audit, including all patients (n = 31) on an off-site, age-related rehabilitation ward was completed. Data on falls and fractures at emergency department presentation and during admission was obtained through chart review. Following education and implementation of a falls pro-forma, a re-audit was completed at four months including all patients (n = 40).
Results: In cycle 1, mean age of patients was 80 years (range 56–94), 39% (n = 12) were admitted with a fall of whom 66.7% (n = 8) had a resulting fracture. In cycle 2, mean age was 82 years (range 63–95), 48% (n = 19) were admitted due to a fall, of whom 53% (n = 10) had a fracture. A falls assessment and bone health review was completed in 39% (n = 12) of all patients in cycle 1, and in 37% (n = 3) admitted with a fall. This increased to 83% (n = 33) of all patients in cycle 2 and 100% (n = 40) of those admitted with a fall. Pre-intervention, 23% (n = 7) had an inpatient fall compared to 18% (n = 7) post-intervention; of these, 43% (n = 3) and 14% (n = 1) resulted in fractures respectively.
Conclusion: Compliance with national guidelines for prevention of falls and fractures improved with education and implementation of a falls pro-forma. This resulted in a reduction in falls, particularly injurious falls, on a rehabilitation ward. In future, this pro-forma may be implemented in other hospital wards.

P-473

Impact of postoperative intravenous iron therapy on postoperative infections in older patients undergoing hip fracture surgery

Abstract Area: Falls and fractures

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Background: The aim of this study was to investigate whether intravenous iron(II) supplements can reduce the rate of postoperative infections in elderly patients undergoing surgery for hip fractures.
Methods: This observational study included 198 ortho-geriatric patients undergoing hip fracture surgery between July 2018 and May 2020. In May 2019 a local guideline recommending intravenous iron therapy (Monofer©) on the 3rd postoperative day if hemoglobin concentration < 6.5 mmol/L after surgery for hip fracture was implemented and patients were included before and after implementation of the guideline. The outcome was infections within 30 days postoperatively defined by an antibiotic prescription.
Results: The patients were divided into four treatment groups: blood transfusion (n = 44), IV iron (n = 69), blood transfusion + IV iron (n = 35) and no treatment (n = 50). The number of patients who had an infection within 30 days was similar in the two time periods (38.8% before vs. 38.9% after systematic I.V. iron supplementation, P = 1.00). No significant difference was found between treatment groups when comparing the risk of an infection within 30 days from the third postoperative day.

Conclusion: The study documents no effect of intravenous iron supplements on post-operative infections in older patients after hip fracture surgery.

P-474

Developing a clinical assessment tool for fear of falling: a challenge to better define and operationalize this concept

Abstract Area: Falls and fractures

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Several approaches have been used to investigate Fear of Falling (FoF) but the existing scales only focus on the activity avoidance that could be in relation with FoF but mainly reflect fall efficacy. This partial evaluation neglects the anxiety or the quality of self-efficacy which vary and can disrupt the overcoming of stress reactions that may follow a fall. It also leads to misinterpretations of the consequences of FoF and may explain the established assumption that FoF has only a negative impact. In order to develop clarity and consistency within FoF definition, FoF can be understood in the light of the description of post-traumatic stress disorder (PTSD) with fall as a trauma event. In this description, fall efficacy plays a protective role by allowing older adults to adapt their activities to their estimated risk of falling and their confidence in their abilities during tasks of daily life. On the contrary, other aspects of trauma response such as anxiety and loss of self-confidence induce the avoidance that becomes maladaptive, causing the functional impairment. It results in a maladaptive nature of FoF, where daily activities appear to have excessive risks of falling. Considering that FoF and PTSD share similar mechanisms allows us to use the criteria proposed for PTSD to develop an instrument that would clinically describe the psychological symptoms related to the FoF. Therefore, obtaining a clear diagnosis of FoF could assist in identifying older individuals at risk in order to optimize tailor-made rehabilitation strategies for this psychomotor disorder.

P-475

Vertebral fragility fractures: a problem we can no longer ignore!

Abstract Area: Falls and fractures

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Introduction: Osteoporosis affects 200 million people worldwide, with one fragility fracture occurring every 3 s. Vertebral fragility fractures (VFF) are the most common osteoporotic fracture. VFF can result in significant pain requiring hospitalisation. However, data is scarce on patient numbers, hospital bed days and costs, contributed to by these patients.

Methodology: We report a retrospective analysis of patients aged 55 years and over admitted to hospitals across England from 2017 to 2019. ICD-10 classifications for VFF and OPCS codes were used to identify admissions and patients who had undergone vertebral augmentation (VA).

Results: There were a total of 99,240 (61% Female) patients admitted during this period, with 64,370 (65%) patients aged 75 and over. On average, there was a 14.3% increase in admissions annually. Hospitalised patients accounted for 2.2 million bed days, costing £704 million with a MLOS of 12.6 days. The majority of patients (84%) were admitted under a non-surgical speciality and were primarily older (median age 76.8 vs 67.6 years, MLOS 8.2 vs 6.0 days). 1755 patients underwent VA. 775 (44.2%) of these were 75 years and over. The MLOS and cost per patient admission was lower in the VA group compared to those managed non-surgically (MLOS 2.4 vs 10.8 days, $p = < 0.01$, cost £4737 vs £7250).

Conclusion: Older patients hospitalised with VFF represented a significant number, cost, use of bed days and have associated longer MLOS. Further studies are necessary to identify older patients with VFF who may benefit from early VA as they had significantly shorter length of stay.

P-476

Prevalence of type 2 diabetes mellitus with hip fracture in a orthogeriatric center in Mexico

Abstract Area: Falls and fractures

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We found in the period from 2019 to 2021 32 patients admitted for hip fracture with type 2 Diabetes Mellitus in the Orthogeriatric service of the Hospital Universitario "Dr. José Eleuterio González", in México, from a total of 234 patients also admitted in this service with the same diagnostic. Caracteristics of the patients: 24 were female and 8 masculine; the average age was 76.8 ($\pm$) 7.2 years. 31 reported long-term Diabetes (> 5 years), 44.4% had no medical follow-up with glucose levels above the recomended. A prevalence of 13.8% was found in our population. The bad control of glucosa inpatient (> 140 mg/dL) was found in 30.5% at the pre-surgical moment, and 38.8% at the hospital discharge, what is incredible. The average post-surgical stay was 3.28 days, and only 19.4% patients had a longer-than-average stay. Only one patient presented complicantions during his stay: sepsis as a result of peri-implant infection, and was the only death recorded in relation to surgery.

Conclusion: One of the few recognized complications of diabetes is osteoporosis [1]. There is reported in the literature of an increase in morbidity and mortality in hip fractures due to the risk of post-surgical complications, mostly unrelated to surgery [2]. We found a

prevalence of 13.8% in our center, and the importance of describing the data collected is to corroborate whether patients of Latin American present the same clinical scenarios found in the literature.

P-477

Global guidelines for falls in older adults: working group 12: fear of falling

Abstract Area: Falls and fractures

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Introduction: The Fear of Falling (FoF) Working Group is part of the global initiative on fall prevention. Fear of falling is common, with an estimated prevalence of 21–85% in community-living older adults.
Objectives: Presenting recommendations on how to best assess and manage FoF in older adults.
Methods: We conducted a critical appraisal of existing evidence through narrative reviews, expert consensus and several systematic reviews and meta-analyses.
Results: Our narrative review suggests that there is low-to-moderate evidence that FoF is predictive of future falls. Our consensus opinion including FoF as part of a comprehensive fall risk assessment, showing links with quality of life and potential openness to various interventions. While the final the recommendations are still being developed, our initial recommendations are: (1) we recommend clinicians adopt a holistic approach, combining a FoF tool with balance and/or gait assessment instruments in a comprehensive fall risk assessment of older adults. (2) The Falls Efficacy Scale International (FES-I) and the Short Falls Efficacy Scale International (Short FES-I) are reliable and valid tools with strong to moderate levels of evidence for assessing fear of falling in the community, acute care hospitals or long-term care facilities. (3) We recommend exercise, cognitive behavioural therapy and/or occupational therapy (as part of a multidisciplinary approach) to reduce fear of falling in community-dwelling older people.
Conclusion: FES-I is a suitable test of FoF that can easily be implemented in clinical practice. Older adults with FoF should be offered an exercise program ideally as part of a multidisciplinary approach.

P-478

Mortality following hip fracture among nursing home residents

Abstract Area: Falls and fractures

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Introduction: Little is known about mortality following hip fracture among nursing home (NH) residents. Prognostic data is important to guide management, including osteoporosis treatment.
Methods: A retrospective cohort study of all patients admitted to an Irish tertiary hospital from NHs with hip fracture during the years 2017–2020 inclusive. Mortality was assessed at 90, 180 and 365 days (1 year) following admission.
Results: One patient was lost to follow up, leaving 233 in the analysis group. 147 were female. Mean age was 85. All-cause mortality was 18.03% at 90 days, 27.04% at 180 days and 37.34% at 1 year. One year mortality (OYM) was 34.01% among females, 43.02% among males. Among those aged 90 or over, OYM was 45.59%, being 65.22% among males and 35.56% among females. In those aged 75 or over, OYM was 39.9%, being 48.57% among males and 35.34% among females. In those aged under 75, OYM was 20%. OYM was 42.31% among those who could mobilise independently before fracture, 37.23% among those requiring an aid, 33.9% among those requiring assistance, and 45.45% among those unable to mobilise. 62 Rockwood Clinical Frailty Scales (CFS) were recorded (median score 7, range 5–9). OYM was 0% for CFS 5, 50% for CFS 6, 31.43% for CFS 7, 80% for CFS 8 and 100% for CFS 9.
Conclusion: Mortality among NH residents following hip fracture was highest in older males. While mobility before fracture was a poor predictor of mortality, CFS showed promise among a smaller sample size.

P-479

Healthcare evaluation of inpatient vision screening for elderly patients sustaining a neck of femur fracture

Abstract Area: Falls and fractures

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Introduction: This healthcare evaluation focussed on the effectiveness of the inpatient vision screening service at Nottingham University Hospitals for elderly patients who sustain a Neck Of Femur (NOF) fracture. In particular, it addressed the efficiency of the patient care pathway. The service was developed in 2013 as a response to NICE guidance [NICE CG161] aiming to reduce the risk and incidence of repeat falls. The guidance recommended multifactorial assessment and intervention of elderly patients presenting with a fall, including a visual assessment.
Methods: Retrospective data was collected from all patients sustaining a NOF fracture in 2018.
Results: Of the 744 patients sustaining a NOF fracture in 2018, 431 (58%) were eligible for vision screening and 284 (66%) of these were screened. 121 (82%) eligible patients refused screening. 121 (43%) patients screened required Ophthalmology referral via the GP, or were advised seeing a local optician. Only 21 (34%) requiring Ophthalmology referral were successfully referred and of these, only 14 (54%) attended given appointments. 13 of 14 had a visual defect, nine being cataracts.
Key conclusions: Screening appeared specific, although this was determined by a small number of patients who were successfully referred and attended. The most common visual defect was cataracts, as expected [1, 2], which is correctable. Staff and patient education may reduce the refusal rate. An internal referral pathway to Ophthalmology is being considered. The proportion of patients not attending appointments may reflect difficulties in accessing care for this population [1]. There is a need to follow-up patients who were advised seeing a local optician
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P-480

Investigating the risk of falls due to psychotropic medications in a large population-representative cohort of community-dwelling older adults

Abstract Area: Falls and fractures

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Introduction: Psychotropic medications are identified as Falls Risk Increasing Drugs (FRIDS). These include antidepressants, anti-cholinergics, benzodiazepines, 'Z' drugs and antipsychotics, However, there is a relative lack of data investigating the prospective risk of falls with these medications.
Methods: Participants aged $\geq$ 65 years from the Irish Longitudinal Study on Ageing (TILDA) were included and followed from waves 1–5 (mean 7.6 years). Participants self-reported falls and medication lists were reviewed. Logistic Regression models, reporting odds ratio with 95% confidence intervals, were used to determine the association between drug classes and fall types. Results were adjusted for relevant covariates.
Results: 2090 participants were included (mean age at baseline 72 years, 53% female). Over 1/2 (52%, n = 1089) reported a fall, 1/4 (25%, n = 526) reported an unexplained fall and nearly 1/5 reported (19%, n = 394) an injurious fall. Anti-depressants were associated with an increased risk of falling (OR = 3.01, 1.98–4.58, $p < 0.001$), injurious falls (OR = 1.96, 1.37–2.81, $p < 0.001$) and unexplained falls (OR = 2.71, 1.88–3.91, $p < 0.001$) in adjusted models. Anti-cholinergic medications were associated with an increased risk of falling (OR = 1.79, 1.11–2.88, $p = 0.017$) and unexplained falls (OR = 1.89, 1.19–3.01, $p = 0.007$). 'Z' drugs were associated with an increased risk of falling (OR = 2.96, 1.64–5.32, $p < 0.001$) and injurious falls (OR = 2.05, 1.26–3.34, $p = 0.004$). There was not increased falls risk associated with benzodiazepines and anti-psychotics in the adjusted models.
Conclusions: Anti-depressants, anti-cholinergics and 'Z' drugs are independently associated with an increased falls risk. Falls can have a profound impact on functional status and quality of life. Therefore, regular review of the indication for these medications is essential within the comprehensive geriatric assessment.

P-481

Investigations and therapeutic management of an 89-year-old patient diagnosed with multifocal motor neuropathy

Abstract Area: Falls and fractures

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Introduction: Older people are often polypathological and the multiplication of intertwined disorders make diagnosis difficult. Moreover, some pathologies can present variable forms, complicating the diagnosis.
Methods: Mrs D—an 89-year-old patient with vascular history, autonomous, and without neurocognitive disorders—has had a motor deficit of lower limbs for a few days and particularly of the feet elevator muscles, without sensory deficit. This led to multiple falls, and to her hospitalisation. In this context, a cerebral and spinal CT scan was conducted, finding no abnormalities, and motivating a cerebral MRI, also normal. After discussion, an electromyogram of the lower limbs was performed, which revealed paresis of both feet in connection with paralysis of the external and internal popliteal sciatica.
Results: The diagnosis of multifocal motor neuropathy was made. The patient underwent a lumbar puncture which revealed hyperproteinorachy with negative bacterial serologies and anti-neuronal antibodies. The cytobacteriological study of the CSF was also sterile. 5-day treatment with immunoglobulin (2 g/kg) was introduced, showing only a small improvement 2 months later.
Conclusion: Multifocal motor neuropathy with conduction block is a dysimmune neuropathy occurring mainly in men over 50 years and characterised by an asymmetric, multifocal motor deficit predominant in the upper limbs. The case of Mrs. D shows that this pathology of men in their fifties can also be encountered in geriatrics. It is important to bear in mind that this disease can have an atypical presentation, and to know how to evoke it in the geriatric subject.

P-482

Mobility and physical activity comparison in older adults with and without falls

Abstract Area: Falls and fractures

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Objective: The aim of this study was to compare mobility and physical activity differences in elderly people who had and had not fallen.
Materials and methods: Inclusion criteria to this cross-sectional study were: 60 or more years, unrestricted mobility, MMSE $\geq$ 21. History of falls was assessed by asking whether the subject had experienced a fall in the past 12 months (1, 2, 3 and > 3 falls). Mobility was assessed using Timed Up and Go (TUG) and Tinetti gait and balance tests. Physical Activity Scale for the Elderly (PASE) was used for physical activity assessment. Comparison between mobility

and physical activity between people with and without falls was assessed by one-way ANOVA test.
Results: The study was performed on 94 subjects: 32 (34%) men and 62 (66%) women. Mean age was 73.98 ± 6.1 years, ranging from 61 to 89 years. During previous 12 months 51 (54.3%) people had fallen, 22 (68.8%) were men and 29 (46.8%) women. Seventy two (76.6%) participants had reported that they were afraid of falling: 29 (90.7%) men and 43 (69.4%) women. TUG was significantly lower in non fallers when compared to people who had 3 falls in the past 12 months ($p < 0.001$). Tinetti score was higher in non faller group than in groups of people who had 2, 3 and more than 3 falls in the past 12 months ($p = 0.03$, $p < 0.001$, $p = 0.04$, respectively). PASE score did not differ between groups.
Conclusion: People who had falls, especially 3, in the past year were more likely to have reduced mobility.
Disclosure: All authors state that they have no conflicts of interests.

P-483

Implementing an orthogeriatric unit: a four year overview

Abstract Area: Falls and fractures

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Introduction: In a bid to improve the management of hip fractures, a dedicated orthogeriatric Unit was established on January 1, 2018, at the Hospital du Valais (Switzerland).
Method: The aim of this retrospective study is to highlight the results of a 4-year follow up (from 1 January 2018 to 31 December 2021). Standardized geriatric protocols were implemented as we worked with the orthopedic Unit in the treatment of 517 patients.
Results: Patients were predominantly female (78%) who live at home (82%) with a mean age of 84.1 years. Based on the American Diabetes Association criteria, 24.6% were healthy, 54.9% were complex and 20.1% were very complex. The average time of surgical orthopedic intervention was 32.1 h with a 6-week mortality rate of 6.4%. Considering a univariate analysis, mortality rate was not linked to the time of surgical intervention and was decreased by 60% in female patients ($OR = 0.40$, $p = 0.013$). Conversely, given at least one complication, the risk of mortality was multiplied by 3.81 ($p = 0.002$), severe malnutrition by 4.69 ($p = 0.045$) and being considered very complex by 6.65 ($p = 0.016$). From the perspective of a multivariate analysis (which included gender, time of surgical intervention, malnutrition, dementia, various health categories and complications), the occurrence of at least one complication resulted in a mortality risk increase of 3.2 ($p = 0.010$), an increase in moderate malnutrition of 4.92 ($p = 0.046$) and severe malnutrition of 5.77 ($p = 0.030$).
Conclusions: Mortality rate reduction can achieved in geriatric patients with hip fractures by preventing renal and cardiac complications and improving management and treatment of undernourishment.

P-484

Improving falls assessment and prevention practices for frail older adults in an emergency department using best practice guidelines

Abstract Area: Falls and fractures

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Introduction: NICE guidelines are the current gold standard for the management of falls in older persons.
Aim: To benchmark the practice of a frailty at the front door (FATFD) team against NICE guidelines.
Methods: All patients referred to and discharged directly by the FATFD team in the emergency department had demographic data entered prospectively by a trained administrator onto excel. Data gathered included age, diagnosis and CFS score. Patient records were accessed to gather assessment and treatment data. Data was analysed using descriptive statistics.
Results: Between January and March 2022, 443 patients were seen of which 48% ($n = 213$) presented due to a fall. 23% ($n = 49$) were discharged directly from ED. Full clinical information was available for 35% ($n = 15$). The mean (SD) age of those who presented with falls was 84 (8) years with a mean (SD) clinical frailty score of 5.6 (0.9). The male to female ratio was 3:2. 53% ($n = 8$) patients had a falls assessment in line with NICE guidelines. Fear of falling, perceived unsteadiness and bone health issues were the most commonly omitted areas. 7% ($n = 1$) patient received falls prevention education or individualised intervention.
Discussion: The majority of patients received a falls assessment in line with NICE guidelines but 65% of patient data was not available. Data availability is key to service development and a database will be developed for all attendees. A falls education package to address management of visual impairment, home hazard advice, strength and balance training, bone health and individualised patient and family education, including fear of falling, has been developed.

P-485

Falls and recording of postural blood pressure in a Gerontology department

Abstract Area: Falls and fractures

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Introduction: Falls represent a significant part of geriatric admissions. They require a specific work-up including measuring postural blood pressures (PBP) and reviewing possible causative medications. This audit assessed all patients discharged from a gerontology unit over two 2-week periods, pre and post interventions aimed at improving PBP awareness and monitoring.
Methods: Data collected in patients discharged in the last two weeks of July 2021 (pre-intervention) and the last two weeks of February 2022 (post-intervention) included: presenting complaint, medical history, PBP, medications and medication changes. Post-data also included who recorded PBP and whether B12 was checked. The intervention consisted of a presentation of initial data to a clinical

governance meeting, departmental meeting, and brief PBP training at another departmental meeting.
Results: Results shown for pre vs post intervention. Admissions (115 vs 117), Fall as presenting complaint (28% vs 26%), PBP's recorded in fallers (47% vs 41%), PBP's recorded overall 23% vs 21%), significant drops overall (30% vs 46%), significant drops in fallers (27% vs 64%), significant drop in non-fallers (33% vs 22%), fallers medications appropriately managed (81% vs 89%), PBPs recorded by nurses (71%).
Key conclusions: Falls represented > 25% of geriatric admissions. PBPs are done in fallers around 40% of the time. Fallers frequently have significant PBP drops (64% in February 2022). The interventions had no effect on recording PBPs. Medication management appeared to slightly improve post intervention. Further interventions (a new information leaflet, doctor and nurse group training, dissemination to new colleagues) are required to increased PBP recording.

P-486

Falls and recording of postural blood pressure in a gerontology department

Abstract Area: Falls and fractures

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Introduction: Falls represent a significant part of geriatric admissions. They require a specific work-up including measuring postural blood pressures (PBP) and reviewing possible causative medications. This audit assessed all patients discharged from a gerontology unit over two 2-week periods, pre and post interventions aimed at improving PBP awareness and monitoring.
Methods: Data collected in patients discharged in the last two weeks of July 2021 (pre-intervention) and the last two weeks of February 2022 (post-intervention) included: presenting complaint, medical history, PBP, medications and medication changes. Post-data also included who recorded PBP and whether B12 was checked. The intervention consisted of a presentation of initial data to a clinical governance meeting, departmental meeting, and brief PBP training at another departmental meeting.
Results: Results shown for pre vs post intervention. Admissions (115 vs 117), Fall as presenting complaint (28% vs 26%), PBP's recorded in fallers (47% vs 41%), PBP's recorded overall 23% vs 21%), significant drops overall (30% vs 46%), significant drops in fallers (27% vs 64%), significant drop in non-fallers (33% vs 22%), fallers medications appropriately managed (81% vs 89%), PBPs recorded by nurses (71%).
Key conclusions: Falls represented > 25% of geriatric admissions. PBPs are done in fallers around 40% of the time. Fallers frequently have significant PBP drops (64% in February 2022). The interventions had no effect on recording PBPs. Medication management appeared to slightly improve post intervention. Further interventions (a new information leaflet, doctor and nurse group training, dissemination to new colleagues) are required to increased PBP recording.

P-487

Surgical-site infection after hip fracture surgery: preoperative full-body disinfection compared to local disinfection of the surgical site: a population-based observational cohort-study

Abstract Area: Falls and fractures

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Swedish national guidelines recommend full-body disinfection (FBD) with 4% chlorhexidine before hip fracture surgery to prevent surgical-site infection (SSI) despite little evidence. Our objective was to compare preoperative FBD with local disinfection (LD) of the surgical site regarding SSI incidence. All patients with hip fracture, operated at a hospital in Sweden, January 1, 2018 to December 31, 2019 were included. Patients in 2018 (n = 237) were prepared with FBD and patients in 2019 (n = 259) with LD. Primary outcome was SSI and secondary outcome was SSI and/or death. We adjusted for potential confounders with logistic regression. The adjusted analysis was performed in two models to enable assessment of variables that lacked either outcome; in the first model, these variables were not adjusted, and the second model was restricted to a sub-population not affected by respective variables. There were 16 (6.8%) cases of SSI in 2018 and 8 (3.1%) cases in 2019. FBD (2018) compared to LD (2019) presented an adjusted OR of 1.9 (95% CI 0.8–4.9, P = 0.16) respectively 2.0 (95% CI 0.8–5.1, P = 0.14) in the two models of the logistic regression. In addition, 40 (16.9%) patients in 2018 and 29 (11.2%) patients in 2019 had the combined outcome of SSI and/or death, adjusted OR 1.6 (95% CI 0.9–2.8, P = 0.08) respectively 1.7 (95% CI 0.9–2.9, P = 0.06). We found a non-significant increased risk of SSI 2018 compared to 2019 after adjustment. Randomized control trials are needed. Nonetheless, results suggest that LD is not inferior to FBD regarding SSI prevention, meaning patients could potentially be spared substantial pain.

P-488

Hip fracture-related mortality in older adults

Abstract Area: Falls and fractures

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Introduction: The incidence of hip fractures increases abruptly with age and currently represents a public health problem due to the economic impact it generates [1]. Hip fractures are associated with increased mortality rates, mainly in the first postoperative year, with a current report of 22% [2].
Methods: The objective was to evaluate mortality related to hip fracture in adults older than 65 years after hospitalization.

Observational, longitudinal, prospective, analytical, population-based study, carried out at the "Hospital Dr. José Eleuterio González", where relatives or caregivers of adults over 65 years of age hospitalized in 2019 for hip fracture were interviewed, through a telephone call in the period March–April 2022. The date and cause of death were questioned in the patients who died, determining association or hip fracture. Hip Fracture-Related Mortality was defined as mortality that is a direct or indirect consequence of it and that would not have occurred if the fracture had not occurred (pulmonary thromboembolism, hospital-acquired pneumonia, postoperative sepsis, acute myocardial infarction, cardiac arrhythmias, electrolyte imbalances).

Results and conclusion: Of the 80 patients hospitalized in 2019, a total of 54 caregivers were contactedand agreed to participate in the study. Of a total of 54 patients, 34 patients (63%) were still alive, and 20 patients (37%) had died. The percentage of causes of death related to hip fracture was 40% (8 patients), which is higher than that reported in the current literature. It is important to carry out prevention interventions in our population due to the high rates of morbidity and mortality currently reported [3,4].

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P-489

What are the strongest predictors of mortality among proximal femur fracture patients with COVID-19?

Abstract Area: Falls and fractures

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Introduction: Proximal femoral fractures (PFF) are severe injuries in geriatric patients. Additionally, octogenarians are at a high risk of death due to COVID-19.

Methods: A total of 34 patients were hospitalized between 10/2020 and 12/2021 for PFF and also had COVID-19 at our clinic. The time to surgery, the length of hospital stay, the rate of reoperations, the mortality at 1- and 3 months and discharges home were evaluated.

Results: Thirty-two patients underwent surgery for PFF (f/m: 20/12; median age 86 years (IQ range 9.5)). Of those, 23 patients (72%) were operated on within 24 h and 26 patients (81.3%) had to be cared for at the ICU for a median of 1 (1) day. Nineteen patients (59.4%) had a severe course of COVID-19 with pneumonia. The median length of hospital stay was 21 (14.8) days for survivors. Three of the patients (9.4%) required surgical revision. The 1- and 3 month mortality was 37.5% (n = 12) and 40.6% respectively (n = 13). Of the 13 patients admitted from home and surviving, 8 patients (61.5%) were able to return back to their homes. Factors influencing the 1- and 3 months mortality rate were admission from a nursing home, the presence of pneumonia (increased the risk of death) and female gender (protective).

Key conclusions: COVID-19 occurring in patients with a PFF has a high mortality. Admission from a nursing home and the presence of pneumonia increased the risk of death, whereas female gender was protective.

P-490

Vertebroplasty in vertebral compression fractures in the elderly: a case series in a multidisciplinary geriatric outpatient clinic

Abstract Area: Falls and fractures

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Introduction: Vertebral fractures are usually due to osteoporosis, are far more common in women and steadily increase with age (40% women $\geq$ 80 years in the US). Usually underdiagnosed, only 35% come to medical attention. Vertebroplasty was originally developed in France (1989) and is usually performed on an outpatient basis. This case series aims to show the impact of implementing a problem-oriented procedure.

Cases: Case 1:Male, 91 years, retired shopkeeper, widow, living alone. Prisma7:2 MMSE:24 MNA:11 Comorbidities:5 Drugs:10 With severe pain and inability to walk after a fall due to L4 osteoporotic vertebral fracture. Solved with vertebroplasty three weeks after, with partial recovery.

Case 2: Female, 74 years, married, retired dressmaker. Prisma7:3 MMSE:27 MNA:14 Drugs:10 Comorbidities:4, including osteoporosis due to prolonged corticosteroid therapy. With sudden back pain and inability to perform daily activities due to multiple vertebral fractures, culminating in respiratory infection with hospitalization during which vertebroplasty was performed.

Case 3: Male, 74 years, retired banker, widow, living alone. Prisma7:3 MMSE:27 MNA:14 Comorbidities:7 Drugs:6. With disabling low back pain due to lytic lesions including D12 fracture caused by multiple myeloma. Vertebroplasty performed and manages to regain autonomy within the oncologic patient context.

Discussion: The cases above describe 3 geriatric patients, with high levels of comorbidity and polypharmacy but generally low fragility scores, good cognitive function and mostly adequate nutritional status. A comprehensive geriatric assessment with appropriate geriatric scales may identify patients who are good candidates for vertebroplasty. In this case-series, a fast and minimally invasive intervention with pain control, resulted in maintenance of autonomy.

P-491

HIP fracture in elderly people and vitamin D deficiency. efectiveness of vitamin D supplementation

Abstract Area: Falls and fractures

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Introduction: Vitamin D deficiency is common in elderly people with hip fracture. This study evaluates the effectiveness of two vitamin D supplementation regimens in terms of functional recovery and correction of vitamin D deficiency.
Methodology: Randomized clinical trial. People $\geq$ 75 years with hip fracture and vitamin D deficiency were allocated to receive calcifediol 16.000 IU per day for 5 days (IG) or 16.000 IU per week for 5 weeks (CG). Variables: Barthel Index (BI), Absolute/Relative Functional Gain (AFG/RFG) and parameters of bone mineral metabolism at discharge, at 1 and 3 months.
Results: N = 50. Mean age 86 (SD:4). 64% female. Mean BI: 85 (12). Baseline serum 25-hydroxyvitamin D (25(OH)D) levels 13.26 (5.4) vs 11.96 (6.7) ng/mL (IG vs GC respectively) ($p = 0.45$); parathyroid hormone (PTH) 77.5 (48) vs 101.3 (49.6) pg/mL ($p = 0.096$). At 1 month there was an increase in 25(OH)D levels, 38.2 (26.2) vs 35.2 (13.3) ng/mL ($p = 0.66$); the percentage of patients 25(OH)D $\geq$ 30 ng/mL was 45.5% and 54.5%. PTH at one month 43.5 vs 75.16 pg/mL ($p = 0.01$) and calcium was 9.29 (0.46) vs 9.16 (0.58)mg/dL ($p = 0.48$). Mean BI at discharge 68 (17) vs 69 (13), 50% showed clinically relevant improvement with mean AFG of 35 (20) vs 30 (15), and RFG of 63.6% and 67.8%. In multivariate analysis RFG at discharge was lower in the weekly administration schedule that did not reach optimal 25(OH)D levels [67.2 (31.6) and 43.7 (55.3) $p = 0.061$)].
Conclusions: Calcifediol supplementation schedules have been shown to be effective in correcting vitamin D deficiency without increasing the risk of hypercalcemia in older people with hip fracture. All patients showed functional improvement in the first 3 months. Patients with optimal 25(OH)D levels showed clinically relevant functional improvement.

P-492

Factors associated with early surgery in patients with hip fracture in the Spanish National Hip Fracture Registry (RNFC)

Abstract Area: Falls and fractures

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Introduction: The Spanish National Hip Fracture Registry (RNFC) includes patients > 75 years with hip fracture admitted to Spanish hospitals. One of its quality indicators is the proportion of patients who undergo surgery in first 48 h. The objective was to know the factors associated with early surgery (48 h) in RNFC patients.
Methods: Prospective multicenter study of cases recorded in the RNFC from January 1 to December 31, 2019. The proportion of patients who underwent surgery in the first 48 h was evaluated and the factors associated with early surgery were analyzed using bivariate and multivariate analysis. Demographic, clinical variables and ASA score were collected and functional (modified Functional Ambulation Category—FAC-scale) and cognitive (Pfeiffer´s Questionnaire) assessment was performed.
Results: Forty-three hospitals recorded 8,037 cases, 45.8% underwent surgery in the first 48 h. Patients who underwent early surgery were in most cases women, had better previous mobility, less cognitive impairment, less pre-surgical comorbidity by ASA score and higher percentage of extracapsular fracture, all with $p < 0.001$. In multivariate analysis, predictors of early surgery were older age (OR 1.011 95% CI 1.002–1.021 $p < 0.05$), female sex (OR 1.333 95% CI 1.177–1.510 $p < 0.001$), independent previous mobility (OR 1.196 95% CI 1.026–1.394 $p < 0.05$), lack of cognitive impairment (OR 0.816 95% CI 0.731–0.910 $p < 0.001$), lower ASA score (OR 2.624 95% CI 1.431–4.812 $p = 0.002$) and extracapsular fracture (OR 1.401 95% CI 1.260–1.557 $p < 0.001$). The area under the ROC curve was 0.578 (95% CI 0.563–0.592, $p < 0.001$).
Key conclusions: None of the factors associated with surgery in the first 48 h in the RNFC were modifiable.

P-493

Do we do secondary prevention of fragility hip fracture?

Abstract Area: Falls and fractures

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Introduction: Osteoporosis can and should be prevented, diagnosed and treated before fragility fracture appears.
Objectives: Analyze secondary prevention interventions in patients who were admitted to the Orthogeriatrics Unit after undergoing surgery for fragility hip fracture during 10 years.
Material and methods: Longitudinal descriptive study of patients admitted to the Orthogeriatrics Unit from 2011 to 2021 (treatment at 6 months from 2011 to 2016). Variables: age, sex, cognitive and functional assessment prior to admission/discharge, Charlson, previous fractures, antios teoporotic treatment previous/discharge/6 months/1 year.

Results: 1635 patients. 78% women. Mean age 86.13 (SD 5.88). Previous dementia 592 (36.2%), previous/discharge I. Barthel independent (100) 11.6%//0.1%, mild (> 60–95) 57.9%//16.9%, moderate (40–55) 15.2%//29.8%, severe (20–35) 9.9%//29.4%, total (< 20) 5.4%//23.8%. Previous fractures 437 (37.4%). Previous antiosteoporotic treatment 20.1%: vitamin D 9.1%, Calcium + vitaminD 9.1%, alendronate 2.4%, risedronate 1.2%, teriparatide 0.5%, denosumab 1.8%. Antiosteoporotic treatment at discharge 95%: vitamin D 82.8%, calcium + vitamin D 38.1%, alendronate 15.4%, risedronate 6%, teriparatide 2.9%, denosumab 25%. Total: 49.3%. Anti-osteoporotic treatment at 6 months: 85.4%, at 1 year: 81.1%. Statistical significance: gender (p 0.197), adjusted Charlson (p 0.006), treatment at discharge (p 0.47).
Conclusions: The percentage of patients with treatment for osteoporosis prior to fracture is low, despite the risk factor for previous major fracture regardless of gender and age. The percentage of patients with antiosteoporotic treatment at discharge, despite not reaching the standard percentage recommended by the national hip fracture registry, is similar to the national average. The high percentage of continuity of treatment at 6 months and at 1 year, is possibly in relation to the availability of a Fracture Liaison Service in the hospital.

P-494

Falls predict more severe geriatric status in elderly patients with osteoarthritis

Abstract Area: Falls and fractures

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Aim: To study the features of the geriatric status of elderly patients with osteoarthritis (OA) who had a fall.
Materials and methods: Included 697 patients with OA (72.9 ± 7.5 years, women 82.2%) and identified 2 groups of patients: 1 group—patients with falls occurring during the year (n = 350), 2 group—patients without falls (n = 347). The groups were comparable in age, duration of OA, incidence of artroplasty. A comprehensive geriatric assessment (CGA) was performed. Results: In group 1, the duration of pain with exacerbation of OA was longer (5 (3; 7) vs 3 (2; 7) days, p = 0.021), as was its intensity (50 (30; 60) vs 40 (20; 55) VAS, p = 0.002). More than 60% took NSAIDs. Neuropathic pain was diagnosed in 1 group more often than in 2 groups (14.4% vs 9.9%, p = 0.030). In CGA, it was found that patients with falls compared to patients without falls performed worse all tests SPPB, the sum of which was 7 (4; 9) vs 8 (6; 10), p < 0.001. In the presence of falls, patients with OA had a higher probability of osteoporotic fractures according to FRAX (15.9 ± 8.9 vs 12.1 ± 6.5%, p < 0.001). SARC-F results were higher in group 1 than in group 2 (4 (3; 6) vs 2 (1; 4) points, p < 0.001), and dynamometry—lower (20.9 ± 7.3 vs 22.7 ± 7.6 kg, p = 0.002). TUG in patients with falls 13.7 ± 10.1 s vs 11.9 ± 6.9 s in patient without falls, p = 0.008. The results of the MMSE 26.3 ± 4.2 vs 27.1 ± 3.3 (p = 0.011), respectively. Frailty was diagnosed in 210 (60%) patients with OA and falls and in 146 (42%, p < 0.001) OA without falls.
Conclusion: Falls are a geriatric syndrome leading to a worsening of geriatric status and an increase in the incidence of frailty in patients with osteoarthritis.

P-495

One fall: a pemanent disability. A case report

Abstract Area: Falls and fractures

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Introduction: Falls lead to serious injuries, such as physical, social and psychological consequences. Given the inherent frailty of the elderly, one fall can lead to diverse consequences, namely an acute decline in functional status.
Methods: Analysis of a clinical case of a patient who suffers a fall and consequently acquires permanent disability.
Results: Male patient, 79 years old. Duvall's cycle stage VIII. Previously independent on daily life activities. In February 2022: fall from his own height, with trauma to his right shoulder and head. On the emergency service he was diagnosed with shoulder frature and dislocation, and a small left frontal epidural hematoma. He was referred to specialized consultations and prescribed pain relievers, arm immobilization and elevation. He then developed loss of mobility and strength in his right forearm and hand, which remained after resolution of edema. Electromyography described: "axonal lesion of the right brachial plexus, with active denervation in all muscles". It was decided on promotion of contralateral limb activity, occupational therapy and adaptations in home environment and daily activities.
Conclusions: Falls in older adults are common occurrences that lead to deleterious effects, such as fractures, head injury, chronic pain, but also, decline in funcional status, with disruption to daily routines and physical activities. It's crucial to assess the fall risk among elderly. Injuries causing shoulder fracture and brachial plexus palsy are rare. This report demonstrates how one fall, in the elderly, can lead to permanent disability and, consequently, the need for adaptations in order to guarantee (parcial) independence.

P-496

Orthogeriatric co-management for older patients with a major osteoporotic fracture: protocol of an observational pre-post study

Abstract Area: Falls and fractures

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Introduction: Osteoporotic fractures are associated with post-operative complications, increased mortality, and reduced quality of life. The care for older patients with a fracture is often complex due to multimorbidity and presence of geriatric syndromes requiring a multidisciplinary approach based on a comprehensive geriatric assessment. Nurse-led geriatric co-management has proven to prevent complications resulting in a lasting increase in quality of life. The aim of this study is to prove that a nurse-led orthogeriatric co-management model is more effective than usual care in terms of in-hospital complications.
Methods: This observational pre-post study will be performed on the traumatology ward of the University Hospitals Leuven in Belgium in

patients ≥ 75 years hospitalized with a major osteoporotic fracture. In the pre-cohort, usual care of 108 patients will be mapped. A feasibility study will be conducted prior to the post-cohort where fidelity to the intervention components will be measured. In the post-cohort, 108 patients will receive proactive geriatric care based on automated protocols and a comprehensive geriatric evaluation performed by a nurse followed by multidisciplinary interventions and systematic follow-up. An effectiveness evaluation, based on the proportion of patients developing one or more in-hospital complications, and process evaluation will be conducted.
Results: In the pre-cohort, all 108 patients were recruited. The post-cohort will start on September 1, 2022. Results will be expected soon.
Key conclusions: This study will give evidence for the beneficial impact of orthogeriatric co-management to improve patient outcomes.

P-497

Audit: review of falls-risk increasing medications (FRIMs) post inpatient falls

Abstract Area: Falls and fractures

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Background: Falls are the most frequently reported incident affecting hospital inpatients, with nearly 250,000 falls occurring annually in English hospitals. (1) It is recommended that all patients should have their medications reviewed after a fall. (2) The audit's aim was to establish if medication reviews were completed in post-fall clinical reviews.
Methods: A retrospective review of charts of reported inpatient falls within Specialty and Integrated Medicine wards, between 1st August 2021 and 31st January 2022. Data collected include: documented reason for falls according to clinical assessment, falls-risk increasing medications (FRIMs) prescribed at the time of fall, and any changes to FRIMs post-fall.
Results: Twenty-two patients were reviewed: 64% (n = 14) were female; mean age 84.4 years ± 5.3. The documented reasons for falls included: deconditioning (n = 3), postural hypotension (n = 4), dizziness (n = 3), delirium (n = 3). Prescribed FRIMs were categorised into 3 traffic light categories 2: red (high-risk), amber (medium-risk), and yellow (possible cause). Fifteen (68%) patients were prescribed ≥ 1 FRIM. 14(64%) patients were prescribed ≥ 1 red medication; 10(46%) prescribed ≥ 1 amber medication; and 5(23%) prescribed ≥ 1 yellow medication. Red medications prescribed included: anti-hypertensives (n = 10), antidepressants (n = 5), opioids (n = 2). FRIM reviewed and changed post-fall occurred in 7 patients (32%): 3 had FRIM stopped, 1 had FRIMs dose reduced, 3 had non-FRIM medication stopped (anticoagulant).
Conclusion: Our audit showed that 4 out of 15 patients (27%) had their FRIM changed after an inpatient fall. This presents a missed opportunity to prevent further falls. We aim to carry out quality improvement initiatives to increase the uptake of medication review post falls.

P-498

A fall doth not a faller make: evidence from the Irish Longitudinal Study on Ageing (TILDA)

Abstract Area: Falls and fractures

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Introduction: For older adults, a fall, whether or not it results in serious injury, may represent a life-changing event. There is much clinical, academic and societal attention directed at reducing falls [1]. Partly due to this, falling can result in stigma and labelling an individual as a 'faller' [2]. To better understand the significance of falls we used TILDA datasets to examine the longitudinal trajectories of self-reported falls.
Methods: We included participants aged ≥ 50 years with self-reported falls information at TILDA Wave 1 (2010), who were followed up over four longitudinal waves (2012, 2014, 2016, 2018). Next-wave transition probabilities were estimated with multi-state models.
Results: 8157 (54.2% female) participants were included with a median age of 62 (IQR 56–71). Of the 1568 participants who reported having fallen at Wave 1, the median number of falls was 1 (IQR 1–2). At any point, people who reported having fallen had a 53% probability of not reporting a fall, 37% probability of reporting having fallen and 10% probability of dying before the subsequent wave, compared to 80%, 17% and 2% if they reported not having fallen.
Conclusion: Whilst people who self-reported having fallen had an increased probability of death over the subsequent 2 years compared to those who reported not having fallen, they were also more likely to report not having fallen at the next TILDA assessment than having had further falls. Greater understanding of this may help reduce the stigma of falling without reducing its clinical importance.
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P-499

Are blood concentrations of benzodiazepine and Z-drugs associated with fall risk in older adults?

Abstract Area: Falls and fractures

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Introduction: Benzodiazepines and benzodiazepine related drugs (Z-drugs) are important fall-risk-increasing drugs. Currently it is

incompletely understood which users have the highest fall risk and whether this could be driven by blood concentrations levels. Our objective was to explore whether benzodiazepine and/or Z-drugs blood concentrations are associated with risk in older users.
Methods: For this study, we included a cohort of benzodiazepine and/or Z-drug users from the B-PROOF study. Fall incidents were prospectively recorded using fall calendars. Blood concentrations (at baseline and at 2 years follow-up) were analyzed and categorized into below and above median concentrations. Cox proportional hazard models and logistic regression models were applied to determine the associations between benzodiazepine/Z-drug blood concentration and (time to first) falls. We adjusted for potential confounders.
Results: Benzodiazepines: baseline concentrations were not associated with fall risk. Higher follow-up concentrations were associated with fall risk prior to follow-up visit (n = 131; OR 2.57, 95% CI 1.23–5.38). Z-drugs: higher baseline concentrations were associated with lower fall risk (n = 52; HR 0.33, 95% CI 0.14–0.77). Also higher follow-up concentrations associated with fall risk prior to follow-up visit (OR 0.17, 95% CI 0.04–0.82).
Conclusion: Our results suggest that higher BZS concentrations increase fall risk, while higher Z-drug concentration lower fall risk in users. However, our findings have to be replicated in a cohort with a bigger sample size and with blood concentration measurements around the fall incident to determine whether determining blood concentrations should have a role in clinical decision making.

P-500

Gait speed for predicting falls in older adults: an umbrella review of instruments assessing gait, balance, and functional mobility

Abstract Area: Falls and fractures

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Background: Best practice guidelines indicate the importance of an individualised approach to screening, assessment, and intervention for falls management for older people. Multiple approaches to assess gait, balance, and functional mobility are commonly used across clinical practice however determining the most appropriate tool is challenging. An umbrella review of validated tools to predict falls was undertaken with the findings for gait speed presented here.
Methods: Umbrella review of narrative- and systematic reviews with or without meta-analyses of all study types. Reviews that focused on older adults in any settings with validated instruments assessing gait, balance, and functional mobility were included. Medical and allied health professional databases were searched from inception to April 2022. Title, abstract, full text screening, and data extraction was undertaken independently by two reviewers. Quality appraisal was conducted through the Risk of Bias Assessment Tool for Systematic Reviews (ROBIS).
Results: Among 2736 articles initially identified, 10 reviews were included reporting on gait speed. Six systematic reviews without meta-analysis, 3 systematic reviews with meta-analysis and one narrative review. 5 reviews were assessed as having a high risk of bias, 4 reviews low risk and 1 review unclear. Seven reviews demonstrated positive findings. Determining the gait speed protocol was limited by different distances being used across the studies (4, 6, 10, and up to 25-m distances), different speeds and a lack of protocol detail.
Conclusions: Moderate evidence suggests gait speed can be useful in predicting falls and might be included as part of a comprehensive evaluation for older adults.

P-501

Instability and falls in a pluripathological patient, what was the cause?

Abstract Area: Falls and fractures

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Introduction: Recurrent falls are a frequent problem in elderly patients and predispose to disability and dependence. It is considered one of the main geriatric syndromes and is the second leading cause of death worldwide.
Medical History: COPD-asthma. Heart failure. Non-declotted atrial fibrillation due to chronic kidney disease stage G4A3ICC. Right femoral fracture. Comprehensive Geriatric Assessment: Functional: Ambulation worsened the previous 2 months, presenting left lateralization, short steps and a fall 1 week earlier. She suffered several falls during the current year. Barthel Index: 5/100. Dependent for all ABVD, except feeding. Cognitive: Alzheimer's dementia with associated vascular component. Social: single. Lives at home with a sister.
Case Report: A 86-year-old woman presented to the emergency department with dyspnea, palpitations and cough. Congestive heart failure secondary due to pneumonia was diagnosed. Treatment was started with oxygen therapy, bronchodilators, diuretics and antibiotics. She had atrial fibrillation (AF) with rapid ventricular response, Holter was requested, showing sinus rhythm with phases of AF (30% of the registry). Echocardiogram showed preserved LVEF. Given that she had recurrent falls in the last year and acute functional impairment, we requested a cranial CT, observed chronic right frontal cortical infarction. She was evaluated for rehabilitation, starting kinesitherapy. At discharge she was able to walk with a walker and short distances without technical aids. She was able to perform toileting, transfers and dressing independently.
Conclusions: The geriatric population with recurrent falls usually has pluripathology and polypharmacy, so a comprehensive geriatric assessment is essential.

P-502

TITLE: Variables associated with functional improvement in hip fracture patients

Abstract Area: Falls and fractures

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Objectives: To know the variables associated with functional improvement and its relation with the Montebello index (MI) in patients with hip fracture admitted in an orthogeriatric unit.
Material and methods: Observational and descriptive study of all patients admitted to an Orthogeriatrics Unit from 2012 to 2021. Demographic variables (age, sex, institutionalization, available resources), cognitive and functional evaluation, Charlson index, variables associated with the fracture (type of fracture), the surgery (surgical delay) and rehabilitation (time to start rehabilitation since surgery), functional gain, RHB efficacy measured with MI.
Results: N = 1635, 78% women, average age 86.13 + 5.886, 68.36% at home (alone 13.9% as a couple 20.1%, with children 27.4%), institutionalized 31.4%. Pfeiffer < 2: 39.3, 3–4: 15.6, 5–7:14%, 8–10: 30%. BI previous/admission/discharge 100:11.6%/0/0.1%, 60–95: 57.9%/0.3/16.9%, 40–55: 15.2%/2.2%/29.8%, 20–35: 9.9%/8.6%/29.4%, < 20: 5.4%/88.9%/23.8%. Previous walking aids: 33.6% without assistance, cane 31.6%, 2 english canes 1.1%, walker 18.7%, person ± technical assistance 11.9%. Charlson; < 1 47.8%, 2: 24.3%, > 3:27.9%, age-adjusted: 1–2: 0.60%, 3–4: 17.6%, > 5 81.9%. Variables associated with the fracture. Type of fracture: basicervical 2.8%, subcapital 36.1%, pertrochanteric 51.9%, subtrochanteric 4.5%, diaphysiary 0.1%, per-subtrochanteric 4.5%. RHB: 92.1%. Surgical delay: < 72 h:78.2%. Transfer from OST to desde COT a Orthogeriatrics: > 72 h 30.8%, < 72 h 69.2%. Days since the onset of RHB: < 72 horas: 22.4%.Functional gain > 20: 80.5%. average MI 0.4688. In men: 0.4626, in women 0,467. MI > 0.5: 40.2%Statistical significance: Charlson (p 0.007), Age-adjusted Charlson (0.000). Previous placement (0.000), Pfeiffer index at admission (0.000). Correlation (Spearman): Pfeiffer index at admission (− 0.155: p = 0.000), age (− 0.142: p = 0.000).
Conclusions: The factors associated with a worse efficacy of RHB coincide with those published in the literature, in which age and cognitive impairment are determinants in recovery after hip fracture. Previous functional capacity has been referred to as a risk factor for worse functional status after hip fracture rehabilitation. However, this capacity alone was not an independent risk factor for worse functional status in the multivariate analysis.

P-503

What fall risk factors are more prevalent in an orthogeriatric unit population?

Abstract Area: Falls and fractures

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Introduction: Falls are the 5th main cause of death in patients over 65 years, with annual incidence of 30–40%. Multifactorial fall risk assessment is mandatory in post fall approach to identify modifiable intrinsic and extrinsic fall risk factors. This is the base to implement multifactorial interventions that have been found to reduce falls.
Methods: 1 year retrospective observational study (from 1/1/2021 to 31/12/2021) of patients admitted to an ortogeriatric Unit (OGU) after a fall resulting in hip fracture.
Results: 300 patients with hip fracture were admitted in the OGU, 29 were excluded due to incomplete information. 75% were females (n = 203), with an average age of 83 years. 32.5% (n = 88) patients were nursing home residents. 29.1% (n = 79) of the patients had severe or total dependence for basic activities of daily living (n = 79, Barthel Index 0–39). 33,6% had history of recurrent falls and 62% were at least mildly frail according to the Clinical Frailty Scale. The most prevalent modifiable risk factors were: potentially inappropriate medications and fall risk increasing drugs (59%; n = 160), 24% (n = 65) were malnourished, 33% (n = 89) had visual impairment and 24.7% (n = 66) hearing loss.
Conclusion: In older patients, the risk of falling can be reduced by 20–40% with multifactorial interventions that are tailored to the individual. In this population the most prevalent modifiable fall risk factor was the use of potentially inappropriate medications (PIM). This study underlines the importance of in multifactorial fall risk evaluation and intervention for secondary fall prevention. And will be the base to increase PIM approach in our OGU.

P-504

The role of Health social worker in hip fracture process

Abstract Area: Falls and fractures

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Introduction: Older adults have described their fractures as disruptive events that dramatically changed their life situation, both in a short-term and longterm perspective. We aim to examine the key contributions made by Health Social Workers working with older patients with hip fracture.
Method: Prospective study. We enrolled 247patients with hip fracture, aged 75 years or older in an Orthogeriatric Unit of the University Hospital from León (Spain), between October 2021 and March 2022. Variables: sex, age, type of fracture, in-hospital mortality, place of residence, functional and cognitive baseline and characteristics at hospital discharge (destination and ambulation). Health Social Workers carry out a comprehensive assessment of the patient's needs.
Results: Among the 247 participants, 75.7% were women. The mean age was 87.6 ± 5.8 years. 97.5% underwent surgery. 54.2% walk independently (independence/1 stick) and 25% live in nursing homes prior to fracture. Of the 185 who live at home, 42% were evaluated by Health Social Workers who assess the options to hospital discharge that are feasible, with the patient and the family, according to their state of health (in coordination with the medical and nursing team) and their real socio-family situation. Return to home discharge 116 patients (65.9%), 55 patients (31.2%) go to a nursing home, 5 (2.8%) go to Functional recovery unit and 9 (4.8%) died during hospitalation.
Conclusions: The advanced age of the patient and the caregiver, the lack of formal supports and the current social reality, makes the intervention of the Health Social Worker with these patients essential.

P-505

Vision assessments for patients at risk of falls: a single centred study

Abstract Area: Falls and fractures

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Introduction: Falls are common in the elderly. In people aged over 80 years of age, 50% will have at least one fall per year [1]. Visual acuity declines with age for a multitude of reasons. The National Institute for Health and Care Excellence advise that a vision assessment be performed for those at risk of falls [2].
Methods: To evaluate if vision assessments were conducted at our hospital for patients admitted with a fall. On average, we found that patients were not receiving vision assessments so we created and introduced a vision assessment tool to try to increase the amount of visual examinations performed. We then evaluated if there was an increase in vision assessments being completed and if any follow up was recommended upon discharge if a visual impairment was identified.
Results: Initially we found that 89% of patients admitted with a fall were not receiving a visual assessment. Following the implementation of our vision assessment tool, we discovered there was a marked increase with 78% of patients having a visual assessment undertaken using the tool that we introduced. In the patients that had a visual assessment undertaken, 50% were found to have an impairment of vision which needed follow up by the optician or ophthalmologist upon discharge.
Conclusions: Our results show the importance of identifying visual impairments as it may be a significant contributing factor to a patient's fall. Our vision assessment tool is a simple but effective at quickly identifying those who may need further follow-up.
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P-506

Do very older patients with traumatic intracranial hemorrhage (TIH) have different profile and worse prognosis if received antithrombotic treatment?

Abstract Area: Falls and fractures

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Introduction: Traumatic intracranial hemorrhage (TIH) generates a high burden of morbi-mortality. The objective was to assess the risk of poorer outcome in relation to antithrombotic use among patients with TIH.
Methods: Observational study of patients aged > 80 years admitted to an acute geriatric unit with TIH from December 1, 2016, to April 30, 2022. Demographic, clinical, neuroimaging and functional variables were included. The factors associated with poorer outcome (in-hospital complications and mortality) were analyzed.
Results: We included 169 patients (87.6 + 4.4 years, 61.5% women); 110 (65%) were on antithrombotic therapy (42.6% on antiplatelets, 48.7% on anticoagulants and 8.7% received both). Patients on antithrombotic therapy had a similar profile to patients not taking antithrombotic: age (87.4 vs 87.8 years), female sex (61.8 vs 61%), nursing home residence (29.1 vs 20.3%), previous Barthel index (69.9 vs 75.9) and dementia (40.9 vs 37.9%). Patients on antithrombotics had not different prevalence of thrombocytopenia (14.5 vs 6.8%), anemia (48.2 vs 39%), cognitive decline at admission (82.7% vs 93.3%), delirium (56.4 vs 49.2%), functional impairment (95.1 vs 93.1%), infections (46.4 vs 44.1%), nor mortality (20% vs 16.9%). Antithrombotic treatment did not increase the incidence of intracranial bleeding: subdural hematoma (73.6% vs 72.9%), epidural hematoma (4.5% vs 1.7%), subarachnoid hemorrhage (65.5% vs 67.8%,), intraventricular hemorrhage (22.7% vs 30.5%), intraparenchymal contusion (34.5% vs 37.3%) and number of bleeding lesions (2 vs 2.1).
Conclusion: In very older patients with TIH, there were no differences in profile, in-hospital complications, and prognosis between who received antithrombotics versus those who did not.

P-507

Fallers versus non-fallers: phenotypical differences from an osteoporosis outpatient clinic

Abstract Area: Falls and fractures

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Introduction: Falling may have grave consequences for patients with osteoporosis. The aim of this study was therefore to investigate the phenotypical differences, fallers versus non-fallers, in patients suffering from osteoporosis.
Methods: Patients from an osteoporosis outpatient clinic (Rigshospitalet-Glostrup, Denmark), were included from May 2018 to November 2019. Bone mineral density and appendicular lean mass were assessed by DXA. Hand-grip-strength (HGS), 30-s-chair-stand-test (CST) and gait-speed (GS) were measured. Data on daily activity, dizziness, walking balance, need of walking aid, previous fracture and fall within the last year were obtained. Differences were tested by t test, Wilcoxon-sum-rank or Chi-square-test. P values adjusted for multiple testing < 0.05 were considered significant.
Results: 162 patients (age 80.1 ± 6.2SD; 143 women/19 men) were included; 70 fallers and 92 non-fallers. The fallers had slower GS (0.91 vs 1.06 m/s, $p = 0.002$) and fewer CSTs (9.0 vs 11.5 rep, $p = 0.01$), but HGS and muscle mass were not different. The fallers had poorer balance, needed walking aid more frequently and appeared with lower weekly activity (all $p \leq 0.04$). Dizziness and previous fractures tended to be more frequent in fallers, but the differences were non-significant.

Key conclusions: The present results showed frequent fall among patients with osteoporosis. The fallers were characterized by lower GS, fewer repetitions of CST, and were overall more fragile with daily lower daily activity level, balance issues and need of support from walking compared with non-fallers. The results suggest that physical performance should be assessed in osteoporotic patients to recommend strength- and balance training when relevant.

P-508

Fallers versus non-fallers: phenotypical differences from an osteoporosis outpatient clinic

Abstract Area: Falls and fractures

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P-509

Are vertebral fragility fractures appropriately managed following outpatient identification: a retrospective analysis

Abstract Area: Falls and fractures

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Introduction: Vertebral fragility fractures (VFF) are the most common osteoporotic fracture and a powerful predictor for future fractures 1–3. With our ageing population, early identification and treatment of VFF remains crucial in reducing its socio-economic burden and health related-disability. However, up to 70% remain undiagnosed 4,5 and therefore untreated. Therefore, we aimed to investigate the prevalence of VFF identified on outpatient radiographs and their subsequent management in efforts to consolidate local practices.
Method: We conducted a retrospective analysis of outpatient spinal radiographs for vertebral fractures over a four month period in a tertiary hospital in England (September–December 2020).
Results: A total of 418 spinal radiographs were analysed. The median age was 75 years (IQR 16) and females accounted for 71.6% of this cohort. Seventy four (17.7%) radiographs confirmed a new vertebral fracture, of which 27 (36.5%) had $\geq$ 2 vertebral fractures. Of the 74 patients, 46 (62%) had subsequent DEXA imaging. Mean time from spinal radiograph imaging to DEXA scan was 144 days. Forty five (61%) patients had a history of previous vertebral fractures, of which 16 were on osteoporosis treatment. After 8 months following identification of VFF, only 40 patients (54.7%) were on osteoporosis treatment; 32 (43%) bisphosphonates, 4 (5%) denosumab, and 4 (5%) teriparatide. Sixteen (39%) of these patients were referred onto a specialist bone clinic for review.
Conclusion: A significant proportion (45.3%) of patients with newly identified VFF remained untreated after 8 months. A national pathway can be the catalyst to streamline local processes for ongoing management of VFF.

P-510

Reasons for institutionalization after hip fracture surgery

Abstract Area: Falls and fractures

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Introduction: Hip fracture is increasingly frequent due to the progressive ageing. It represents a health problem according to its consequences about morbidity, mortality, functional dependency and institutionalization.
Objective: To analyze the destination after hip fracture surgery during the last 10 years regarding different variables.
Methods: Longitudinal descriptive study of admitted patients to Orthogeriatrics since 2012. Variables: Age, sex, location, cognitive and functional evaluation, rehabilitation, functional gain, geriatric syndromes and morbidity. SPSS26.
Results: N = 1635, average age 86.13, 78.04% women. Previous institutionalization 31.34%. New institutionalized patients 7% (25 men and 89 women) + temporary stay 6.5% (18 men and 89 women). Pfeiffer > 5/medical discharge: 71 permanent institutionalization (PI), 29 temporary stay (TS) p 0.000. Functional evaluation (Dependency) Previous/Admission/Discharge Mild 49.3%/0.3%/16.9% Moderate 16.5%/2.2%/29.8% Severe 14%/8.6%/29.4% Total

15.9%/88.9%/23.8%. Rehabilitation < 72 h 30.8% Functional gain > 20 80.5% Geriatric syndromes/Morbidity and destination Delirium 32%/PI 9.8%, TS 5.6% (p 0.001) Dysphagia 12.2%/PI 11.2%, TS 3.4% (p 0.000) Pressure ulcers (PPU) 4.2%/PI 10.4%, TS 3% (p 0.006) Depression/anxiety 52.4%/PI 7.2%, TS 6.4% (p 0.000) Dementia 37.2%. PI 46.5%/TS 16.8% (p0.000) Heart failure 16%/PI 5%, TS 5.3% (p 0.001) Cerebrovascular accident (CVA) 18.3%/PI 4.7%, TS 4.7% (p 0.009) Chronic kidney disease (CKD) 16%/PI 6.9%, TS 3.4% (p 0.000) Age-adjusted Charlson: Medical discharge > 5: 97 PI, 74 TS (p 0.000), p 0.000: sex institutionalization.
Key conclusions: Women who suffer hip fracture present greater institutionalization than men at discharge. Deficient functional gain, dementia, depression/anxiety, detection of dysphagia, onset of delirium and PPU are determinant for institutionalization. Dementia, heart failure, CVA and CKD have an influence on not returning home.

P-511

Frailty, falls and poor functional balance predict the new onset of fear-related activity restriction in older adults: a prospective 12-month cohort study

Abstract Area: Falls and fractures

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Introduction: Fear of falling is common in older adults, and often causes activity restriction. This can trigger a debilitating spiral of physical deconditioning, falls, social isolation, diminished confidence, and a loss of one's sense of self. However, not every fearful older adult will restrict their activities. We therefore adopted a prospective cohort study to investigate the factors that predict the development of fear-related activity restriction in older people aged $\geq$ 75 years.
Methods: Data was collected as part of the Community Ageing Research 75 + (CARE75 +) study. 543 healthy older adults (Mage = 80.3 ± 4.4 years, range 75–98) who did not report fear-related activity restriction completed a battery of physical and psycho-social assessments at T1. We then assessed which variables predicted the onset of fear-related activity restriction at T2 (12-months later).
Results: 55 older adults reported to have started to restrict activity due to fear of falling at T2 (10.1% of overall sample), while 488 people reported to (still) not restrict their activities (89.9%). Three key predictors significantly predicted activity restriction group status at 12-months follow-up: greater frailty (Fried Frailty Index; OR = 1.58, p = 0.017), experiencing a fall between T1 and T2 (OR = 2.22, p = 0.021) and poorer functional mobility (Timed up and Go; OR = 1.08, p = 0.036).
Conclusions: These findings show that frailty, experiencing a fall and poorer functional mobility/balance contribute to the development of fear-related activity restriction. Clinicians working in balance and falls-prevention services should regularly screen for frailty, and patients referred to frailty services should likewise receive tailored treatment to help prevent the development of fear-related activity restriction.

P-512

Declining daily functioning as a prelude to a hip fracture in older persons: An individual patient data meta-analysis

Abstract Area: Falls and fractures

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Introduction: Daily functioning is known to decline after a hip fracture, but studies of self-reported functioning before the fracture suggest this decline begins before the fracture [1, 2]. This study aims to determine whether change in functioning in the year before a hip fracture in very old (80 +) differs from change in those without a hip fracture.
Methods: This two-stage individual patient data meta-analysis includes data from four population-based longitudinal cohorts from the Netherlands, New Zealand and the United Kingdom from the Towards Understanding Longitudinal International older People Studies (TULIPS)-consortium. Participants aged 80 + years were followed for 5 years, during which (instrumental) activities of daily living [(I)ADL] scores and incident hip fractures were registered at regular intervals. Z-scores of the last (I)ADL score and the change in (I)ADL in the year before a hip fracture were compared to the scores of controls, adjusted for age and sex.
Results: Of the 2357 participants at baseline, the 161 who sustained a hip fracture during follow-up had a worse (I)ADL score before the fracture (0.40 standard deviations, 95% CI 0.19–0.61, p = 0.0002) and a larger decline in (I)ADL in the year before fracture (− 0.11 standard deviations, 95% CI − 0.22 to 0.004, p = 0.06) compared to those who did not sustain a hip fracture.
Conclusions: In the very old a decline in daily functioning already starts before a hip fracture. Therefore, a hip fracture is a sign of ongoing decline and what full recovery is should be seen in light of the pre-fracture decline.
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P-513

Falls predict more severe geriatric status in elderly patients with osteoarthritis

Abstract Area: Falls and fractures

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Aim: To study the features of the geriatric status of elderly patients with osteoarthritis (OA) who had a fall.
Materials and methods: Included 697 patients with OA (72.9 ± 7.5 years, women 82.2%) and identified 2 groups of patients: 1 group—patients with falls occurring during the year (n = 350), 2 group—patients without falls (n = 347). The groups were comparable in age, duration of OA, incidence of artroplasty. A comprehensive geriatric assessment (CGA) was performed.
Results: In group 1, the duration of pain with exacerbation of OA was longer (5 (3; 7) vs 3 (2; 7) days, p = 0.021), as was its intensity (50 (30; 60) vs 40 (20; 55) VAS, p = 0.002). More than 60% took NSAIDs. Neuropathic pain was diagnosed in 1 group more often than in 2 groups (14.4% vs 9.9%, p = 0.030). In CGA, it was found that patients with falls compared to patients without falls performed worse all tests SPPB, the sum of which was 7 (4; 9) vs 8 (6; 10), p < 0.001. In the presence of falls, patients with OA had a higher probability of osteoporotic fractures according to FRAX (15.9 ± 8.9 vs 12.1 ± 6.5%, p < 0.001). SARC-F results were higher in group 1 than in group 2 (4 (3; 6) vs 2 (1; 4) points, p < 0.001), and dynamometry—lower (20.9 ± 7.3 vs 22.7 ± 7.6 kg, p = 0.002). TUG in patients with falls 13.7 ± 10.1 s vs 11.9 ± 6.9 s in patient without falls, p = 0.008. The results of the MMSE 26.3 ± 4.2 vs 27.1 ± 3.3 (p = 0.011), respectively. Frailty was diagnosed in 210 (60%) patients with OA and falls and in 146 (42%, p < 0.001) OA without falls.
Conclusion: Falls are a geriatric syndrome leading to a worsening of geriatric status and an increase in the incidence of frailty in patients with osteoarthritis.

P-514

Physical performance estimated by the SPPB, as a predictor of falls and serious falls in the elderly

Abstract Area: Falls and fractures

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Introduction: The decrease in physical performance is a risk factor for the onset of falls in the elderly. One of the test used to assess physical performance is the 'short physical performance battery test' (SPPB). But the ability of this test to identify patients who will present a fall and a serious fall has been scarcely studied. The objective of this study is to assess the association between the total score on the SPPB and the occurrence of falls and serious falls. The secondary objective of the study is to establish the ability of the SPPB's score to identify patients who will experience falls and serious falls.
Methodology: Retrospective cohort study design in 90 patients evaluated between November 1, 2019, and October 30, 2020, in a geriatric outpatient clinic dedicated to falls. The initial assessment included a standardised geriatric assessment comprising an SPPB. The identification of a fall and their complications is carried out by a telephone interview at the end of the follow-up period (June 2021).
Results: Of the 90 patients analysed, 52% (47) presented a fall of which 80% (38) were severe falls. Patients who suffered a fall during the follow-up had a greater prevalence of polypharmacy (78% vs 58%, p = 0.041) and cognitive impairment (68.2% vs 42.9% p = 0.014). They also averaged a lower total SPPB score than patients who did not fall (F [1.87] = [5,596], p = [0.020]). On ROC analysis, SPPB is associated with the occurrence of falls and severe falls. This analysis gives us an optimal cutoff point for SPPB score below 6 (sensitivity 73.91%; specificity 53.4% with an RR = 1.8 for the fall and RR = 2.35 for the severe fall). On multivariate analysis, total SPPB score wasn't independently correlated with the occurrence of falls and severe falls, unlike cognitive impairment (OR = 3.28 95% CI 1.17–9.23 p = 0.024) and polypharmacy for severe falls (OR = 3.72 95% CI 1.02–13.50 P = 0.045).
Conclusion: SPPB is associated with the occurrence of falls and severe falls. In addition, this test identifies the patients most likely to present a fall and a complication of this fall with an optimal cutoff point at 6. It is therefore judicious to use this test in clinical routine in combination with the search for polypharmacy and cognitive impairment.

P-515

Population-based interventions for preventing falls and fall-related injuries in older people: a cochrane review

Abstract Area: Falls and fractures

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Introduction: Nearly one third of people aged 65 + years and living in the community experience a fall every year. Falls are associated with 20–30% of mild to severe injuries that may require medical support. The aim of this study was to assess the effects of population-based interventions (targeting whole communities rather than targeting selected individuals), for preventing falls and fall-related injuries in community-dwelling older people.
Methods: We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register, CENTRAL, MEDLINE, Embase, CINAHL, PsycINFO in December 2020. We used Cochrane methodological procedures. Primary outcomes: rate of falls, number of fallers, and number of people experiencing 1 + injurious falls. Meta-analysis was not feasible given insufficient data. We used narrative synthesis and GRADE to assess methodological quality.
Results: We included eight studies (three trials, three CRTs, and two prospective intervention studies) with 992,138 community dwellers aged 60 + years across seven countries. We found very low to moderate certainty evidence that multicomponent interventions targeting behaviour and environmental modifications reduce incidence of falls and fall-related fractures in the community.
Key conclusions: Standardised effect estimates indicate that multicomponent population-based interventions targeting behaviour/environmental modifications in the community can reduce falls. Findings need to be interpreted with caution due to low certainty evidence. Cluster RCTs should be employed for population-based interventions. This abstract is based on a draft and pre-peer review version of a Cochrane Review. Upon completion and approval, the final version is expected to be published in the Cochrane Database of Systematic Reviews (www.cochranelibrary.com).

P-516

Are cognitive enhancers falling short?

Abstract Area: Falls and fractures

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Introduction: Cognitive enhancers are commonly prescribed to those diagnosed with neurodegenerative diseases, such as Alzheimer's disease (AD). UK guidelines currently recommend acetylcholinesterase inhibitors (AChEIs) for mild-moderate AD which enhance cholinergic activity to provide modest improvements in attention and memory. However, multiple studies report syncope, bradycardia and consequent falls in AD cohorts taking AChEIs. These adverse events, alongside AChEIs providing only transient cognitive benefits, lead to a deprescribing dilemma for physicians.
Methods: We present a review of the literature surrounding falls risk in people taking cognitive enhancers, including AChEIs and memantine. **Results:** We initially explore why those with cognitive impairment experience a twofold increase in falls risk. Further, interactions between acetylcholine-mediated cognition, attention and gait are clarified: explaining the additional use of cognitive enhancers as adjuvant therapies in movement disorders like Parkinson's disease (PD). Subsequently, we evaluate both clinical trials demonstrating a reduction in falls in people taking cognitive enhancers, alongside studies that support their deprescription due to increased falls risk. Finally, we discuss the potential and pitfalls of deprescribing cognitive enhancers to reduce falls.
Conclusions: Current literature demonstrates mixed findings regarding falls in people taking cognitive enhancers. Some studies demonstrate that AChEIs and memantine reduce falls in AD and PD populations. However, many report growing concern for fall-related adverse effects linked to cognitive enhancers. Thus, in the absence of a clear consensus for deprescribing cognitive enhancers due to increased falls risk, we advocate instead for detailed assessments, treatment individualisation, and guidance through patient priorities.

P-517

A survey of falls services in Europe: identifying gaps and opportunities for sustainable falls prevention

Abstract Area: Falls and fractures

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Background: Falls and fall-related injuries have negative effects both on quality of life and functional independence. Furthermore, they are associated with increased morbidity, mortality, and health care costs. The World Falls Prevention and Management Guidelines is expected to be available in September 2022. In current health care landscape it is difficult to successfully and durably implement falls prevention. Understanding the current practices of falls prevention and existing challenges in Europe would help successful implementation of the anticipated guidelines in Europe. Aims of this projects are to characterize current falls prevention practices and approaches, and to identify gaps, threats, challenges, and opportunities in falls prevention in Europe.
Methods: We will conduct an online survey. The developed questionnaire includes questions on current falls prevention practices, knowledge and education and barriers and facilitators for falls prevention activities. The survey will be distributed in over 20 European countries with the help of EuGMS Special Interest Group (SIG) on Falls and Fracture members and through EuGMS channels from August 2022 onwards.
Expected results and conclusions: Based on the findings of the survey, the EuGMS SIG on falls and fractures will formulate and publish recommendations for preferred falls prevention practices and approaches among European geriatricians. We will report on how to improve the implementation and we will contribute to the alignment and optimization of falls prevention in Europe.

P-518

Title: Implementation of evidence-based fall-prevention programs in the communal health care services in Norway: The FALLPREVENT research project

Abstract Area: Falls and fractures

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Introduction: Falls and fall-related injuries, for example hip fractures, are major contributors to the burden of disease in older people and thus a challenge to the health care systems. Annually, one third of community-dwelling people above 65 years experience a fall. Despite robust evidence for effective fall prevention programmes, routine uptake of these simple exercise interventions is unsatisfying. There is an urgent need to translate evidence-based fall prevention into routine practice, both to improve the adherence to and the quality of fall prevention in practice. FALLPREVENT focusses on implementation of evidence-based practice in fall prevention in the communities.
Methods: FALLPREVENT focusses on older community-dwelling "fallers", those above 65 years who have experienced one or more falls the last year. In 2022, two pilot studies will develop and test implementation strategies for fall prevention in municipalities. A cluster-randomised controlled trial will be run in 40 municipalities from April 2023, to evaluate effectiveness of implementation strategies of fall prevention programmes. We will include both quantitative and qualitative outcome measures.
Results: This is an ongoing 4-year project. At the EUGMS conference we will present plans for the two pilot studies and the RCT, with focus on how we may implement successful strategies of fall prevention programmes in the municipalities in Norway.
Key conclusion: The FALLPREVENT project will systematically develop and test tailored implementation strategies in health care services in the communities. There is a global emphasis on the need for implementation of evidence in clinical practice, teaching and research.

P-519

Descriptive and comparative study of the clinical characteristics before and after proximal humeral fracture in patients over 75 years old

Abstract Area: Falls and fractures

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[1]Parc Salut Mar

Introduction: Proximal humeral fracture (PHF) is the third most common fracture in the elderly,but there is little information about it. Our objective was to describe the clinical characteristics of patients > 75 years with PHF and compare their clinical characteristics before and after the diagnosis.
Methods: Retrospective, descriptive study of patients with PHF diagnosed between January and December of 2020. The following information was collected from the clinical records of each patient the year before and after the diagnosis: sociodemographic characteristics, functional status and presence of geriatric syndromes. A bivariate analysis was made to investigate potential differences in geriatric syndromes and functional status before and after the diagnosis.
Results: 114 patients were included: 78.9% women, mean age 83.5 ± 5.41. In the year prior to the fracture, 65.8% of the patients were independent, 43% had suffered ≥ 1 fall event, 30.7% had cognitive impairment, 71.9% had polypharmacy and 36% had mood disorders. In the year after the diagnosis, there was a significant increase in cognitive impairment (41.2%; $p < 0.01$) and polypharmacy (83.3%; $p < 0.01$). There was a significant decrease in independent patients (31.6%; $p < 0.01$) and presence of falls (32.5%; $p < 0.01$).
Key conclusions: Patients with PHF are mainly previously independent women and they may experience a significant worsening of their functional status after PHF. These patients could benefit from a multidisciplinary approach during the diagnosis and follow-up. It is necessary to carry out prospective studies on the management and consequences of a PHF among the elderly.

P-520

Can machine learning algorithms help clinicians predict and prevent falls in nursing homes?

Abstract Area: Falls and fractures

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Introduction: Falls are a critical public health concern, especially in nursing homes where they have serious medical, social, economic consequences. Prior to multidisciplinary intervention to reduce those consequences, fall risk should be measured and monitored. However, our ability to identify those at risk and detect early changes in balance capacities, that could lead to falls, is still limited. Longitudinal follow-up is also problematic as it requires sufficiently sensitive and reliable means to quantify those changes. Thanks to technological developments in recent years, instrumented examination of balance could provide clinicians with more information than clinical tests and help better target fall prevention programs, but require them to work with experts from other domains such as signal processing, data analysis and machine learning.
Methods: In a prospective, multicenter clinical trial, we'll follow institutionalized seniors over 65 during 6 months through computer-assisted posturography and automatic gait analysis. The data gathered will be correlated with the daily record of falls in the institution and data from medical records.
Results: Through machine learning, we expect our algorithms to provide high accuracy in detecting future falls and to provide relevant markers for clinicians in the longitudinal monitoring of the balancing abilities of frail elderly people. The sensitivity of this algorithm will also be assessed as participants improve their physical condition during a 3-months physical activity program.
Key conclusions: This trial could provide the basis for posturographic and gait normative values in older adults, and a fall risk monitoring solution to be implemented in nursing homes.

P-521

Silver trauma review clinic: a novel model of care for older trauma

Abstract Area: Falls and fractures

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Background: Increasing numbers of older patients are presenting to emergency departments (ED) following trauma. These patients require multidisciplinary care that the traditional trauma model fails to provide. Therefore, a Silver Trauma Review Clinic (STRC) was developed in conjunction with the geriatric, ED and physiotherapy services. The goal of the clinic is to provide a comprehensive multidisciplinary management for older patients following non operative traumatic injuries.
Methods: A retrospective review of routinely gathered data was performed of the first 100 patients reviewed in the STRC between May 2021 and April 2022. ResultsMedian patient age was 81 years old (IQR 73–86) and 69% were female. Median clinical frailty score was 3 (IQR 2–4). Median time from the patient's initial ED presentation to clinic was 14 days (IQR 10–24) and median time from the initial review to discharge was 21 days (IQR 8–35). Mean number of assessments was 2. 70% of presentations were as a result of falls under 2 m. Primary injuries were 17% vertebral fractures, 49% limb fracture, 17% thoracic trauma, 11% pelvic trauma with 15% of patients suffering from multiple injuries. 59% were already on bone protection and a further 29% were commenced on treatment. 21% had an abnormality on Mini-cog testing. 21% were newly diagnosed with orthostatic hypotension and 49% had difficulty with balance or walking. Only 5% required surgery.
Conclusion: The STRC is a novel approach of patient focused multidisciplinary trauma care for frail older patients following non operative trauma, ensuring timely care.

P-522

Hip fracture in centenarians: clinical profile, complications and functional recovery

Abstract Area: Falls and fractures

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Introduction: The number of hip fractures in centenarians is growing steadily, and data on this population are sparse. Our aim was to describe the characteristics, complications, functional evolution, and mortality in centenarians admitted to the hospital with hip fractures.
Methods: Retrospective study of patients 100 years or older admitted with hip fracture to an Orthogeriatric Unit in a 5-year period (January-2017–December-2021). Sociodemographic data, functional status at admission and one month after discharge, comorbidities, type of fracture, perioperative complications, and mortality were collected.
Results: 31 patients (mean age 101.4 years; 90%women) were included. On admission, 45% walked independently (FAC $\geq$ 4), mean Barthel Index (BI) was 55.6 $\pm$ 23.8, 84% lived at home, 68% dementia, 29% diabetes, and 26% chronic kidney disease. Mean CIRS-G was 12.4 $\pm$ 4. Seven patients (23%) reported previous fractures, although only 2 were on anti-osteoporotic treatment. Pertrochanteric fracture was the most frequent fracture type (61%). All but one were operated, 59% within 48 h. Most frequent perioperative complications were: delirium (52%), acute renal failure (45%), anaemia requiring blood transfusion (39%), constipation (36%), urinary tract infection (26%), respiratory infection (26%) and pressure sores (13%). The mean length of stay was 12 $\pm$ 3 days. Seven patients (23%) died during hospitalization. At discharge, 65% patients returned home, only two were transferred to postacute care. One month after discharge, only one patient walked independently; mean BI was 42.6 $\pm$ 17.7, and two additional patients had died.
Conclusions: Centenarians admitted to an Orthogeriatrics Unit were moderately dependent, almost half walked without assistance before the fracture. Most had perioperative complications, died or had a poor functional recovery one month after discharge.

P-523

A qualitative study of attitudes to physical activity in older British Caribbeans

Abstract Area: Falls and fractures

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Introduction: The health benefits of physical activity (PA) are well documented, and yet Older Adults (OAs) rarely attain recommended levels. Attempts to increase PA in this group is often unsuccessful in the real world due to poor adherence. For different ethnic groups, this may be due to cultural factors impacting the acceptability of PA programmes. Caribbean OAs were selected as a target ethnic group to better understand their specific barriers and facilitators to PA.
Methods: Semi-structured virtual interviews were carried out with representatives from the Caribbean community (n = 12) and health care professionals (n = 7) with a particular interest in older adults, in order to ascertain the various facilitators and barriers within this community to a PA programme.
Results: A thematic analysis of the interviews revealed a lack of understanding of what constitutes PA, as well as recommended levels of PA. A history of PA being a side-effect of daily life, rather than something performed for its own sake was also identified as a key issue. The social benefits from participating in PA with others was reported as being very important, and expected barriers such as cost and transport were also prevalent.
Conclusions: Understanding of the cultural influences on attitudes to PA can allow the development of programmes tailored to different ethnic groups. By improving understanding of the benefits of PA, and the acceptability of programmes offered, uptake and adherence may be improved, thus increasing the benefits to health.

P-524

Does a standardized treatment course affect mortality in hip fracture patients? Data from the Norwegian Hip Fracture Register

Abstract Area: Falls and fractures

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Introduction: We aimed to study the prevalence of good quality standardized treatment course for hip fracture patients in Norwegian hospitals and if the standardization affected 30 days mortality after hip fracture surgery.
Methods: Based on the Norwegian national guidelines for interdisciplinary treatment of hip fractures, nine criteria for standardized treatment were identified. In 2020, a questionnaire was sent to the Norwegian Hip Fracture Register's (NHFR) contacts at all Norwegian hospitals performing hip fracture surgery, mapping adherence to these criteria. Fulfilling 8 or 9 of the criteria was defined as having a standardized treatment course of good enough quality. Using data from the NHFR, 30 days mortality was compared for patients operated in hospitals with or without standardized treatment of good quality. Hazard Rate Ratios (HRRs) with 95% confidence intervals (CIs) were estimated with Cox regression adjusted for sex, age, and American Society of Anesthesiologists (ASA) class.
Results: Twenty-nine (67%) of 43 hospitals returned the questionnaire. Twenty of these (69%) had a standardized treatment course of good quality. Mortality after 30 days in 2016–2020 was significantly lower in these hospitals compared with hospitals without standardized treatment course of good quality [HRR: 1.13, 95% CI 1.04–1.23; p = 0.005].

Key conclusions: Two thirds of the responding hospitals met the definition of good quality treatment course for hip fracture patients. Mortality after 30 days was significantly lower in hip fracture patients treated in these hospitals as compared to patients treated in hospitals without standardized treatment of good quality.

P-525

Characteristic quality standards of an orthogeriatric unit, compared with results from the Spanish National Registry of Hip Fractures (RNFC)

Abstract Area: Falls and fractures

Maria Jesus Molina[1]

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Introduction: Hip fracture (HF) is a very common pathology in the elderly population. Its management in orthogeriatrics units (OU) tries to improve the functional and vital prognosis. The RNFC is a multicenter registry of numerous Spanish hospitals of the epidemiological, clinical and functional characteristics of patients with HF. Our hospital participates from the beginning 2017.
Material and methods: Descriptive study of patients older than 65 years admitted to an OU during 2021, 30 days follow up. We analyzed demographic and functional variables (previous Barthel Index (IB), prefracture mobility), prevalence of dementia (GDS), procedence (home or residence), type of fracture, incidence of delirium and pressure ulcers (PU), destination at discharge, in-hospital and month mortality, mobility per month and treatment for osteoporosis (OP) and compare with results of RNFC at 2020. Statistic analysis: SPSS V28.
Results: We had 181 pacientes with HF. Mean age 84.60 (66–98) years, 71.8% were women, come from home 80.1%, 48.6% had IB $\geq$ 60 and 82.2% were independent to walk; 35.4% had dementia. The more frecuent fracture was pertrochanteric (53.6%). 100% patients underwent surgery. 93.9% sat down first day after surgery. 71.8% were operated in the first 48 h. The average stay was 11.40 $\pm$ 5.65 días, they stayed at emergency room 17.50 $\pm$ 13.82 horas. 2.8% had PU $\geq$ 2 and 36.5% delirium. At discharge 45.3% went to home and 23.2% to a rehabilitation unit. 89.5% iniciate vitamin D supplements and 71.30% antiosteoporotic treatmente. At month 58.7% were independent to walk, functional loss 23.5%. In-hospital mortality was 6.6% and month mortality 7.7%.
Conclusions: We compare our results with RNFC. We have more average stay 11.4 vs 9.3 days, in-hospital mortality 6.6% vs 5.3%, but less month mortality 7.7 vs 10.1% and less function loss 23.5% vs 33.6%. Respect RNFC quality standars we have more patients intervened $<$ 48 h (71.8 vs 56.1), more patients sat down first day after surgery (93.9 vs 70.9), more patients with vitamin D at discharge (89.5% vs 78.8) and more patients with osteoporotic treatment at discharge (71.3% vs 50.9), it is the same independent mobility at month (58.7 vs 58.3) y less PU $\geq$ 2 (2.8% vs 5.2%).

P-526

The design and implementation of an abnormal serum plasma electrophoresis (SPEP) Haematology referral pathway for use in patients who have sustained hip fractures

Abstract Area: Falls and fractures

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Background: Hip fracture is a common manifestation of osteoporosis. All patients who sustain a hip fracture should receive a specialist bone health assessment, including Serum Protein Electrophoresis (SPEP). SPEP results can be challenging to interpret without training and expertise.
Methods: The Orthogeriatrics and Haematology teams designed an algorithm to guide evaluation of abnormal SPEP results in hip fracture patients. A retrospective study was then conducted using data from the local Hip Fracture Database in 2020, and the electronic laboratory system. The algorithm was used to determine which patients warranted haematology review and the electronic appointment system was accessed to review whether this cohort had been referred to our haematology colleagues if indicated.
Results: Of 270 hip fracture presentations, 19 duplicate records were excluded. Five patients had no data and three patients had passed away. Of the remaining 243 patients, 193 (79.42%) had SPEP's sent. Abnormalities were detected in 116 patients (47.74%). According to the SPEP referral pathway, two patients warranted routine referral and one patient required an urgent referral, none of whom appeared to have been referred to haematology. Two patients who did not warrant haematology referral were already under haematology for different conditions.
Conclusion: Not all patients who sustain acute osteoporotic fractures with an abnormal SPEP result require haematology referral. The need for a haematology referral can be guided by the SPEP result alongside clinical features. With the introduction of this pathway, it is proposed that all hip fracture patients will be triaged in a timely, appropriate, and consistent manner.

P-527

Characteristics of patients admitted to an orthogeriatric unit coming from home who go to a rehabilitation unit at discharge compared with patients who go back home

Abstract Area: Falls and fractures

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[1]Geriatrician

Introduction: Hip fracture (HF) is a very common pathology in the elderly population. Its management in orthogeriatrics units (OU) tries to improve the functional and vital prognosis. This patients are very heterogeneous and need differents approaches.
Material and methods: Descriptive study of patients older than 65 years admitted to an OU during 2021 coming from home, 30 days

follow up. We compared the patients coming from home who go to a rehabilitation unit (group 1) with those going directly home from OU (group 2). We analyzed demographic and functional variables (pre-fracture mobility, Barthel index (IB)), prevalence of dementia (GDS), type of fracture, average stay, mobility per month, re-entry first month. Statistic analysis: SPSS V28.
Results: We have 181 patients with HF, 123 come from home. Mean age 83.15 (66–98) years, 71.8% were women, 85.36% had a IB > 60, 88.6% were independent to walk; 22% have dementia. 42 patients (34.14%) went to a rehabilitation unit. The mean age was similar for two groups, the IB previous and the mobility prefracture was also similar, also the type of fracture was similar, less patients in group 1 had dementia, the average stay was 14.88 ± 4.44 to group 1 versus 10.92 ± 5.27 days to group 2 ($p < 0.001$), 51.21% of the group 1 had mobility independence at month versus 81.48% in the group 2. More patients re-entry for medical cause at the first month in the group 2 (11.11%).
Conclusions: Patients going to a rehabilitation unit from the acute OU have less dementia than patients going home, more average stay because it takes time to have a bed in the rehabilitation unit, worse mobility at the first month and less re-entry by medical cause.

P-528

The importance of the study of falls: about a case

Abstract Area: Falls and fractures

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An 89-year-old woman was referred to the Acute Geriatric Unit from the Nursing Home, due to functional impairment during three weeks, which coincided with two consecutive falls, without apparent aftermath. High blood pressure, type II diabetes mellitus, and chronic myeloproliferative syndrome highlighted as antecedents. Functionally, she was dependent for BADL with a life chair-bed life since falls. She had moderate cognitive impairment that had worsened since falls. Institutionalized. On physical examination was objectified a decreased level of consciousness (Glasgow of 3), unreactive to pain and bad general state. An urgent cranial CT was performed, showing an extensive right frontotempoparietal subdural hematoma with areas of recent bleeding and important mass effect with deviation of midline, subfaltial herniation with dilatation of the left ventricular system, and signs of transtentorial herniation. After two hours of admission, the patient began with seizures, so that the bad prognosis, and according to her family, an adequacy of therapeutic effort was made. Falls are the most common cause of injury in older patients, as well as traumatic brain injury. Complications resulting from falls are the principal cause of traumatic death in older adults. The rate of severe injuries in institutionalized are from 10 to 30% and subdural hematoma should be suspected, because the brain atrophy, advanced age, male gender and certain medications are predisposing factor. Its incidence doubles between 65 and 75 years, and continues to increase with age. It is important to perform a comprehensive study in patients with falls to avoid functional deterioration and severe unnoticed complications.

P-529

Using STOPPFall to measure point-prevalence of falls risk increasing drugs (FRIDs) in hospitalised older adults experiencing falls: a prospective observational study

Abstract Area: Falls and fractures

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Introduction: Falls represent a common geriatric syndrome sharing many characteristics with frailty. Falls-risk increasing drugs (FRIDs) represent a frequent modifiable risk factor for recurrent falls. We examine the relationship between frailty and FRIDs in older people who have fallen in the previous 12 months.
Methods: We undertook a prospective observational study that included patients aged ≥ 65 years with falls in the preceding 12 months. We excluded patients < 65 years, those unable to provide informed consent or declining participation. We reviewed patients' medical records and medications and interviewed the patient/carer. Frailty was measured using the Clinical Frailty Scale (CFS) and FRIDs prevalence was established using STOPPFall criteria.
Results: We present data for the first 128 participants among whom the mean ($\pm$ SD) age was 81.8 ($\pm$ 6.3) years, 64.8% were female, 91.4% lived at home and 64.8% required activities of daily living support. The prevalence of frailty was 59.4% (CFS ≥ 5). Median number of falls in the previous 12 months and median CFS score were 2 (IQR 3) and 5 (IQR 2) respectively. 106 patients (82.8%) had ≥ 1 STOPPFall-defined FRID. There was significant positive correlation (Spearman's rank correlation) between total number of medications and number of FRIDS ($r = 0.52$, $p = 0.01$) and a positive correlation between number of FRIDs and CFS ($r = 0.24$, $P = 0.006$).
Conclusion: STOPPFall-defined FRIDs were detected in over 80% of older fallers. Polypharmacy and CFS-defined frailty predicted the presence of FRIDs. STOPPFall explicit criteria provide a useful and straightforward tool for FRIDs identification towards deprescribing and falls prevention in older people.

P-530

Is orthostatic hypotension associated with altered cerebral perfusion during active standing?

Abstract Area: Falls and fractures

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Introduction: Orthostatic Hypotension (OH) is associated with poor outcomes in later life including depression, cognitive impairment and falls. Whilst it is hypothesised that OH disrupts cerebral blood flow

leading to hypoperfusion, this has not been robustly demonstrated to date. This study investigated the association between OH and cerebral perfusion during orthostasis using a non-invasive surrogate of cerebral perfusion, Near Infrared Spectroscopy (NIRS).
Methods: Four-hundred ninety-one patients (58% female, median age 65, IQR 38–92) attending a falls and syncope service underwent measurement of beat-to-beat blood pressure (BP) by finometry and real-time frontal lobe perfusion (% TSI: Tissue Saturation Index) by NIRS during the active stand. This study examined the association between OH and change in cerebral perfusion (delta TSI) over time using mixed-effects linear regression, with adjustment for important clinical covariates.
Results: Nearly two-fifths of the sample (189/491, 38.5%) met criteria for OH occurring between 30 and 120 s after standing. Baseline TSI ($p = 0.0157$) and TSI throughout the stand was significantly lower ($p < 0.001$) in OH versus non OH patients. Using mixed effects linear regression models, there was a significant relationship between OH and delta TSI per second after standing ($\beta - 0.003$, -0.004 to -0.001, $p < 0.001$) which persisted following adjustment for confounders including age, sex, baseline blood pressure, cerebrovascular and cardiovascular disease, depression/anxiety, diabetes, systolic blood pressure, antihypertensives, and antidepressants ($\beta - 0.003$, -0.005 to -0.001, $p < 0.001$).
Conclusion: OH is independently associated with a reduction in frontal lobe cerebral perfusion which may explain the significant link between OH and negative brain health outcomes.

P-531

Deprescribing dilemmas: alpha blockers and centrally acting antihypertensives in people who fall

Abstract Area: Falls and fractures

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Introduction: Alpha-blockers are commonly prescribed for both the management of lower urinary tract symptoms in people with benign prostatic hyperplasia (BPH) and hypertension. Centrally acting antihypertensives are used less commonly but form an important part of the tool kit for managing difficult to treat hypertension or where other agents are contraindicated. However, concerns have been raised about both groups of drugs regarding the risk of postural hypotension and falls in older adults. This has been a particular concern in cognitively and physically frail groups. BPH is common and alpha-blockers are an effective treatment, in an older adult who is falling this can lead to a prescribing dilemma.
Methods: A scoping review of the literature was carried out including primary research, published systematic reviews and meta-analyses, and falls guidelines.
Results: Alpha-blockers are commonly associated with postural hypotension. Where such drugs are being considered patients should be carefully assessed for the presence of orthostatic hypotension and not started if present. Centrally acting antihypertensives should be prescribed with caution in older frailer people and if deprescribed care should be taken to avoid rebound hypertension.
Key conclusions: Patients should be made aware of the risks of postural hypotension, falls, and syncope with alpha-blockers and centrally acting antihypertensives when they are prescribed. In particular, they should be informed that the highest risk of falls is when treatment is initiated (or when dose increased). Functional status is important and should guide decision making. In the absence of specific RCT evidence individualise treatment whenever possible, guided by patient priorities.

P-532

Lower FAB score is associated with fall risk in oldest patients with MCI: results from the MEMENTO cohort

Abstract Area: Falls and fractures

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Intoduction: Mild cognitive impairment (MCI) is defined as cognitive decline with preserved autonomy. MCI prevalence was 14.8% for ages 75–79, and 25.2% for 80–84. The risk of falls is higher in people with MCI than in cognitively healthy people. Nonetheless, fall prevention is still insufficient. This may be due to a lack of specific tools in this particular population. Thus, we aim to identify fall risk factors in patients aged 75 and more and who live with MCI.
Methods: MEMENTO is a French prospective, multicentric cohort of people with MCI recruited from 26 memory clinics. Fallers were defined as participants having fallen at least once during the study's 2-years follow-up period. For our study, we included participants older than 75 years. Bivariate and multivariate analysis were conducted to compare clinical, neuropsychological and biological data at baseline between fallers and non-fallers.
Results: Among 694 included patients, 16.9% (117) have fallen at least once during the follow-up. Fallers were older, predominantly women, frailer and lived more frequently alone. They performed also less well in executive tests. Frontal Assessment Battery (FAB) test remained significantly worse in older fallers after adjustment for age, gender and sociodemographic and clinical variables.
Conclusion: Our study showed that usual sociodemographic factors were associated with higher risk to fall in oldest patients with MCI. More particularly, FAB test could be a useful tool to identify fall risk in those patients. Executive dysfunction might constitute a target for future falls prevention trials.

P-533

Relationship between cardiorespiratory fitness, static balance and gait parameters

Abstract Area: Falls and fractures

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Background: Impaired static balance is a risk factor for falls in older people. Recent studies suggest a relationship between static balance and acute aerobic strain. The influence of cardiorespiratory fitness (CRF) on static balance as well as reactive dynamic balance or individual fall risk remains unclear and will be analysed in the CareFall study.

Methods: 100 participants will be included in the study. So far, 28 participants with and without a fall history (71.8 ± 5.45 years) were tested. Besides the assessment of foot elevation at midswing (FEM) during a gait analysis on a treadmill after 5 min of familiarisation, participants were tested for individual CRF, by assessing oxygen uptake ($V'O_2$) at the first ventilatory threshold (VT1). Postural sway, as an indicator for static balance was assessed before and after peak exercise (Δswaypeak), as well as after 6 min of exercise at VT1 (ΔswayVT1), using inertial measurement units.
Results: Preliminary results show a correlation between Δswaypeak and $V'O_2$@VT1 ($r = -0.389$, $p = 0.037$), as well as Δswaypeak and FEM ($r = -0.413$, $p = 0.029$), but no correlation between the other parameters ($p > 0.05$).
Key conclusions: The preliminary results of the CareFall study indicate a relationship between CRF and postural stability after exercise, but not after moderate exercise. Participants with greater sway after peak exercise show lower FEM values during treadmill walking. Further analyses will focus on the evaluation of reactive dynamic balance after acute aerobic strain and the association with CRF. The preliminary results indicate that CRF is a potential falls risk factor to be considered in further research.

P-534

FastTraX: a fracture response service for Nursing home residents

Abstract Area: Falls and fractures

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Introduction: Nursing Home Residents (NHR) are the frailest group of older people and require a gerontologically attuned approach to care. The new FastTrax fracture response service has been developed as a result of a QI project to evaluate the need for this service. The data leading to the development of this pathway is presented here. FastTraX ensures NHR receive optimal orthopaedic and gerontological care without necessity for emergency department (ED) presentation.
Methods: A retrospective, medical chart review was completed on all NHRs who presented over12-months to a level-4 hospital ED following a fall/injury. Included patients were nursing home residents with suspected fracture discussed with the on-call orthopaedic service. Patients who required more complex imaging other than plain film or with known/suspected head trauma were excluded. Data collected included demographics, clinical and imaging details, and care outcomes.
Results: In 2021, there were sixty-nine (mean age 80.3, 82.6% female) NHR presentations to the ED with fracture/injury where orthopaedic opinion was sought following X-ray. 49.2% (34/69) patients were admitted, all of whom had confirmed fractures. However, 32.3% (11/34) of admitted NHRs were conservatively treated with an average length-of-stay of 3.6 days before discharge to NH. 6/34 (17.6%) of admitted NHRs died, and 5 of those deaths occurred post-operatively. Of the 50.7% (35/69) discharged directly back to NH from ED, 45.7% (16/35) of those had no fracture, whereas 54.2% (19/35) were discharged for conversative management Therefore, potentially only 29/69 (33%) ED presentations required definitive orthopaedic/gerontological intervention necessitating admission and two-thirds are potentially avoidable.
Conclusion: The new FastTraX fracture response service is a RANP coordinated integrated service combining use of on-site mobile radiological diagnostics in the NH, a fast-track ambulatory orthopaedic-consult clinic, and specialist gerontological care delivered in timely response to support NH staff in avoiding ED transfer where appropriate.

P-535

Descriptive analysis of the Getafe Hospital database of the National Hip Fracture Registry

Abstract Area: Falls and fractures

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Introduction: The Spanish National Hip Fracture Registry (NHFR) is a large database that collects information on healthcare for hospitalized patients diagnosed with hip fracture. The main objective of this registry is to obtain information to develop new strategies in order to improve our healthcare.
Methods: A retrospective, observational study was carried out in the Getafe Hospital—Spain. 591 patients were included in the NHFR from January 2017 to December 2021. Data collect provided information on patient mobility and osteoporosis treatment, surgical management, complications, and mortality. A descriptive analysis was performed obtaining frequencies, mean and standard deviations.
Results: 591 patients with a mean age of 86.6 years old were analysed, 73.6% females. Regarding mobility, while 83.1% were independent indoor and/or outdoor pre-fracture, only 53% remained as such 30 days after fracture. 35.9% obtained Pffeifer < 3 at admission. Pertrochanteric fracture was the most frequent (50.3%), 28.6% overall was subcapital and 20.6% from other localization. Osteosynthesis was realized in 59.9% and in 27.7% was practised arthroplasty. 88.2% received spinal anesthesia and 53.1% nerve block. Surgical delay time was of 59.61 h. 86.6% sat down on first day after surgery. Hospitalization lasted a mean of 11.77 days. At discharge 9% had pression ulcers. At 30 days 7.6% were readmitted and we calculated a mortality of 4.7%. In order to the specific osteoporosis treatment: 11.8% received pre-fracture, 31.8% at discharge and 38.2% at 30 days.
Conclusion: This results have helped us to develop new protocols to guarantee the minimum functional decline in our patients.

P-536

Impact of rollator use on gait and balance in the oldest old: new strategies for falls prevention?

Abstract Area: Falls and fractures

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Introduction: Rollator users have often been confronted with a history of gait disorders, falls and insecurities, thus leading to the walking aid prescription. Studies, explicitly evaluating gait and postural control of walking aid users are missing. This study aims to identify differences regarding gait and balance between older adults with and without experiences with a walking aid.
Methods: Overall, 70 older adults, n = 24 frequent rollator users (≥ 3 months, ø at least 1 h/day; 84.5 ± 5.5 years; GRoll), n = 21 older adults with gait insecurities (80.1 ± 5.7 years; GUsi), and n = 25 older adults with no gait instabilities (75.6 ± 4.0 years; GNorm) participated. Assessments included the Short Physical Performance Battery (SPPB), Falls Efficacy Scale (FES-I), Montreal Cognition Assessment (MOCA), and gait analysis on a perturbation treadmill (Motek). Balance and gait parameters were recorded via accelerometry (APDM Opal).
Results: GNorm showed significantly better scores in SPPB (11 ± 0.7 vs 8 ± 1.7 points) and FES-I (8 ± 1.4 vs. 13 ± 4.5 points) compared to GRoll. A minimum number of six fallers within the last 12 months were reported in each group. Descriptive differences among the groups were also detected in sagittal and coronal plane activity patterns during postural control as well as in double support time, stride length, and gait speed during treadmill walking. Final results and statistics will be presented in October.
Key conclusion: To the best of our knowledge, this is the first study evaluating gait and postural parameters of frail older adults with mobility impairments on a perturbation treadmill. Our findings will contribute valuable information for falls prevention strategies in frail older people.

P-537

Implementing a Digital Falls Prevention Program (KOKU) for Community Dwelling Older Adults with support from care providers: application of the nonadoption, abandonment, scale-up, spread and sustainability (NASSS) framework

Abstract Area: Falls and fractures

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Introduction: Falls are a growing global public health concern. We conducted an implementation evaluation of a digital falls prevention (FaME/OTAGO strength and balance) program known as, 'KOKU' for community-dwelling older adults aged ≥ 55 with support from Care Providers.
Methods: Qualitative evaluation was guided by the NASSS Framework. Online training was given to Care Managers who cascaded the training to carers who then trained eligible older participants to use KOKU (3 times per-week, over 12 weeks). Data collection included observations, records and telephone interviews (11 users; 9 Carers/Managers) to explore multiple perspectives. Data were analysed following inductive and deductive approaches.
Results: Older participants (n = 46) from 6 Care Providers (mean age 76; range 56–99) participated. Themes identified across the NASSS domains were (1) Condition: KOKU was implemented with participants with a wide range of conditions; suitability was guided by perception of benefits, safety and willingness to use (2) Technology: carers and users reported minimal training was required. Those unfamiliar with technology needed initial support that reduced over time. (3) Value: positive outcomes (physical, psychological) were reported by majority of participants (4) Adopter System: training and clear messaging to users was deemed important (5) Organisation: staff capacity and readiness to innovate affected uptake (6) Wider context: staff shortages was the main implementation challenge (7) Embedding/adapting over time: post study implementation has continued indicating the high demand for falls prevention services.
Key conclusions: A digital falls prevention program may be a safe and suitable option for community-dwelling older adults in receipt of care support.

P-538

Forecasting through the initial assessment of hip fractures

Abstract Area: Falls and fractures

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Objective: To know the relationship existing between the degree of frailty at admission of patients with hip fracture, its evolution during hospitalization and mortality at 1 year.
Methodology: Prospective observational study of patients hospitalized for osteoporotic hip fracture with data from June 2018 to January 2020. Chi-square was performed with linear association by linear statistical analysis with the SPSS v25 program. Variables: sociodemographic data, degree of frailty using the Fragile Index (VIG), functional status using the Barthel Index (BI) and cognitive impairment using the Pfeiffer Test (PT) and the Red Cross Cognitive Disability Scale (ECRM), comorbidity with the Charlson syndrome (CI), medical-surgical complications, discharge prescription and death.
Results: N = 319, mean age 86.4 years (SD ± 6.9). 73.0% female. 71.2% live at home. 52.7% of the patients did not present cognitive impairment (ECRM ≤ 1). 44.8% presented functional dependence (BI ≤ 60). 12% had high comorbidity (CI ≥ 3). 44.2% moderate frailty (VIG>0.37). Regarding fractures, 46.4% were pertrochanteric, 39.8% subcapital and 13.2% subpertrochanteric. At discharge: 49.9% had moderate-severe cognitive impairment (PT ≥ 5), 24% were prescribed discharge. The destination at discharge was 26.3% home, 43.6% rehabilitation and death 4.4%. After a year, 27% died. It was found that VIG is related with the following: death at 1 year (p value<0.001), Acute Confusional Syndrome (p value<0.001), urine retention (p value = 0.02), renal complication (p value = 0.006) and injuries due to pressure (p value = 0.003).
Conclusions: Frailty determines worse health outcomes and generates a greater need for socio-health resources. Detection of frailty on admission can help prevent complications and intervene on them early.

P-539

Vertebral fractures in older patients with COPD: an underdiagnosed and undertreated entity

Abstract Area: Falls and fractures

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Background: Patients with COPD are at increased risk of osteoporosis. Vertebral fractures (VF) are the most common manifestation of osteoporosis, yet only a quarter of incident radiographically identified VF are clinically diagnosed. This study aims to assess the frequency of VF in patients admitted with acute exacerbation of COPD

Methods: A retrospective review of AECOPD admissions over a four-month period was performed. Information on baseline characteristics, prescribed medications and reports of radiological imaging were obtained from Electronic Healthcare Records.

Results: In total 116 patients were included. In 24% (n = 28), VF was present on imaging. Females accounted for 64.3% (n = 18). Median age was 80 (76–85) and median CFS was 6. There was no documented diagnosis of osteoporosis in 67.8% (n = 19). VF were initially detected on CT thorax imaging performed to assess for pulmonary pathology in 35.7% (n = 10) cases. Vitamin D3 was prescribed in 60.7% (n = 17), concurrently with calcium in 28.6% (n = 8). Antiresorptive therapy was prescribed in 39.3% (n = 11), oral bisphosphonates in 4 patients and denosumab in 7. Vitamin D (OH) level was measured in 78.6% (n = 22) patients and was insufficient (< 50 mmol) in 25% (n = 7).

Conclusions: Almost one quarter of patients admitted with an AECOPD had VF present. Identification and treatment of VF was suboptimal. Most were not identified as having osteoporosis nor prescribed antiresorptive therapy. CT imaging should be routinely reviewed for the presence of insufficiency fractures as part of case finding initiatives. Bone health assessment should be routinely performed in patients with COPD, particularly those with frequent corticosteroid usage.

P-540

Asymptomatic orthostatic hypotension and risk of falls in community-dwelling older people

Abstract Area: Falls and fractures

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Introduction: Many older people with orthostatic hypotension (OH) may not report typical symptoms of dizziness, light-headedness, or unsteadiness. However, the relationships between OH and falls in the absence of typical symptoms are not yet established.

Methods: Continuous orthostatic BP was measured during active stand using a Finometer at Wave 1 of TILDA in participants aged ≥ 70 years. OH, with and without dizziness, was defined as a sustained drop in systolic BP ≥ 20 and/or diastolic BP ≥ 10 mm Hg at 30, 60 and 90 s post-standing. The association between symptoms of dizziness and orthostatic BP was assessed with multi-level mixed-effects linear regression; logistic regression models assessed the longitudinal relationship between OH and falls at 6-year follow-up (Waves 2–5).

Results: Almost 11% (n = 934, mean age 75 years, 51% female) had OH, two thirds of whom were asymptomatic. Dizziness was not associated with Systolic BP drop at 30 (β = 1.54 (− 1.27, 4.36); p = 0.256), 60 (β = 2.64 (− 0.19, 5.47); p = 0.476) or 90 s (β = 2.02 (− 0.91, 4.95); p = 0.176) after standing in adjusted models. Asymptomatic OH was independently associated with unexplained falls (odds ratio 2.01 (1.11, 3.65); p = 0.022) but not explained falls (OR 0.93 (0.53, 1.62); p = 0.797) during follow-up.

Conclusions: Two thirds of older people with OH did not report typical symptoms of light-headedness. Dizziness or unsteadiness after standing did not correlate with the degree of orthostatic BP drop or recovery. Participants with asymptomatic OH had a significantly higher risk of unexplained falls during follow-up, and this has important clinical implications for the assessment of older people with falls.

P-541

Gender differences in admitting unit for patients with trauma: insights from an australian trauma older persons trauma service

Abstract Area: Falls and fractures

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Introduction: The Royal Melbourne Hospital is a tertiary hospital with a Level 1 adult major trauma service. Not all older patients admitted with trauma are admitted to a trauma unit, some are admitted under a general medical (GM). This study examines whether gender is associated with admitting unit.

Methods: In this prospective cohort study, all patients aged 65 and older admitted with trauma between February and June 2022 were included. Baseline characteristics measured were sex, age, baseline function, comorbidities and low fall vs other mechanism of injury. The outcome was admitting unit (trauma, general medicine (GM), orthopaedics and other). Descriptive statistics were used for baseline characteristics and multivariate analysis was used to measure association with the primary outcome. Results Of the 336 patients admitted with a diagnosis of trauma 180 were women and 157 were men. Women had a higher average age than men (80.3 (range 65–102) vs 76.0 (65–99). 82 women and 118 men were admitted to trauma (46.1% vs 75.2%), 13 women and 1 man were admitted to GM (7.3% vs 0.6%), 71 women and 31 men were admitted to orthopaedics (39.9% vs 19.8%) pr < 0.00). Multivariate regression for trauma vs GM including age, Modified Early Warning Score and low fall, Women were less likely to be admitted to trauma compared to men (OR 0.09, 95% CI (0.01, 0.70).

Conclusions: Compared to men women with trauma were less likely to be admitted under a specialist trauma unit. It is important to determine whether this is clinically appropriate or the result of unrecognised bias.

P-542

'Not just a tick box exercise': a quality improvement project in the prevention of fragility fracture

Abstract Area: Falls and fractures

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Introduction: UK Osteoporotic fracture incidence is nearly 5,00,000 per year [1]. All women aged 65 years and over and all men 75 years and over should be assessed for fragility fracture risk. The aim was to first identify at-risk patients and then reduce the risk of fragility fracture [2].
Method: A retrospective observational study was conducted between October 2019 and September 2021. Three cycles of the audit were undertaken consisting of 50 patients ($n = 50$) in each. After the baseline data collection in October 2019, Plan Do Study Act (PDSA) cycle 1 was implemented in the form of an educational session and pharmacists' checklist. After the second data analysis in January 2021, PDSA cycle 2 was implemented. Firstly, we amended our comprehensive geriatric assessment booklet to include fracture risk data and prompts in the post-take section. Secondly, we introduced a fragility fracture prevention flow chart [2].
Results: A baseline audit showed that 1 (2.2%) patient was assessed for fragility fracture risk even though 46 of them were at risk. After the 1st PDSA cycle, 15 (31.3%) out of 48 at-risk patients were assessed, 8 (16.7%) were not appropriate and 25 (52.1%) were missed. After the 2nd PDSA cycle, 34 (69.4%) out of 49 at-risk patients were assessed, 10 (20.4%) were not appropriate and 5 (10.2%) were missed. Key conclusionChanging practice using practical but effective methods has more real-life value than treating bone health as a "tick box exercise".
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P-543

The 'Bermuda Triangle' of orthostatic hypotension, cognitive impairment and reduced mobility: prospective associations with falls and fractures in Community-Dwelling older people

Abstract Area: Falls and fractures

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Background: Orthostatic Hypotension (OH), cognitive impairment (CI) and mobility impairment frequently co-occur in older adults. This study examines clustering of these three geriatric syndromes and their longitudinal association with falls/fractures in a large cohort of people $\geq$ 65 years.
Methods: OH was defined as a drop of $\geq$ 20 mmHg in systolic blood pressure when measured after standing from a seated position and/or reporting unsteadiness when rising from a chair. CI was defined as MMSE $\leq$ 24 and/or self-reporting memory as fair/poor. Mobility impairment was defined as a Timed Up and Go $\geq$ 12 s. Logistic regression models, including 3-way interactions, assessed the longitudinal associations with future falls and fractures.
Results: Of those with at least one geriatric syndrome (993/2108, 47%), over two thirds (644/993) had any one of the three, one quarter had any two (261/993) and almost 10% (88/993) had all three syndromes. One fifth of the sample had an unexplained fall during follow-up (mean 6.6 years), while one tenth had a fracture. The cluster of OH, CI and mobility impairment was independently associated with > fourfold likelihood of unexplained fall (Odds Ratio 4.36 (2.61–7.28); $p < 0.001$) and double the likelihood of fracture (Odds Ratio 2.51 (1.27–4.96); $p = 0.008$), when compared to other clusters. There was no association with explained falls.
Discussion: The 'Bermuda Triangle' of co-existing OH, CI and mobility impairment, was independently associated with increased risk of future unexplained falls and fractures amongst community-dwelling older people. This simple risk identification scheme may represent an ideal target for multifaceted falls prevention strategies.

P-544

railty syndrome is associated with changes in peripheral inflammatory markers in patienst with prostate cancer: a one year follow-up study

Abstract Area: Frailty and resilience

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To evaluate the role of peripheral inflammation (leukocyte differential count, the proinflammatory cytokines IL-beta, TNF-α, IL-6, IL-8, and the inflammatory markers fibrinogen and C-reactive protein [CRP]) in frailty syndrome in patients with prostate cancer (PCa) undergoing antiandrogen therapy (ADT). A significant negative correlation between the severity of frailty syndrome and lymphocyte count was observed ($P < 0.01$). The concentration of IL-6 ($P < 0.05$), CRP ($P < 0.05$), and fibrinogen ($P < 0.01$) were significantly associated with frailty syndrome, but not of TNF-α, IL-beta, or IL-8. The severity of frailty syndrome was not dependent upon the clinical disease stage at diagnosis, the time elapsed since PCa diagnosis, the presence of metastases, or prostatectomy. Multinomial regression analysis showed that among the inflammatory biomarkers, those significantly and repeatedly (baseline and follow-up time points) ($p < 0.05$) associated with frailty syndrome were high IL-6 levels and low lymphocyte counts in blood. Other biomarkers such as IL-8, monocyte counts and C reactive protein were significantly associated with frailty syndrome ($p < 0.05$) in cross-sectional analyses, but they do not predict frailty progression at 1 year-follow-up. Receiver operating characteristic curve analysis showed that both lymphocyte counts and IL-6 concentration significantly ($p < 0.05$) (although moderately) discriminate PCa patients that progressed in the severity of frailty syndrome. IL-6 and lymphocytes count are possible biomarkers, useful for identifying frail patients and predicting the progression of frailty in PCa under ADT.

P-545

VACS index and frailty: one part of the whole

Abstract Area: Frailty and resilience

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Objectives: In HIV-medicine, the Veterans Aging Cohort Study (VACS) index is associated to numerous geriatric syndromes and has also been recently used as a proxy of frailty. However, using it as a proxy for the frailty phenotype may inadvertently interchange two different concepts. The purpose of this study was to evaluate to what extent the frailty phenotype may be explained by the VACS index.
Methods: Cross-sectional analysis from 393 participants with HIV aged 50 or older, receiving care at a tertiary care, university-affiliated hospital in Mexico City. Regression models were run to determine how the index's scores explained frailty scores or the probability of being frail. Receiver operating characteristic area under the curve (AUC) was calculated to estimate how VACS and frailty scores distinguished three outcomes: disability for instrumental and basic activities of daily living and falls.
Results: Mean age 57.6 (SD 6.5) years, and 87.3% men. Logistic regression showed that pre-frail and frail participants had higher probabilities for greater VACS scores (OR = 1.05 and OR = 1.17); linear regression showed that VACS scores have a positive association with frailty scores (ß = 0.026). VACS index only explained < 11% of the variability observed in frailty. In comparison with the VACS index, the frailty score showed better receiver operating characteristic AUC scores for both disabilities and falls.
Key conclusions: High VACS scores were associated with a greater probability of physical frailty; however, with a weak correlation. Given its components, the index may be closer to a deficit accumulation approach; thus, we should be cautious when using it as a general proxy of frailty. However, the VACS Index may be used as a means to identify persons who might benefit from further comprehensive geriatric assessment.

P-546

Prevalence and risk factors of frailty among HIV-infected adults aged 70 years or older: the ANRS EP66 SEPTAVIH study

Abstract Area: Frailty and resilience

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Background: Frailty, a phenotype that correlates with adverse health outcomes in older persons, has been evaluated mainly in middle-aged persons living with HIV (PLWH). The French multicenter prospective ANRS EP66 SEPTAVIH study aimed to assess frailty prevalence and risk factors in PLWH aged 70 or older and who have been on antiretroviral treatment (ART) for at least 12 months.
Methods: Parameters collected at baseline included Fried frailty phenotype criteria, sociodemographic data, medical/HIV history, functional status, morbidities including impaired cognitive function, depression, history of falls, and comedications. We measured the prevalence of frailty and compared the characteristics of frail versus pre-frail and robust participants using univariate (Kruskal–Wallis tests for continuous variables and Chi-2 tests for categorical variables) and multivariate analyses.
Findings: 510 PLWH were included with a median age of 73 years; 81.4% of them were male. The median HIV and ART durations were 22.7 years and 15.7 years, respectively. The prevalence of frailty was 13.5%, and of pre-frailty 63.3%. In the multivariate analysis, increasing age (OR 1.79 for a 5-year increment; 95% CI 1.32–2.41), deprived socioeconomic status (OR 3.17; 95% CI 1.76–5.70), and multimorbidities (OR 2.03; 95% CI 1.06–3.90) were all associated with frailty.
Conclusion: We found a prevalence of frailty in 13.5% of PLWH aged 70 or older, with two thirds of them pre-frail. Independently of age, low socio-economic status and comorbiditiesmore than HIV-related factors were associated with frailty in older PLWH, suggesting the need to target these factors to promote successful aging in these patients.

P-547

Correlation between SARC-F score and handgrip strength (HGS) in hospitalised older patients

Abstract Area: Frailty and resilience

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The SARC-F questionnaire is a screening tool for Sarcopenia. SARC-F score is a subjective evaluation as judged by the patient or the healthcare worker. A score of ≥ 4 indicates the need for further evaluation, and it predicts that a patient has reduced muscle strength and performance. Handgrip strength, using the dynamometer, is an objective measure of muscle strength.
Aims/objectives: To determine if there is a correlation between the subjective SARC-F and the objective HGS in older inpatients.
Methods: A prospective, cross-sectional observational analysis was carried out on inpatients aged 60 years and older, in a single UK district hospital. SARC-F score was calculated. Patients had their HGS measured as part of screening for frailty in older patients. The JAMAR hydraulic hand held manometer was used to measure HGS in both hands. The Southampton Protocol was used to obtain the final scores. Patients unable to perform the test, stroke patients with hemiparesis and patients with incomplete data were excluded. SPSS

27 software was used for statistical analysis. Baseline characteristics were calculated using summary statistics and correlation analysis was calculated using the Pearson's correlation coefficient and linear regression analysis.
Results: 105 patients were analysed; 42 males and 63 females. Mean age was 83 years (SD 8.2). There was statistically significant inverse correlation between SARC-F and HGS in all patients, males and female ($r = -0.410$; $p < 0.001$, $r = -0.477$; $p = 0.001$, $r = -0.297$; $p = 0.018$, respectively).
Conclusions: SARC-F score is negatively correlated with handgrip strength (HGS) in older inpatients. This correlation appears to be stronger in older male patients than in female older patients.

P-548

Prognostic impact of frailty on functional autonomy in older adults with hypertension

Abstract Area: Frailty and resilience

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Introduction: The present study aimed to investigate the prognostic impact of frailty on decline of functional autonomy in a sample of hypertensive older adults.
Methods: We performed a longitudinal observational study including patients aged 75 or older evaluated at the Hypertension Clinic and Memory Clinic of the Division of Geriatric and Intensive Care Medicine, Careggi Hospital, Florence. Participants underwent a multidimensional geriatric assessment including frailty evaluation using Fried Frailty Phenotype, Clinical Frailty Scale [CFS], Frailty Index and two physical performance measures (gait speed and Short Physical Performance Battery [SPPB]). The primary outcome was reduction of autonomy in daily activities according to the Barthel Index ("functional decline"). The predictive performance of different frailty measures was evaluated based on ROC curve analysis, sensitivity, specificity and accuracy.
Results: Among 99 hypertensive older adults (mean age 81 years, 59% women, follow-up 13 months), functional decline occurred in 39% of patients. Participants with functional decline had a higher prevalence of cognitive impairment and frailty according to all the frailty scales used and a worse physical performance. Frailty Index and CFS showed the best predictive performance (AUC 0.715 and 0.708, respectively), followed by physical performance measures (AUC 0.691). All frailty measures showed good specificity (66–79%) and moderate sensitivity (54–70%). Gait speed showed the highest accuracy (71%) and achieved 57% sensitivity and 79% specificity, resulting in better predictive performance than the SPPB.
Conclusions: The CFS and gait speed may represent useful instrument to detect frailty and predict functional decline in hypertensive older adults.

P-549

Frailty screening in a nursing home using the Fried criteria

Abstract Area: Frailty and resilience

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Objective: Perform a frailty screening in a nursing home using the Fried criteria and propose a multimodal intervention with physical exercise through technological tools like ICOPE Handbook App and Vivifrail App in order to reverse pre-fragile states.
Material and methods: A frailty screening program was carried out at the "La Salina" nursing home located in Ciudad Rodrigo—Salamanca. Using exclusion criteria 65 people were discarded and 44 people were included in the sample. They were characterized according to four variables: sex, age, marital status and level of education. Fried criteria were used modifying the measurement of certain domains, such as muscle strength.
Results: Older adults who have between 1 and 2 criteria of frailty are 11 people of which 60% are men and 40% are women. Thus, according to the states of fragility 54.5% were considered frail, 20.5% non-frail, and 25% pre-frail results that differ from other preliminary studies.
Conclusions: There is the possibility of carrying out a frailty screening in a nursing home using Fried criteria. When they are modified, it cannot be that their measure is the most appropriate and more studies with standardized designs and criteria are needed to generalize the data of a study for future research. The use of technological tools is an important support for the comprehensive geriatric assessment, since it is possible to carry out personalized evaluations and plans, which reinforce person centered care.
Key words: Fried criteria, frailty, ICOPE, pre-frailty, Vivifrail.

P-550

Prognostic role of orthostatic blood pressure in hypertensive older adults

Abstract Area: Frailty and resilience

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In older adults, orthostatic hypotension (OH) represents a risk factor for adverse outcomes (falls, syncope, cardiovascular events), while its prognostic impact on functional autonomy remains currently unknown. We enrolled hypertensive patients aged 75 + from the Hypertension Clinic and Memory Clinic of the Geriatric Department of Careggi Hospital, Florence, Italy. Participants underwent multidimensional geriatric assessment and measurement of BP within 3 min of standing. Decline in functional autonomy was defined according to the Barthel Index assessed during phone interviews. Cox regression analysis was applied to investigate the association of functional decline with standing systolic BP (sBP) and orthostatic systolic BP drop (ΔBP), expressed as a percentage of supine systolic BP. Among 99 patients (mean age 81 years, 56% female), prevalence of OH was 44%, with a mean immediate BP drop of 14.8 ± 14.2% (ΔBP-t0), a

mean drop of 10.6 ± 16.3% at the first minute (ΔBP-t1) and 8.0 ± 14.4% at the third minute (ΔBP-t3). After a median follow-up of 13 months, 37 patients reported functional decline. sBP and ΔBP were comparable in patients with and without functional decline. In a sex- and age-adjusted Cox regression analysis, sBP was not associated with functional decline. A greater systolic BP drop at 1 min within standing was associated with an increased risk of functional decline in frailer subjects (HR 1.048, 95% CI 1.003–1.095), but not in fit ones (HR 0.969, 95% CI 0.918–1.022). Conclusions: a greater systolic BP drop at 1 min within standing predicts 1-year functional decline in older adults with hypertension and frailty.

P-551

Frailty education for the London Ambulance Service (LAS): an initiative aiming to improve screening for frailty utilising the Clinical Frailty Scale (CFS) [1]

Abstract Area: Frailty and resilience

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Introduction: The National Health Service Long Term Plan (NHS 2019) [2] advocates frailty screening within 30 min of patient arrival in the emergency department (ED). There is variation in frailty assessment across healthcare systems as per the 'Getting it Right First Time' review (GIRFT 2021) [3]. Frailty education could support the NHS in standardising frailty assessment and in meeting the 30-min target. This study aims to analyse the impact of frailty education on the confidence of LAS paramedics in using the CFS, prior to conveying patients to ED.
Method: Two virtual training sessions were conducted by a multidisciplinary faculty including Emergency, Geriatric and Palliative care medicine physicians. The core element was scoring frailty across different stages of a fictitious patient's journey, through CFS. The audience's confidence in using CFS pre- and post-training, was captured in real time, using the interactive web platform 'Slido', through a Likert scale from 1 to 5, with 1 indicating the lowest and 5 the highest level of confidence. Post-training evaluation forms were distributed through the 'Microsoft Forms' system.
Results: The percentages are mean values from both sessions. 115 paramedics attended; response rate was 39% in Slido and 34% in Microsoft Forms. Pre-training, the confidence in the use of CFS was 3/5 in 40% of the attendees. Post-training, this increased to 5/5 in 64%. 95% of respondents planned to use the CFS in electronic patient care records (ePCR), post-training.
Key conclusions: Virtual frailty education is a successful and scalable tool to improve confidence in CFS assessment amongst paramedics.
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P-552

Oral Frailty: Prevalence and Relationships

Abstract Area: Frailty and resilience

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Introduction: Oral frailty (OF), gradual loss of oral function combined with difficulty chewing in association with cognitive and physical decline, has been recommended to be considered as a geriatric giant. DENTAL has been suggested as a possible screening tool for OF. We have looked at the prevalence of OF amongst people admitted acutely to the acute medical/frailty wards in our hospital.
Methods: OF, dysphagia and frailty were screened for as part of the routine clinical assessment of patients during the usual clinical ward round. Screening tools used were DENTAL for OF, Rockwood Score for frailty and 4QT for dysphagia. Age, sex comorbidities and the need for formal care was documented.
Results: 101 people were assessed over a 4 week period. Mean age was 84 years (65–99), 58 (57.4%) were female, 31 (30.7%) were independent, 33 (32.6%) dementia, 57 (56.4%) frail, 54 (53.4%) had swallowing problems, and 34 (33.6%) OF. OF was associated with dysphagia ($p < 0.0001$), frailty ($p < 0.0001$), dementia ($p < 0.05$) but not sex. There was an association between needing care and frailty ($p < 0.01$) and OF ($p < 0.05$).
Conclusion: OF was present in 33.6% of those patients sampled, and was associated with dysphagia (97%), frailty (88%) dementia (47%) and requirement of formal care support (85%). The relationship between OF and frailty may be bidirectional, with poor oral health resulting in chronic oral inflammation being a final common pathway. Clinical staff need to be aware of OF and oral health and include oral screening in their clinical assessment of an older adult.

P-553

The relationship between frailty, hematological parameters and mortality in older adults with COVID-19

Abstract Area: Frailty and resilience

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Introduction: COVID-19 is a infectious disease that affects millions of people in the world and is an important cause of the morbidity and mortality. Frailty is a geriatric syndrome characterized by a decrease in physical and physiological reserve and increased vulnerability and

susceptibility to external stressors. It is an important cause of morbidity and mortality in older adults.
Methods: This was a prospective single-center study including 154 older patients ≥ 60 years of age. Frailty was evaluated with the FRAIL scale. Complete blood count, CRP, ferritin, D-dimer and troponin T levels were tested. Mortality status was assessed at 1st and 3rd months. Multivariate regression analyzes were run to assess independent relationship between frailty and mortality and hematological laboratory parameters.
Results: Forty-one of the 154 patients (%26.6) were categorized as frail. One month mortality rate was %19.61 (n = 30), 3rd month mortality rate was %24.3 (n = 37). In the frail and non-frail population, 1st month mortality rates were %33 (n = 10) and %23 (n = 7), respectively; 3rd month mortality rates were %38 (n = 14) and %19 (n = 7) ($p > 0.05$), respectively. Troponin T levels were significantly higher in the frail patients compared to the non-frail patients ($p < 0.001$). There was a statistically significant relationship between elevated troponin levels and mortality (1 month p: 0.015, 3 month p: 0.011).
Conclusion: In this study, there was no significant relationship between mortality and frailty status. A statistically significant relationship between elevated troponin levels and frailty was observed. There was also significant relationship between elevated troponin levels and mortality in our study.

P-554

Frailty scoring for older patients admitted to an emergency admissions unit

Abstract Area: Frailty and resilience

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Introduction: Frailty predicts poor clinical outcomes in older patients. Evidence supporting the uptake of frailty scores in older patients admitted to emergency admission units (EAU) is limited.
Methods: Prospective observational study of all consecutive medical patients aged 65-years and over admitted to an EAU between 28th March—11th April 2022. Clinical Frailty Scale (CFS) score was recorded by our Ageing and Complex Medicine (ACM) Team and scores compared to those documented by other colleagues.
Results: 305 patients were included, 53.44% females. 166 (54%) patients were reviewed by Acute Medicine (AM) with a median age of 76.2 (65–99) and 139 (46%) by ACM with a median age of 83.9 years (65–101). 225 (73.7%) individuals were frail (F = CFS ≥ 5) and 80 (26.2%) non frail (NF = CFS ≤ 4). F vs NF in AM (97 vs 69) vs ACM (128 vs 11). AM scored CFS in 129 patients (77.7%), 79 patients (61.2%) were not accurately scored and 37 (22.2%) were not scored. 6 patients scored as frail were non-frail and 33 scored as non-frail were frail (n = 39, 30.2%). CFS was scored in 137 (98.5%) ACM patients and 2 were not scored (CFS 5 & 7).
Conclusion: 3 in 4 patients were living with frailty. AM reviewed 86.2% of NF and 43.1% of F patients whereas 92% of patients reviewed by ACM were frail. A combination of age and frailty appear to identify patients more likely to benefit from ACM. 1 in 3 individuals assessed by AM were not accurately scored.

P-555

Health literacy, sense of coherence, and burden of caregivers of older adults living with frailty

Abstract Area: Frailty and resilience

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Introduction: Caregivers (CGs) play a crucial role in providing support to frail older adults. Health literacy (HL) is defined as personal resource that enable an individual to access, understand, appraise, and use information to participate in decisions related to their health or their care-receiver's (CRs) health. HL is a modifiable factor that could decrease the burden by improving comprehensiveness of health outcomes [1]. We aimed to assess potential associations between CG's HL, sense of coherence (SOC) and burden.
Methods: Observational cohort study was performed using convenience sample of caregivers of geriatric in- and outpatient attending in 2 geriatric departments between 1/06/20 and 31/09/2021. Following data were recorded: for CGs: demographic, socio-economics variables, burden, SOC, HL; for CRs: KATZ, dementia, NPI. Multivariable logistic regression was performed to identify factors associated with burden.
Results: 75 CGs were included (median age was 59 y (IQR 53–70), 46 were female). Median burden, SOC and HL were 32 (IQR 19–42), 68 (IQR 57–75) and 14 (IQR 12–15), respectively. 53 care-receivers had dementia. Caregivers with a high SOC reported a lower burden (OR 0.11 (95% IC: 0.02–0.54) while the presence of dementia of CRs significantly increased the burden (OR 6.02 (95% IC 1.61–22.5). Lower education (less than 9 years) was negatively associated with CG's HL.
Discussion: SOC and dementia in CRs were associated with CGS's burden, while this was not the case with HL. This may be due to the high level of HL in this small cohort. Further research is needed to examine relationships between CG's HL and CG's health outcomes.
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P-556

Circular RNAs in leukocytes: potential new biomarkers for frailty

Abstract Area: Frailty and resilience

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Introduction: Even if life expectancy has increased, health status commonly worsens with aging, so disability-free life expectancy has not improved. Frailty is an intermediate and reversible state that often precedes dependency and, therefore, its identification is crucial. However, there is no consensus on the best tools or biomarkers to identify frailty. Recently, circular RNAs (circRNAs) have emerged as new non-coding RNAs, which are formed by backsplicing. Their

regulatory role together with their high stability in biofluids makes them good candidates as biomarkers for several processes.
Methods: RNASeq was performed in leukocytes from 35 frail and 35 robust individuals. CIRI2 and Circexplorer2 were used for circRNA detection and DESeq2 for differential expression analysis. Validation was performed by qPCR. CircRNA candidates were studied in 13 additional elder donors before and after a 3-month physical intervention. R-studio was used for statistical analysis including Wilcoxon's rank-sum test, Pearson's correlation, ROC curves and a Linear Discriminant Analysis (LDA) to determine the best circRNA combination to discriminate frails from robusts.
Results: We found 89 differentially expressed circRNAs (p value < 0.05, FC $>|1.5|$) and several group-exclusive circRNAs. The upregulation of hsa_circ_0007817, hsa_circ_0101802 and hsa_circ_0060527 in frail individuals was validated. The combination of hsa_circ_0079284, hsa_circ_0007817 and hsa_circ_0075737 levels showed a great biomarker value with an AUC = 0.959. Moreover, has_circ_0079284 levels decreased after physical intervention in concordance with an improvement in frailty scores.
Conclusions: We describe for the first time a different circRNA expression pattern between frail and robust individuals and suggests that they could be used as minimally invasive biomarkers of frailty.

P-557

Developing a multidisciplinary training program for frailty in the community

Abstract Area: Frailty and resilience

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Introduction: Primary care providers are uniquely positioned to support frailty identification and management. Yet awareness of frailty remains an emergent concept that may not be routinely identified in primary care. Our purpose is to educate primary care providers on frailty in the community, especially in detecting reversible contributors of frailty.
Methods: We adopted a multidisciplinary on-the-ground training of primary care providers (doctors, nurses and therapists). This is part of the ongoing Geriatric service Hub (GSH) programme in the community including Bukit Batok polyclinic, Choa Chu Kang polyclinic and St Luke's Eldercare Centre, conducted weekly over 2 years (July 2019 to March 2022). It is helmed by a Senior Consultant Geriatrician, supported by an Advanced Practice Nurse and case manager from Ng Teng Fong General Hospital (NTFGH). It involves screening patients more than 65 years old, then training providers on a comprehensive multidisciplinary assessment and management. Data on the biological, psychological and social aspects of frailty were collected.
Results: Among 226 patients in the polyclinics, using the FRAIL scale, 60.6% were identified as frail and 38.9% pre-frail while using the clinical frailty score (CFS), 63% were identified as frail and 36% identified as pre-frail. Of all the 301 patients, primary care physicians identified 84% with visual impairment, 54% with sarcopenia (based on grip strength), and 42% with pain issues. Psychological and social issues were also identified—62% with cognitive concerns (based on MMSE) and 15% required financial assistance.
Key conclusions: A multi-disciplinary training program in primary care will identify reversible contributors of frailty.

P-558

Familial longevity, Frailty and Sarcopenia

Abstract Area: Frailty and resilience

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Background: Familial longevity confers advantages in terms of health, functionality, and longevity. We sought to assess potential differences in frailty and sarcopenia in older adults, according to parental history of extraordinary longevity.
Methods: 176 community-dwelling subjects aged 65–80 years were recruited in this observational case–control study, matched 1:1 for gender, age, and place of birth and residence: 88 centenarians offspring (cases), and 88 non-centenarians offspring (controls). Main variables were frailty and sarcopenia based on Fried's phenotype, and EWGSOP definitions respectively. Sociodemographic, comorbidities, clinical and functional variables, presence of geriatric syndromes and laboratory determinations were also collected to better characterize the sample. Related samples tests were applied, and conditional logistic regression was performed with the potentially confounding variables.
Results: Robustness in cases group were significantly higher, 31.8% vs 15.9%, with lower percentages of frail, 9.1% vs 21.6%, and pre-frail patients, 59.1% vs 62.5%, ($p = 0.001$), than in controls group. Cases also showed lower levels of IL-6, 1.03 vs 1.45 pg/mL ($p = 0.044$), than controls. The robust adjusted OR for cases was 3.00 (95% CI 1.06–8.47, $p = 0.038$). Cases also showed better muscle performance, with significant less weakness and slowness, but no significant differences in muscle mass and sarcopenia were found. Familial longevity was also associated with less obesity, insomnia, pain and polypharmacy, and higher educational level, total and low-density lipoprotein cholesterol.
Conclusion: Our study suggest an inherited genetic component in the frailty phenotype, while sarcopenia association with familial longevity remains challenging.

P-559

Simpler Modified Fried Frailty Scale as a practical tool to evaluate frailty: methodological report for its cross-cultural adaptation and validation

Abstract Area: Frailty and resilience

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Frailty is a common geriatric syndrome that indicates homeostenosis and increased risk of disability and mortality. It is amenable to intervention when detected. Hence, screening frailty is of utmost importance to preserve quality-of-life and function in older age. Simpler Modified Fried Frailty Scale is a very practical frailty screening tool that has recently been introduced and has rooted from the original Fried Scale. It is developed in Turkish and has been shown to predict mortality in nursing home residents. Considering the variety of lan-guages in Europe, it seems valid to adapt and validate this tool in different European lan-guages. Thereby, it is expected that clinicians will have the possibility to screen for frailty more quickly and easily in their practice across many countries. This report is written to explain the details of the final consensus methodology suggested for Simpler Modified Fried Frailty Scale validation in order to guide and help the research teams in their studies.

P-560

Biomarkers associated with frailty in the oldest-old population

Abstract Area: Frailty and resilience

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Searching for factors associated with frailty is essential for fundamental senescence understanding. The aim of this multicenter cross-sectional study was to find out biomarkers associated with frailty in the cohort of oldest-old people in Russian Federation.
Methods: The inclusion criteria were age 90 years and over and agreement to participate in the study. All participants underwent comprehensive geriatric assessment and blood tests on wide range parameters (glucose, HbA1c, lipid profile, apolipoprotein A1 and B, albumin, total protein, sex and thyroid hormones, IGF-1, 25-OH-vitamin D, leukocyte telomere length). Data was processed in RStudio version 4.1.2. To determine which biomarkers are associated with frailty intergroup comparison analysis was performed. The factors that showed significant difference between the groups were then included in the logistic regression. Differences were considered statistically significant with p-value < 0.05.
Results: In years 2019–2021 totally 3008 people (74.5% women) with mean age 92 years were enrolled in the study. Frailty was found in 82.2% of participants. Among the analyzed parameters only four biomarkers were significant different between the groups: 25-OH-vitamin D, apolipoprotein A1, apolipoprotein B, telomere length (p-value, 0.001, 0.004, 0.008, 0.012, respectively). Logistic regression showed that holding all other predictor variables constant, the odds of frailty occurring decreased by 14% (OR 0.857, 95% CI [0.780, 0.950]) for each 10 ng/ml increase in 25-OH-vitamin D, by 8% (OR 0.919, 95% CI [0.850, 0.990]) for each 1 unit increase in telomere length, by 0.004% (OR 0.996 95% CI [0.992, 0.999]) for each 1 mg/dl increase in apolipoprotein A1, and by 0.005% (OR 0.995 95% CI [0.992, 0.998]) for each 1 mg/dl increase in apolipoprotein B.
Conclusion: In this study 25-OH-vitamin D, apolipoprotein A1 and B, and telomere length were identified as protective factors for frailty in the oldest-old population. Further investigations are needed to include these parameters in the biological age model equations.

P-561

Phase-angle is associated with Frailty in community-dwelling older adults

Abstract Area: Frailty and resilience

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Introduction: Frailty is a geriatric syndrome associated with many adverse conditions. Malnutrition and sarcopenia are other conditions intertwined with frailty. Phase angle, which is used as an active and valid method in the evaluation of nutritional status and sarcopenia, shows the hydration state of the cell and the cell membrane integrity, and closely relevant to clinical outcomes and mortality in many chronic conditions. This study aims to evaluate the relationship between phase angle and frailty in community-dwelling older adults.
Methods: A total of 299 outpatients admitted to our hospital's geriatric outpatient clinic were included. Comprehensive geriatric assessment was performed on all participants. Frailty was evaluated via Clinical Frailty Scale (CFS), ≥ 4 level was accepted as living with frailty. All participants underwent Bioimpedance analysis (BIA) and Phase angle (PhA) was recorded for each participant automatically calculated by the BIA.
Results: Patients living with frailty were 46.8% of all participants. We found a significant difference between the mean ages of the two groups, people living with frailty were older than robust ones (p value < 0.001). The median PhA was narrower in patients living with frailty than robust ones, and the difference was statistically significant (p value 0.014). In multivariate regression analysis, it was shown that frailty defined by CFS is also associated with phase angle (OR 0.846 95% CI 0.747–0.959 and p value 0.009) along with the age, sex, handgrip strength, and nutritional status.
Conclusion: PhA calculated by BIA was significantly associated with cumulative frailty. Further research is needed to determine whether PhA demonstrates potential utility as a biomarker for frailty.

P-562

Indoor solid fuel use for heating and cooking with functional disability: a cross-sectional study among middle-aged and older adults in China

Abstract Area: Frailty and resilience

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Introduction: Evidence has demonstrated an association between air pollution and the deterioration in physical function. However, little is known about the independent and synergistic impacts of indoor solid fuel use for heating and cooking on functional disability.
Methods: This cross-sectional study included 7598 individuals aged ≥ 45 years from the China Health and Retirement Longitudinal Study baseline survey. Information on household primary energy sources for heating and cooking were collected by self-report. Functional disability was measured by the Katz index of activities of

daily living scale. Multivariable logistic regression analyses were performed to investigate associations of indoor solid fuel use for either heating or cooking, or both, with functional disability.
Results: Compared to none/clean fuel users, solid fuel users for both heating and cooking were at the highest risk of functional disability (OR 1.73; 95% CI 1.41–2.12), followed by individuals who used solid fuel for cooking alone (OR 1.70; 95% CI 1.22–2.36), and the lowest for those used solid fuel for heating alone (OR 1.44; 95% CI 1.16–1.80). We observed similar pattern of such associations among individuals aged $\geq$ 60 years, while the estimated risk was significant only for solid fuel use for both heating and cooking among the middle-aged group.
Key conclusions: Indoor solid fuel use for both heating and cooking were independently associated with greater risks of functional disability among middle-aged and older Chinese adults, especially for those aged $\geq$ 60 years. In addition, such association was more prominent among solid cooking fuel users, regardless of their heating energy source.

P-563

Vitamin D can be a resilience marker at the elderly?

Abstract Area: Frailty and resilience

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Introduction: Research that incorporates the concept of resilience, which refers to situations characterized by a positive or better-than-expected outcome to a particular form of stress, may have the potential to improve the policy and practice of elderly care. Most studies on resilience have focused on subjects who have suffered severe trauma, there are few on patients with chronic diseases.
Material and methods: 89 patients were selected according to criteria of inclusion (> 65 years) and exclusion (stroke, dementia, Parkinson's or myocardial infarction) with mean age (73.4 $\pm$ 5.7 years). We assed the level of resilience, stress and vitaminD (vitD) serum level. Test of 20 questions measures patients' level of resilience depending on the statements (1 = very untrue, 5 = very true); < 50 p is a low resilience status, 50–89p medium resilience status, > 90p high resilience status.
Results: Mean vitD level was 24.03 ng/ml (DS $\pm$ 10.105); 3.37% had severe vitD deficiency (< 10 ng/ml), 35.95% moderate deficiency (10–20 ng/ml), 38.2% relative insufficiency (20–30 ng/ml). The elderly patients are 90% with moderate degree of resilience, 7% high degree of resilience;only 3% scored < 50 points-low degree of resilience. The degree of resilience of patients is dependent on vitamin D correlation coefficient ($p = 0.0046$). Low serum vitamin D is associated with moderate and low score of resilience ($p < 0.001$). Distribution of stress:49% moderate degree of stress and 45% a low degree of stress. The correlation between stress showed associations with low vitD serum concentrations ($p = 0.042$).
Conclusion: The results support the concept of low vitamin D as a general risk factor to stress and that vitamin D could be a marker of resilience at elderly. Further studies must include the association with chronic disease and their implication in this process of resilience.

P-564

Feasibility of physical activity signposting for pre-frail older adults: a qualitative study

Abstract Area: Frailty and resilience

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Introduction: Some 14% of people aged 60 + in England are frail and 42% are pre-frail. Frailty prevalence increases exponentially with age resulting in hospitalisation, falls, loss of independence, disability and death. Although traditionally thought a unidirectional long-term condition, recent evidence suggest frailty can be delayed, and even reversed. Physical activity (PA) is effective in reversing/delaying some effects. Huge public health gains could be achieved from targeting pre-frail older adults with interventions to prevent/delay/reverse frailty. This study explores the feasibility of a PA signposting intervention targeting pre-frail older adults as a first step towards an intervention study.
Methods: In-depth qualitative interviews with key groups to be involved in a future intervention—general practitioners (GPs), physical activity referral staff (PARS), older adults.
Results: 43 interviews analysed using thematic analysis: PARS (16), older adults (22), GPs (5). Key themes: consensus intervention proposes a positive and proactive approach; PARS and GPs highlighted concern around recruitment pathways and potential impact of unmet need in addition to other general capacity issues involved in signposting. Other issues included understanding older adults' motivation to exercise, and more generally the messaging around PA.
Conclusion: MRC guidelines emphasise engagement of intended groups in intervention development to ensure it is acceptable. This study demonstrates clear need and acceptability for an intervention targeting pre-frail older adults, a need amplified by the deconditioning consequent on the COVID-19 pandemic. We will use this information to design our proposed intervention to focus on recruitment pathways; role of primary care; and physical activity messaging.

P-565

Positive project: maintaining and improving intrinsic capacity involving primary care and caregivers

Abstract Area: Frailty and resilience

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Background: POSITIVE technological ecosystem (home monitoring platform to follow up frail and pre-frail older persons) improves frailty $\geq$ 1 point on the Fried Phenotype (FP) and 5 points on the Frailty Trait Scale5 (FTS5), to prevent dependence and disability.
Methods: Multicentric (Spain, Sweden, Poland), non-inferiority, randomized, single-blind, prospective, 6-month follow-up pilot study. Sample: 300 participants (50 dyads older person/informal caregiver per country). Inclusion criteria: $\geq$ 70 years old, living at home with

supervision. Barthel ≥ 90. ≥ 1 FP criteria. Exclusion criteria: Inadequate home infrastructure. Not understanding the POSITIVE system. Illnesses that prevent exercise. Major psychiatric disorders. Alcohol/drug abuse. Living with another participant. Participation in other clinical trials. ≥ 3 hospitalizations in the last year. Control group (CG): Usual medical care (PC) Intervention group (IG): Multicomponent intervention supported by the POSITIVE technological services, including home monitoring of the gait speed, power in the lower limbs, involuntary weight loss and other relevant variables collected throughout questionnaires (falls, state of mind, etc.). Assessed (baseline, 3 and 6 months): both groups: demographic and clinical data, medication, anthropometry, Charlson index, Barthel and Lawton and Brody indices, FP, FTS5, Frail Scale, Gait Speed, SPPB, Up and Go Test, MoCA, Clock Test, Yesavage, EuroQL-5D-5L, MNA short version, WHODAS 2.0, Falls Questionnaire and organizational model. Participants, caregivers and professionals (baseline, 4 and 12 months): carers Organizational model and quality of life questionnaire. Acceptance, ease of use and user experience.
Results and key conclusions: POSITIVE finished in May 2022, the results and conclusions will be published during by Q4 2022-Q1 2023.

P-566

The facilitators and barriers to the implementation of routine frailty screening by nurses in acute geriatric wards: the theoretical domains framework

Abstract Area: Frailty and resilience

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Introduction: The objective was to assess barriers and facilitators to the performance of routine frailty screening by nurses.
Methods: A survey developed based on the Theoretical Domains Framework [1] was administered to nurses in the inpatient acute geriatric wards of a tertiary general hospital in Singapore. Mean domain scores (range 1–5, higher scores indicate stronger agreement) were examined to identify facilitators and barriers. Domains were mapped onto the three core domains of capability, opportunity, and motivation, and regression analyses were performed to investigate the relationship of these core domains with self-reported likelihood of routinely performing frailty screening for geriatric inpatients upon admission.
Results: 112 nurses completed the surveys. 21.4% of nurses agreed or strongly agreed that they routinely performed frailty screening in geriatric inpatients upon admission. Mean domain scores were significantly higher in the domains of intentions, goals, memory, attention and decision processes, social influences, behavioural regulation, environmental context and resources, emotions, social/professional role and identity, and knowledge for nurses who performed routine frailty screening versus those who did not. Age, clinical grade, the number of years working with the elderly or in the role, as well as scores in the domains of skills, optimism, beliefs about capabilities and beliefs about consequences did not differ between groups. Higher scores in the core domains of motivation and opportunity were associated with increased likelihood of performing frailty screening.
Conclusions: Interventions designed to enhance performance of routine frailty screening should utilise behaviour change techniques linked to the identified theoretical domains of motivation and opportunity.
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P-567

Frailty and functional ability in people with parkinsonism: results from the PRIME-UK cross-sectional study

Abstract Area: Frailty and resilience

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Introduction: Frailty and parkinsonism are both common in older people and associated with worse functional outcomes. The Survey of Health, Ageing and Retirement in Europe Frailty Index (SHARE-FI)75 + is a phenotypic frailty assessment tool that can be used in primary care. It generates a score between 0 and 1, classifying individuals as non-frail, pre-frail and frail. We have tested its use to assess frailty in people with parkinsonism without the need for in-person assessment.
Methods: Participants of this single-centre study self-reported answers to the five components of SHARE-FI75 + and the Parkinson's Disease Questionnaire-39 (PDQ-39). Efforts were made to reach typically under-represented groups. Linear regression was used to explore the association between frailty and the PDQ-39 activities of daily living (ADL) domain with age included in SHARE-FI75 + or added as a covariate. Results 98.6% of returned questionnaires had complete data for SHARE-FI75 + . Data for frailty and ADLs were available for 414 individuals with a mean age of 75.3 years ± 8.5, (67.7% male). 134 (32%) were categorised as non-frail, 181 (44%) as pre-frail and 99 (24%) as frail. SHARE-FI75 + was associated with PDQ-39 ADL domain score, (worse 5.3 points per 0.1 increase in frailty score; 95% CI 4.7, 6.0; p value < 0.0001) and was a better predictor than age alone or SHARE-FI75 + score (minus age) plus age as a covariate. Addition of disease duration improved the model further.
Key conclusion: Frailty score, calculated using SHARE-FI75 + , was feasible for self-completion, with telephone support if required, and predicted ADLs in people with parkinsonism.

P-568

Depression among nonagenarians -time trends and associated factors

Abstract Area: Frailty and resilience

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Clinical depression is rather rare among older individuals, but depressive mood is more common and known to be associated with several negative outcomes. Yet only few studies have focused on depression among the oldest-old who often suffer from multimorbidity and functional decline. In this study we investigate time trend and associate factors of depression among nonagenarian population. Data came from the Vitality 90 + Study, in Tampere, Finland. Mailed surveys have been conducted with the total population aged 90 or older in 2001, 2003, 2007, 2010, 2014, and 2018. Response rates varied between 77 and 86%. Altogether 31% responded at least in two surveys. The total number of observations was 7589. Depression (clinical depression or depressed mood) was asked as part of the list of nine health conditions. The frequency of depression declined from 24% in 2001 to 17% in 2018. Almost every second of those who reported depression in the first time of participation, reported it also in the second time. Each year, depression was more frequent among individuals with dementia, arthritis, mobility disability, or poorer self-rated health, but now with marital status. It was more frequent among those living in care facility than in ordinary home, but approximately as frequent among home-dwelling individuals who said that they need place in a facility. Every fourth or fifth nonagenarian suffers from depressive mood, and the condition is often long-lasting and associated with other health problems. In the last years of age for those living a very long life, decline in health and mobility are frequent and practically not preventable. Mental well-being should be an important dimension in care of older individuals.

P-569

Frailty in hospitalised older adults and their spouses

Abstract Area: Frailty and resilience

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Introduction: Hospital admissions are a critical time-point for assessing frailty. Frail older adults have high utilisation of healthcare resources and many require on-going care. Often spouses provide this care, however caregiving can lead to increased frailty in the caregiver. A description of frailty and caregiving within marital dyads has not been explored previously, in relation to hospital admissions.
Aim: To measure the frequency and describe the characteristics of frailty in hospitalised older adults and their spouse.
Methods: This was a cross-sectional study. Participants were recruited from geriatric and stroke services from October 2019-March 2020. Fried Frailty Phenotype (FFP) was used to test frailty. Clinical Frailty Scale, Grip Strength, Montreal Cognitive Assessment, Timed Up and Go, Geriatric Depression Scale and self-reported: mobility status, caregiving status, number of falls and number of hospital admissions were also assessed to describe the population.
Results: Data from 27 dyads that participated and consented were analysed using SPSS. A total of 15 patients (55.5%) and four spouses (14.8%) were classified as frail. Of 15 frail patients, four had frail spouses, five had pre-frail spouses and six had robust spouses. No pre-frail or robust patients had frail spouses. Spearman's Correlational analysis showed no correlation in FFP between patient and spouse ($r = 0.24$, $p = 0.23$). Participants that provided care (44.4%) accounted for 5 patients (frail $n = 4$) and 19 spouses (frail $n = 4$).
Conclusion: Frailty in dyads is heterogeneous. Caregivers are commonly frail and provide care to frail partners.

P-570

Impact of nicotinamide mononucleotide (NMN) for older diabetic patients with impaired physical performance: a prospective, placebo-controlled, double-blind study

Abstract Area: Frailty and resilience

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Objective: Nicotinamide adenine dinucleotide (NAD) is involved in regulating various biological phenomena. Nicotinamide mononucleotide (NMN) increases intracellular NAD levels, which may improve age-associated features. Therefore, we investigated the safety and efficacy of oral NMN supplementation (250 mg) in older diabetic patients with impaired physical performance.
Method: We conducted a 24-week placebo-controlled, double-blind study for male diabetic patients aged 65 years or older with reduced grip strength (< 26 kg) or reduced walking speed (< 1.0 m/sec). The primary endpoint was to evaluate the safety of oral NMN administration and the amount and rate of change in grip strength and walking speed. The secondary endpoints were various muscle strength indices and changes in the frailty status over the study period.
Results: We studied 14 participants with 81.1 ± 6.4 years old. NMN was tolerable without any related severe adverse events. The primary endpoint showed no difference between the two groups. The amount and rate of change in grip strength were 1.25 kg (95% confidence interval − 2.31 to 4.81) and 108% (88.9–127.1) in the NMN group, and − 0.44 kg (− 4.15 to 3.26) and 98.5% (81.1–116.0) in the placebo group. As for walking speed, 0.033 m/s (− 0.021 to 0.087) and 103% (98.2–108.6) in the NMN group, and − 0.014 m/s (− 0.16 to 0.13) and 99.4% (83.9–114.9) in the placebo group. As for the secondary endpoints, there were no significant differences between the two groups.
Conclusion: In older male diabetic patients with impaired physical performance, NMN 250 mg supplementation for 24 weeks was safe, whereas it did not improve the grip strength, walking speed, or frailty status.

P-571

Comparison of the Clinical Frailty Scale (CFS) and the Pictorial Fit-Frail Scale (PFFS) for the early prediction of complications and mortality in hospitalized older patients

Abstract Area: Frailty and resilience

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Introduction: The CFS scale has been used as a prognostic factor for the outcome of hospitalization and the occurrence of complications in elderly patients. A new frailty assessment scale, the PFFS scale, has recently been developed and has not yet been adequately studied.
Aim: The use of both tools for assessing frailty in hospitalized older patients for the early prediction of mortality and the development of complications and the comparison between them.
Material and methods: In 157 consecutively admitted elderly patients (47.1% women), median age 83 years (IQR 74–88), demographic factors, medical history, reason for admission, time of hospitalization, degree of "frailty" using CFS and PFFS, existence of complications during hospitalization and outcome were recorded. Receiver Operating Characteristic curves (ROC curves) were used to examine the predictive value of CFS and PFFS.
Results: 81 patients (51.6%) had complications and 26 (16.6%) died during hospitalization. Comparing the Area Under the Curve, the ROC Analysis showed that the CFS scale (AUC 0.806 [95% CI 0.736–0.876] $p < 0.001$) could more accurately predict the development of complications compared to the PFFS scale (AUC 0.743 [95% CI 0.667–0.819] $p < 0.001$). Results were similar for the prediction of mortality: CFS (AUC 0.805 [95% CI 0.720–0.890] $p < 0.001$), PFFS (AUC 0.726 [95% CI, 0.605–0.846] $p < 0.001$).
Conclusion: In older hospitalized patients the CFS scale can predict both the outcome and the development of complications better than PFFS.

P-572

The impact of befriending interventions on health-related quality of life: a single-case experimental design study

Abstract Area: Frailty and resilience

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Background: Befriending may improve health-related quality of life (HR-QOL) among older adults, potentially via its impact on loneliness, which is a known risk factor for many health outcomes.
Methods: Using a sample of $n = 85$ participants who had recently signed up to receive a weekly home-based befriending service, an AB multiple baseline single-case experimental design was used to measure outcomes (health utility scores) at 13 timepoints across six months, to see whether befriending was associated with improved HR-QOL. Results were analysed both visually and using generalised additive modelling.
Results: As is typical of intensive longitudinal studies, missingness and attrition were serious issues in the study. Overall participants declined in their HR-QOL over the course of their 6 month tenure with the project. Engaging in the befriending intervention was associated with less decline in HR-QOL over time. Further, the intervention reduced the negative impact of loneliness on HR-QOL.
Conclusions: A therapeutic effect of befriending on HR-QOL over time among older adults was observed. Befriending interventions may also reduce the negative impact of loneliness on HR-QOL. Further research exploring this association in better-powered studies is critical.

P-573

Physical health benefits of befriending interventions: a dyadic qualitative analysis

Abstract Area: Frailty and resilience

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Background: Befriending services provide elective social relationships, which may exert a positive influence on aspects of mental health. Less is known, however, about the impact of befriending services on physical health. To explore this, in response to a recent realist evaluation of befriending services, we used a dyadic data collection procedure to explore the mechanisms through which befriending might impact physical health.
Methods: Data from 15 dyads (befriending service users and their befrienders) were collected in semi-structured separate interviews during 2019 and 2020. The study design and analysis were framed within a constructivist grounded theory approach (Charmaz 2006) informed by principles of dyadic analysis (Eisikovits and Koren, 2010).
Results: Overall, participants felt that befriending was more likely to impact mental than physical health. Mechanisms were identified through which befriending might impact physical health: reducing loneliness, provision of health advice, exercising together, delivering food, facilitating healthcare, cognitive stimulation, socialising opportunities, creating gratitude.
Conclusions: While befriending service users and providers did not initially expect the service to improve physical health, there may be pathways through which befriending improves physical health. Further evaluating such mechanisms using in-person dyadic interviews and a quantitative experimental approach are the next planned steps forward in this research program.

P-574

The record-based multidimensional prognostic index predicts mortality in patients with Clostridioides difficile infection

Abstract Area: Frailty and resilience

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Introduction: Older patients with Clostridioides difficile infection (CDI) are challenged by comorbidity, polypharmacy, malnutrition and a need for support in everyday life. All these factors indicate frailty. Few studies focused on the role of frailty as a predictor of mortality in older patients with CDI. Our objective was to investigate if frailty measured by record-based Multidimensional Prognostic Index (rMPI) can predict mortality in patients with CDI.

Methods: Population-based cohort study including all patients aged 60 years or more and diagnosed with their first (index) CDI in the Central Denmark Region in 2018. Frailty was assessed using the rMPI at the time of discharge from hospital, calculated from the medical record. The predictive ability of the rMPI regarding 90-day mortality was quantified by the area under the receiver operating characteristic (ROC) curve.
Results: In total, 457 patients with their first CDI were included. Median age was 77 years (IQR 69–84). Eighty (18%) patients were categorised with low frailty, 136 (30%) with moderate frailty, and 171 (37%) with severe frailty. In 70 patients (15%), frailty level could not be calculated from the medical record because these patients were diagnosed in primary care without hospital admission. Overall 90-day mortality was 28%. Frailty measured by rMPI predicted 90-day mortality with an area under the ROC curve of 77% (95% CI 72–82%).
Conclusion: Frailty measured with rMPI predicted mortality in older patients with CDI. Approaches to assess the concomitant frailty in older patients with CDI should be investigated.

P-575

Translation and validation of the Swedish version of the Tilburg Frailty indicator

Abstract Area: Frailty and resilience

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Introduction: The Tilburg Frailty Indicator (TFI) is a self-administered questionnaire with 15 questions designed for screening for frailty in community-dwelling older people. It is based on a multidimensional approach to frailty that includes psychological and social dimensions of frailty in addition to physical frailty. The aim of this study was to translate the TFI to Swedish and to study the psychometric properties in a sample of community-dwelling older people with multimorbidity.
Methods: A cross-sectional study was conducted including individuals 75 years and older, with three or more diagnoses in the ICD-10 and three or more visits to the Emergency Department in the past 18 months. The translation process followed the recommendations of the International Society for Pharmacoeconomics and Outcomes Research. Psychometric properties of the TFI were examined by determining the reliability (inter-item correlations, internal consistency, test–retest) and validity (concurrent, construct, structural).
Results: 316 participants (57.6% women) were included with mean age 83.3 years. The inter-item correlations were rather weak. The reliability coefficient KR-20 was 0.69 for the total sum. 39 individuals were included in re-testing, the weighted kappa was 0.7. The correlations of the TFI with other frailty measures was moderate. The individual items correlations with alternative measures diverged/converged mostly as expected. In the confirmatory factor analysis (CFA) a three factor model fitted the data better than a one factor model.
Key conclusions: We found evidence for an adequate reliability and validity of the Swedish TFI yet also potential for improvements of the questionnaire.

P-576

The associate physician: the new role in Frailty

Abstract Area: Frailty and resilience

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Introduction: The increasing demand on clinicians with expertise in frailty obliges us to look for new sustainable models. The role of physician associate (PA) first developed in the US in 1960s and formally introduced to the UK in 2003. The PA's ability to practice medicine enables the opportunity to increase the numbers in the medical workforce of our Frailty services.
Methods: At Peterborough City Hospital, we have recruited 4 PAs from January to April 2022. They are under the supervision of one Frailty Consultant and working in partnership with 2 Frailty nurses. The role of the PAs include expertise in comprehensive geriatric assessment, conducting clinical history and physical exams, reviewing and ordering laboratory results, reviewing diagnostic imaging, obtaining collateral history by speaking with family/carers, working closely with therapy team, social worker, Emergency and Acute Medical team, community teams and making informed decisions as to whether the patient is safe to go to their residence or needs hospital admission ensuring follow ups, referrals and medical plan from a frailty perspective if admitted to hospital.
Results: During these 4 months we have had a 153% of increasing number of patients reviewed by the frailty services (from 117 in January to 297 in April) with an increase of 42.4% discharges avoiding hospital admission and a reduction in the number of frailty re-admissions from 6 to 2.3%.
Conclusions: The role of the PA secures the management of the patient from start to finish which improves continuity of care, improves patient safety, and reduces re-admission.

P-577

Height loss as an indicator of frailty and sarcopenia: an observational cohort study

Abstract Area: Frailty and resilience

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Objective: Height loss has been considered as a marker of risk for clinical fractures in older adults. The purpose of this study was to assess the implications of height loss in frailty and sarcopenia.
Methods: This study was based on the longitudinal Aging Study of PyeongChang Rural Area cohort which included people aged 65 years or older, ambulatory, living at home. Height loss as percentages was measured after 2 years from baseline. Individuals were divided into three groups: individuals with height loss $\geq$ 2%, 1–2%, and others (Group HL2, HL1 and REF, respectively).
Results: There was significant correlation between baseline age and ratio of height change (Pearson's correlation coefficient $-$ 0.08, $p = 0.021$). Of the 846 participants, 45 (5.3%), 116 (13.7%) and 685 (81.0%) were included in the Group HL2, HL1 and REF, respectively. Group HL2 and HL1 had significantly higher risks of a composite outcome than Group C (HR, 2.78; $p = 0.007$ and HR, 1.97; $p = 0.01$,

respectively). When Group HL2 and HL1 were merged, the merged group had a significantly higher risk of a composite outcome than Group REF regardless of age (HR, 1.65; $p = 0.042$). The merged group was more likely to be diagnosed with sarcopenia after 2 years from the baseline examination than group REF (OR, 1.69; $p = 0.006$). Group HL1 and HL2 had significantly higher 34-item frailty index than Group C regardless of age (linear regression beta coefficients 0.04; $p = 0.037$, 0.03; $p = 0.025$, respectively).
Conclusion: Height loss was associated with the composite outcome regardless of age. The group with more height loss was frailer and more likely to be diagnosed with sarcopenia regardless of age. Height loss might be an indicator of frailty and sarcopenia in older adults irrespective of age.

P-578

The impact of frailty and its associations among a sample of community dwelling older adults

Abstract Area: Frailty and resilience

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Background: While the literature contains several studies on the frailty assessed duringhospitalization and/or outpatient clinic visits, and nursing homes, few researches assess thecommunity-dwelling older adults in our country. Our study investigated the prevalence offrailty and associated factors among the older adults assessed within the scope of acomprehensive geriatric study in the Fatih District of the Istanbul Province.
Design: Retrospective cross-sectional.
Methods: The study included community-dwelling older adults aged 61–101 years who wereliving in the Fatih District of the Istanbul Province between November 2014 and May 2015. The number of drugs regularly used by the participants and the number of diseases wererecorded. It was evaluated whether the participants experienced falling/risk of falling/fearof falling in the last 1 year. Visual analog scale (VAS) was used in the assessment of chronicpain. The other instruments used for assessment included the FRAIL scale for frailtyscreening; the 6-item KATZ Activities of Daily Living (ADL) scale; the 8-item LAWTON-BRODYInstrumental Activities of Daily Living Scale (IADL) for the measurement of functionalcapacity; the European Quality 5 Dimensions (EQ-5D) questionnaire for the assessment ofquality of life; the Mini-Cog test for cognitive screening; the Geriatric Depression Scale-ShortForm (GDS-SF) for depression screening; the Mini Malnutrition Assessment-Short Form (MNASF) for malnutrition screening; and the Romberg test and postural instability test for walking. Hand grip strength (HGS) was measured using a Jamar hydraulic hand dynamometer and thethresholds for hand grip strength were evaluated < 27 kg < 16 kg in men and women,respectively, based on the European Working Group on Sarcopenia in Older People (EWGSOP2) definition. Muscle mass was measured through a bioimpedence analysis (TANITA-BC532). Lowmuscle mass (young adult mean-2SD) and the thresholds for muscle mass were evaluated as < 9.2 kg/m^2 vs 7.4 kg/m^2 in men and women, respectively, based on national data. Sarcopenia was defined as a reduction in muscle mass and muscle function [usual gait speed (UGS) or muscle strength] based on the European Working Group on Sarcopenia in OlderPeople (EWGSOP2) definition.
Results: The study included 204 older adults (94 men and 110 women), with a mean age of75.4 ± 7.3 years. Of the cases, 30.4% were robust, 42.6% were pre-frail and 27% were frail. Significant differences were recorded in number of diseases ($p = 0.006$), frail score ($p = 0.002$), malnutrition ($p = 0.004$) and the results of a clock-drawing test (CDT) ($p = 0.040$), number ofdrugs, chronic pain ($p = 0.001$), as well as in the fear of falling, IADL, GDS-SF, -EQ-5D scores, BIA fat, BIA muscle and hand grip strength ($p < 0.001$) between the groups. The frailty groupsdiffered significantly in terms of the presence of malnutrition, fear of falling, urinaryincontinence (UI), chronic pain, Romberg sign, postural instability, level of ambulation,presence of depression, dementia, falls within the last 1 year ($p < 0.001$) and gender ($p = 0.004$). A regression analysis evaluating independent frailty-associated factors [dependentvariable: frailty (robust vs. prefrail + frail)], revealed an association with the number of drugs ($OR = 1.24$, $p = 0.036$), cognitive disorder ($OR = 0.30$, $p = 0.016$) and EQ-5D ($OR = 1.53$, $p = 0.017$).
Conclusion: The present study established the prevalence of frailty in the Fatih districtcommunity, in which the most prominent associated factors were cognitive dysfunction, lowquality of life, and multiple drug usage. Nationwide population studies involving multiplecenters are required.
Keywords: Associations, community-dwelling, frailty, impact, older adults

P-579

Importance of targeted health-promoting exercise training as fall prophylaxis and well-being factor in the setting of retirement homes

Abstract Area: Frailty and resilience

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Introduction: The life expectancy of people is getting higher and higher. Many elderly people notice changes in their exercise behavior and fall, become dependent, basic motor skills reduce. The WHO physical activity recommendations for the elderly are at least 150 min of moderate-intensity exercise or 75 min of higher-intensity exercise per week.
Method: The Otago program consists of movement exercises to improve strength, to improve balance, and training to increase walking distance. The 52 elderly and very old people participated in the Otago exercise program with these three times per week their movement exercises. In addition, they performed walking training twice a week for up to thirty minutes each time.
Result: The regular training of the 52 study participants showed a significant improvement in walking time, as well as strength, balance and endurance compared to baseline values. With this program, the exercise recommendations of the WHO for older people can be implemented well. The implementation of this study has shown how important it is to work on health promotion for these people, even in the aged and very old. As a result, many of the participants have regained motivation to cope with everyday life and increased well-being. Increased strength, better balance and equilibrium also contribute to a more active daily life.
Key conclusion: Reductions in fear of falling and fewer falls were evident after the exercise training and also by increasing walking time twice a week. The fear of falling and the number of falls were

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P-580

Incidence of adverse drug events and associated factors in older patients with frailty

Abstract Area: Frailty and resilience

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Background: The incidence of adverse drug events (ADEs) in older patients with frailty has been reported to be 33%. It is important to identify the risk factors associated with ADEs to detect and treat ADEs earlily. In this study, we investigated occurrence of ADEs in older hospitalized patients with frailty and to examine the factors associated with ADEs.
Methods: The subjects were 504 inpatients aged 65 years or older admitted to the Department of Geriatric General Medicine between September 1st, 2014 and December 31th, 2020. Patient information was collected from medical records to determine the occurrence of ADEs, including the date of incidence and the suspected drugs. The J-CHS, the Japanese version of the criteria for evaluating frailty, was used, which included weight loss, self-reported exhaustion, weakness (grip strength), slow walking speed, and low physical activity, and the patient with three or more of these criteria were defined as a frail patient.
Results: Of the 504 patients, 37 (7.3%) had ADEs during hospitalization, for a total of 41 ADEs that occurred. Multivariate analysis showed that the number of days of hospitalization and low physical activity, one of the J-CHS criteria, were significantly associated with the occurrence of ADEs.
Conclusion: This study indicates that older patients with frailty with low physical activity are at high risk of ADEs. We should watch patients carefully, especially with decreased physical activity to detect ADEs early.

P-581

Long-term effects of "Active Health Promotion In Old Age" on need of nursing care and mortality over 20 years: results from the Longitudinal Urban Cohort Ageing Study (LUCAS)

Abstract Area: Frailty and resilience

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Introduction: In 2000, the programme "Active Health Promotion in old Age" (AHP-A) was developed in accordance with WHO principles of empowerment and primary prevention in context of the German social security legislation (§20 SGB V) [1]. Not before 2015, the health promotion and prevention law (PrävG) was launched raising expectations on preventative interventions. We investigated long-term effects of the comprehensive health promotion programme AHP-A.
Methods: Embedded in the Longitudinal Urban Cohort Ageing Study (LUCAS), the APA-A was offered by an expert team on ageing (geriatrics, physiotherapy, nutritional science, social work) to small groups of people 60 years and older, independently living without need of nursing care. Disability-free life was defined using the German Medical Service assessment. Survival and disability-free survival for a 20 years period were analysed with Kaplan–Meier-curves and hazard ratios. Multivariate Cox-regressions were applied to adjust for age, gender, educational level, chronic diseases and functional status. All tests were performed at a significance level of 5% (2-sided).
Results: In the first LUCAS wave 768 (mean age 69.8 ± 6.7 years, 63.0% women) cohort members participated in AHP-A whereas 1335 (mean age 71.6 ± 7.5 years, 60.0% women) did not. In general, participants lived significantly longer and had longer disability-free lifes compared to non-participants. These findings remained statistically significant after adjustments.
Key conclusions: The AHP-A for independently living community-dwelling people 60 years and older was effective in promoting and maintaining high functional status and good health.
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Reference
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P-582

Frail at different speeds: timed up and go performance modulates mortality risk within Frailty Index bands in the Irish Longitudinal Study on Ageing (TILDA)

Abstract Area: Frailty and resilience

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Background: The Frailty Index (FI) is a measure of accumulation of health deficits, and can be used to represent biological age. Mortality risk within individuals of a same chronological age band is modulated by the FI. However, the extent to which this modulation also occurs with a functional performance measure (as opposed to chronological age) has not been studied. Our aim was to explore how Timed Up and Go (TUG) performance modulates mortality risk within Frailty Index bands in The Irish Longitudinal Study on Ageing (TILDA).
Methods: A 32-item self-reported FI was measured at TILDA baseline (wave 1, 2009–2011) and statistically binned into 0.1 increments. TUG was measured in seconds and statistically binned

into 5-s increments. Mortality was ascertained at wave 5 of the study (2018). A heat map was constructed with 8-year mortality proportions according to individual FI/TUG cells.
Results: 5749 participants had full information for FI, TUG and mortality. The heat map showed that TUG performance modulated mortality risk within all FI bands. For example, for non-frail participants with a FI between 0 and 0.1, 8-year mortality proportions were 4% for TUG between 5 and 10 s, 15% for 10–15 s, and 40% for 15–20 s. For frail participants with a FI between 0.3 and 0.4, mortality proportions were 13%, 26% and 58%, respectively.
Conclusion: Even when TILDA participants were classified as frail by a FI, lower TUG speeds were associated with increasing mortality proportions at 8 years. The same frailty, when lived at different speeds of functional performance, has different mortality implications.

P-583

Ratio of symptomatic to preventive medication use according to Frailty Status in Australian and Japanese Nursing Homes

Abstract Area: Frailty and resilience

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Introduction: As frailty progresses, residents' care goals may shift from chronic disease prevention to comfort-oriented care.
Objective: To investigate the ratio of symptomatic to preventive medication use according to frailty status among NH residents in South Australia and Kanto, Japan.
Methods: Cross-sectional study involving 12 Australian and 4 Japanese NHs. Frailty was measured using the FRAIL-NH scale (non-frail 0–2; frail 3–6; most-frail 7–14). Regular medications were classified as symptomatic or preventive based on published lists and expert consensus.
Results: 550 Australian residents (median 89 years; IQR 84–92; 73% female) and 333 Japanese residents (median 87 years; IQR 83–91; 73% female) were included. Overall, Australian residents (9.8 ± 4.0) were taking more medications than Japanese residents (6.7 ± 3.3) regardless of frailty status. In Australia, the mean number of medications grew with increasing frailty (non-frail 8.9; frail 9.6; most-frail 10.1) due to an increase in symptomatic medication use. This corresponded to a gradual increase in the ratio of symptomatic to preventive medications (0.7–0.9) with increasing frailty levels. In contrast, a consistent ratio of 1.3 was observed across all frailty groups in Japan. Proton pump inhibitors and laxatives were among the most frequently prescribed symptomatic medications in both cohorts. The most prescribed preventive medications were vitamin D, antiplatelets, and statins in Australia; and dihydropyridines, diuretics, and sartans in Japan.
Conclusions: The ratio of symptomatic to preventive medications increased with higher levels of frailty in the Australian cohort, but remained consistent in the Japanese cohort. In both cohorts, residents continued to receive preventive medications irrespective of frailty status.

P-584

Frailty in chronic obstructive pulmonary disease

Abstract Area: Frailty and resilience

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Introduction: Older age and chronic diseases have been identified as risk factors for the occurrence of frailty. Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of mortality globally, especially in older adults. Recent evidence showed that COPD is associated with frailty. We conducted a systematic review and meta-analysis to investigate the prevalence of frailty and assess its influence on mortality in patients with COPD.
Methods: We searched PubMed, Web of Science, The Cochrane Library and EMBASE from inception to 24th March 2022 for studies reporting on the assessment of frailty using validated instruments in adult patients with confirmed COPD according to the GOLD guidelines [www.goldcopd.org].
Results: We found 5 studies where patients with COPD living with frailty were followed up for mortality risk. Of 2803 COPD patients, 44% were female and the age ranged between 58 and 90 years. There were 425 patients with frailty (15.2%), 1072 without frailty (38.3%), and the rest with pre-frailty (46.6%). COPD patients living with frailty had increased risk of long-term mortality compared to patients without frailty (pooled OR, 3.93 95% CI 2.63–5.88, I2 49%).
Key conclusions: This systematic review showed higher risk of mortality in patients with confirmed diagnosis of COPD and frailty status. The identification of patients with frailty at risk for negative outcomes should be considered in daily practice for the management and prognosis of COPD population.

P-585

Frailty In Interstitial Lung Disease, Asthma, And Pleural Disease

Abstract Area: Frailty and resilience

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Introduction: Chronic respiratory diseases, including interstitial lung disease (ILD), asthma, and pleural disease are potential risk factors for the occurrence of frailty. Respiratory disease is associated with morbidity and mortality worldwide and represents a significant burden in clinical practice. We conducted a systematic review to investigate the prevalence of frailty and its influence on morbidity and mortality in patients with ILD, asthma, or pleural disease.
Methods: We searched PubMed, Web of Science, The Cochrane Library and EMBASE from inception to 24th March 2022 for studies assessing frailty in adult patients with ILD, asthma, or pleural disease, in secondary care settings.

Results: In 10 studies on ILD across 1941 patients (M:F 1:1; age range 46–79), the frailty prevalence ranged between 12 and 55%. Two studies explored frailty and mortality across 1003 stable ILD patients and found a positive significant association ($p < 0.001$; and aHR 4.41 95%CI 1.29–15.1). The review found 4 studies on frailty and asthma, showing a high frailty prevalence in asthmatic patients (range 6 and 15%). The study did not find any studies relating to frailty and pleural disease.
Key conclusions: The paucity of data regarding the frailty and its risk in patients with ILD requires additional longitudinal studies. No measurement of frailty in patients with asthma or pleural disease has been described and requires further investigation.

P-586

Psychotropic medications and falls in nursing homes: could frailty be a gamechanger?

Abstract Area: Frailty and resilience

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Introduction: Nursing home (NH) residents include individuals with a high risk of frailty and who are also particularly vulnerable to adverse effects of medications including falls. The aim of the study was to evaluate the role of frailty as potential effect modifier in the relationship between psychotropic medications and falls among NH residents.
Methods: retrospective cohort study conducted on 4,096 NH residents in 7 European countries and Israel from the Services and Health for Elderly in Long TERm care (SHELTER) project. Participants were assessed through the interRAI long-term care facility instrument. Frailty was defined according to the FRAIL-NH scale. Odds ratios (ORs) and corresponding 95% confidence intervals (CIs) adjusted for potential confounders were estimated from logistic regression models before and after stratification on frailty status to evaluate the association between psychotropic medications and falls.
Results: Overall 774 residents had history of fall in the 12 months before the assessment. Falls were associated with frailty, ADL impairment, worse cognitive status, cancer, stroke, polypharmacy, use of antidepressants, antipsychotics, and antidementia drugs ($p < 0.05$ for all), but not with benzodiazepines. After stratifying on frailty, the risk of falls was increased for residents on antipsychotics (adj. OR 1.53, 95%CI 1.15–2.03), on antidepressants (adj. OR 1.41, 95%CI 1.07–1.85), on antidementia drugs (adj. OR 1.98, 95%CI 1.32–2.95). Psychotropic medications were not associated with falls in robust residents.
Key conclusions: Frailty may modify the effect of psychotropic medications contributing to the observed increased risk of falls in NH residents. Frailty should always assessed especially among residents with polypharmacy.

P-587

The self-reported Clinical Frailty Scale and its cross-sectional association with various health domains in the general older population in the Netherlands

Abstract Area: Frailty and resilience

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Van der Klei V.M.G.T.H., van Dalsen M.D.W., Drewes Y.M., Mooijaart S.P., Gussekloo J. and van den Bos F. for the COOP-consortium and the COOP Older People Advisory Board.
Introduction: The Clinical Frailty Scale (CFS) has been widely used during the COVID-19 pandemic to aid acute medical decision-making in the hospital. We aimed to study the association of the self-reported CFS with various health domains in the general older population.
Methods: Since May 2022, older adults aged 70 + , living in the Netherlands were invited for an online or written questionnaire (ongoing data collection; embedded in the COOP-study). The self-reported CFS-instrument (10 questions) was used to divide participants into three groups: non-frail (CFS 1–3), mildly frail (CFS 4–5) and severely frail (CFS 6–8). These CFS-groups were related to experienced health problems in the somatic, mental and social domain (i.e. ≥ 2 problems per domain of the validated ISCOPE-tool). Preliminary results: Out of the 536 participants (median age 75 years, 57% female and 68% higher educated), based on self-report, 65% was considered non-frail, 26% mildly frail and 9% severely frail. The non-frail group experienced health problems in a median of 0 health domains (interquartile range (IQR): 0–1), the mildly frail in 1 (1–2) and the severely frail in 2 (2–3; $p < 0.001$). Participants with mild or severe frailty according to the self-reported CFS had higher risks of experiencing health problems in the somatic, mental and social domain and of health problems in multiple domains compared to non-frail participants, adjusted for age, sex and education (all associations $p < 0.001$).
Conclusion: Higher self-reported CFS-scores associated with higher risks of various and combined health problems. Therefore, the easy-to-use CFS also seems relevant to the general older population.

P-588

Antipsychotic use and risk of death in older adults with cognitive impairment: the role of frailty

Abstract Area: Frailty and resilience

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Introduction: The use of antipsychotics has been associated with serious adverse events including death among older adults with cognitive impairment. Geriatric syndromes, such as frailty, are also associated with death in this population. The purpose of this study was to evaluate the impact of frailty on the risk of death among nursing home (NH) residents with cognitive impairment treated with antipsychotic medications.
Methods: retrospective cohort study based on data from 57 NHs of 7 European countries and Israel participating to the Services and Health for Elderly in Long TERm care (SHELTER) project. Frailty was defined according to the Frail-NH scale. Risk of death associated with frailty was the main outcome. The inter-Resident Assessment Instrument for Long Term Care Facilities (interRAI LTCF) was used to assess participants. Follow-up time was 12 months.
Results: Overall, 604 residents aged 65 years or older on antipsychotics were included in the study. The prevalence of frailty in the study sample was 42.8% (n = 299). Among antipsychotic users, frailty was associated with higher mortality (incidence rate (IR) 0.27 per person-year in the frail residents compared with 0.17 per person-year in the robust individuals). After adjusting for potential confounders, frail residents were over 70% more likely to die than robust individuals (hazard ratio = 1.74; 95% confidence interval 1.18–2.56).
Key conclusions: Part of the observed excess risk of death associated with the use of antipsychotic medications in older adults with cognitive impairment may be attributable to frailty. Caution is needed when prescribing antipsychotic medications to frail older adults.

P-589

Assessment and management of frailty: a survey of healthcare professionals

Abstract Area: Frailty and resilience

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Introduction: By 2030, it is estimated that 25% of Europeans will be aged over 65.[Dugarova;UNDevelopmentProgramme;2017] Frailty in this group is a key contributor to poorer outcomes.[Eamer;BMCAnesthesiology;2017] The term is common in healthcare but research into the issues faced by staff around assessment and management of frailty has been limited. We undertook a survey to identify challenges faced in providing care to those living with frailty and considered potential interventions.
Method: The survey was across three hospitals in our health board (which serves a population of around 390,000 with a range of services).[SwanseaUHB;2022] It was developed iteratively through consultation in a multidisciplinary group and adapted questions from other similar validated surveys.[Eamer;BMCAnesthesiology;2017][Taylor;FutureHealthcareJournal;2017]Results218 responses were received covering a variety of medical and surgical specialities. Participants showed a strong (80%) self-reported understanding of frailty as a clinical concept, but only 46% felt confident in their ability to assess patients for frailty. 74% stated they would benefit from more education on frailty. Other barriers included systemic challenges such as staffing and social care, but also a lack of understanding of frailty by patients and relatives which impacted shared decision-making.
Conclusions:The survey showed a significant demand for more education, especially awareness of pathways and assessment methods. It also highlighted the issue of patients' (and relatives') lack of understanding of frailty. In response, we are planning a targeted multi-disciplinary educational programme on frailty across the health board, as well as introducing patient information leaflets.

P-590

What do we know about frailty in adult indigenous populations?

Abstract Area: Frailty and resilience

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Introduction: Frailty is a major health priority and is consistently found to be associated with poor outcomes including impaired quality-of-life, functional decline, residential-care admission, hospitalization, and mortality. Indigenous peoples worldwide experience disproportionately high levels of age-related illness, and little is known about frailty within the Indigenous landscape. The aim of this review was to map and synthesize what the literature reports around frailty within Indigenous populations.
Methods: A scoping review of original research focusing on frailty within Indigenous populations in settler-colonial countries. Ten electronic databases and eight institutional websites searched, eligibility screening by two independent reviewers.
Results: Nine articles from Australia, Canada, New Zealand and the United States were identified. Eight articles reported on the prevalence of frailty, with three finding Indigenous peoples had a high prevalence of frailty and at younger age when compared to their non-Indigenous counterparts. Females presented with higher levels of frailty. Seven articles used a formal frailty measurement to assess for frailty. No culturally specific frailty measurement was identified, and no interventions were identified to combat frailty within Indigenous populations.
Key conclusions: Despite the potential for frailty imposing a large health burden on Indigenous populations, there was little definitive data available on frailty prevalence, approaches to frailty screening and potential points of intervention to prevent or manage frailty in these populations. Further studies are needed to determine the factors contributing to higher rates of frailty within this population. Indigenous views of frailty and approaches to frailty assessment are needed to address this important health priority.

P-591

Impact of frailty, Geriatric Syndromes and comorbidity on mortality and quality of life in older adults with HIV

Abstract Area: Frailty and resilience

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Introduction: More than half of people living with HIV are older adults. Our aim was to know the prevalence and impact of frailty, geriatric syndromes, and comorbidity on mortality and quality of life in older adults with HIV (OAWH).
Methods: Cross-sectional study of the FUNCFRAIL Spanish multicenter cohort. OAWH, 50 years or over, were recruited. We recorded sociodemographic data, HIV infection-related data, comorbidity, frailty, geriatric syndromes (depression, cognitive impairment, falls and malnutrition), quality of life, and estimated risk of all-cause mortality by VACS Index. Association of frailty with other geriatric syndromes and comorbidity was evaluated using the Cochran–Mantel–Haenszel (CMH) test.
Results: 796 patients were included. 24.7% were women, mean age was 58.2 (6.3) years. 14.7% were 65 or over. 517 (65%) patients had > 3 comorbidities, > 1 geriatric syndrome, and/or frailty. There were significant differences in 5-year estimate risk of all-cause mortality by VACS Index (frailty 10.8% vs 3 comorbidities 8.2% vs 1 geriatric syndrome 8.2% vs nothing 6.2%; $p = 0.001$) and in the prevalence of fair or poor quality of life (frailty 71.7% vs 3 comorbidities 52% vs 1 geriatric syndrome 58.4% vs nothing 51%; $p = 0.001$). Cognitive impairment was significantly associated with mortality (MOCA < 20, 8.7% vs MOCA > 20, 6.2%; $p = 0.02$) and depression with poor quality of life (GDS-SF > 6, 76.5% vs GDS-SF < 6, 50%; $p = 0.001$).
Conclusions: Frailty, geriatric syndromes, and comorbidity negatively impact mortality and quality of life in OAWH, with the impact of frailty being significantly greater than the rest.

P-592

Fatigue associates with frailty in older patients with inflammatory bowel disease

Abstract Area: Frailty and resilience

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Introduction: Fatigue is a common and debilitating symptom experienced by patients with inflammatory bowel disease (IBD). Fatigue in older patients could be a symptom related to underlying frailty. Therefore, the aim of this study was to determine the prevalence of fatigue and to identify factors associated with fatigue in older patients with IBD.
Methods: Data were used from a prospective, multicenter cohort study, that included both older patients with IBD (aged > 65 years) and younger patients with IBD (aged < 65 years). A geriatric assessment was performed to measure frailty at baseline in older subjects.
Results: Fatigue prevalence in 405 older patients with IBD varied between 45.5% (70/154) in patients with active disease to 23.8% (59/248) in patients with disease in remission. In multivariable analysis a significant association was found between fatigue and depression (Odds ratio (OR) 2.45, 95% confidence interval (CI) 1.01–4.05), anxiety (OR 2.08, 95% CI 1.07–4.05), sleeping disturbances (OR 3.90, 95% CI 2.18–6.98), use of immunomodulators (OR 2.18, 95% CI 1.12–4.27), and an abnormal Geriatric 8 (G8) (OR 1.99, 95% CI 1.12–3.53). Frailty measured in a geriatric assessment (OR 2.47, 95% CI 1.49–4.12) was independently associated with fatigue.
Conclusion: Fatigue prevalence is lower in older patients with IBD compared to younger patients with IBD, but increases sharply when active disease is present. Fatigue in older patients is associated with depression, anxiety, sleeping disturbances and use of immunomodulators. Moreover, frailty measured by G8 and geriatric assessment associate with fatigue in older patients with IBD.

P-593

Pilot study to detect frailty at the community level

Abstract Area: Frailty and resilience

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Purpose: Population ageing is a challenge for health systems that need to develop strategies to meet the needs of older people. According to the World Health Organization, healthy ageing is not limited to the absence of disease; it also involves developing and maintaining intrinsic/functional capacities that enable older people to enjoy a state of well-being. The assessment at the community level of the physical condition, cognition, nutrition, sleep quality and psychological aspects of people over 65 can lead to the detection of frailty and to subsequent intervention proposals to reverse it.
Methods: We have conducted an observational study of people aged over 65 years from the municipality of Escaldes-Engordany in Andorra from February 21 to May 20, 2022. Our team has evaluated the functional capacity using the Short Physical Performance Battery (SPPB), the cognition with the Montreal Cognitive Assessment (MOCA), the nutrition with the Mini Nutritional Assessment (MNA),the quality of sleep with the SATED questionnaire and the emotional state with the Patient Health Questionnaire-9 (PHQ9).
Results: The analysis comprises 270 persons older than 65 with a Barthel index for activities of daily living above 90. The median age is 76 years; 67% were female. The 8% of the people have physical frailty (SPPB: 0–9), 25% have a cognitive impairment (MOCA score less than 26), 8% have malnutrition (MNA score less than 12), 14% have poor sleep health (SATED: 0–6), 11% have a risk of depression (PHQ-9: 5–10) and 1% of the assessed have depression (PHQ9 score above 10).
Conclusion: This pilot study has enabled to detection of frailty in different domains, with cognitive frailty being the most prevalent. In this setting, interventions to reverse fragility include physical exercise, psychological support, cognitive stimulation, and nutrition and sleep quality workshops.

P-594

Clinical Frailty Scale scoring in older adults admitted to hospital under general surgery

Abstract Area: Frailty and resilience

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Introduction: We evaluated the impact of living with frailty on short term clinical outcomes of patients admitted under general, colorectal, and upper gastrointestinal surgery.
Methods: A prospective observational cohort study of all consecutive patients aged 65 years and over, admitted under general surgery between 11th March and 11th of April 2022.
Results: We included 92 patients, average age 72.08 (65–88), 50% females, 68.48% emergency (EM) and 31.52% elective (EL). 24 patients were frail (CFS $\geq$ 5) and 68 non frails (CFS $\leq$ 4). EL 3 individuals were frail and 26 non-frail. EM: 21 individuals were frail and 42 non frail. Frailty was associated with worse clinical outcomes in F vs. NF: length of hospital stay (10.875 vs. 10.691%), 28-day mortality (8.34% vs 0%), 28-day readmission (0% vs 14.95%). Surgery was carried out in 17.14% F and 82.86% NF. Elective vs Emergency: length of hospital stay was 13.62 vs. 9.41 days, 28-day mortality was 0% vs 3.17%, 28-day readmission was 13.79% vs 10%.
Conclusion: 1 in 4 patients in our cohort of older adults hospitalised under surgery were frail. Higher frailty scores were associated with increased mortality but no difference in length of stay and improved 28-day readmission rate. Elective surgeries are associated with longer hospital stays and increased 28-day readmission rates but lower mortality rates.

P-595

Clinical frailty and short-term clinical outcomes of older patients admitted to an acute medical emergency admissions unit

Abstract Area: Frailty and resilience

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Introduction: Acute Medical Admissions Units (AMAU) are proven to improve all-cause mortality in patients of all ages, but the impact of frailty on clinical outcomes for older patients is limited.
Methods: Prospective observational study of all consecutive medical patients aged 65 years and over admitted to a teaching hospital AMAU between 28th March and 11th April 2022. Clinical Frailty Scale (CFS) score was recorded on admission and clinical outcomes at 28 days documented.
Results: We included 303 patients, 53.4% females, median age 76.2 years (65–101). 73.6% individuals were frail (F = CFS $\geq$ 5) and 26.41% non-frail (NF = CFS $\leq$ 4). The 3 most common reasons for admission were falls (n = 58–51 F, 7NF), community acquired pneumonia (n = 40–30F, 10NF) and infective exacerbation of COPD (n = 21–14F, 7NF). 29.37% were discharged home from AMAU, 50.56% F and 40.44% NF. Average length of stay (LOS) on AMAU was 2.88 days, 2.89 days F and 2.85 days NF. Total hospital LOS was 11.74 days, 13.04 days F and 8.10 days NF. Mortality at 28-days was 12.87%, 12.22% F and × 0.66% NF. 28-day readmission was 20.86%, × 16.93% F and 3.94% NF.
Conclusion: Frailty appears to predict poorer clinical outcomes at 28 days in older patients admitted to an acute medical emergency admissions unit.

P-596

Prognostic accuracy of the Clinical Frailty Scale and the Braden Score for 90-days mortality in acutely admitted older medical patients

Abstract Area: Frailty and resilience

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Background: Frailty is a complex clinical age-related syndrome. The Clinical Frailty Scale (CFS) is a validated tool used to determine the degree of frailty in older citizens, but when used in the Emergency Department (ED), CFS had a low sensitivity and specificity. We aimed to investigate if CFS combined with the Braden Score (BS), could improve the prognostic accuracy.
Methods and materials: The study uses data from the Copenhagen PROTECT study, a prospective cohort of older ($\geq$ 65 years) medical patients acutely admitted to Bispebjerg Hospital, Denmark, between 2019 and 2021 (Clinical Trials NCT04151108). The current study includes patients with complete records of both CFS and BS (n = 900). For both tools, separate and combined, AUROC and cut-off values defined by Youden's index were calculated. In addition, sensitivity (SE), specificity (SP), negative, and positive predictive values (NPV + PPV) were calculated with 90-day mortality as the outcome.
Results: AUROC for CFS was 65.8 (95% CI 61.6–71.1) and 71.0 (95% CI 66.1–76.0) for BS. By Youden's index the cut-off values was > 4 for CFS and < 21 for BS. For CFS SE = 89.1%, SP = 29.1%, NPV = 95.0%, and PPV = 14.9%. For BS SE = 74.6%, SP = 56.6%, NPV = 94.1%, and PPV 19.3%. When combined, SE and SP were 67.3% and 61.8%, respectively, while NPV and PPV were 93.1% and 19.7%, respectively.

Conclusion: The findings demonstrate that CFS had a slightly lower prognostic accuracy than BS. CFS and BS combined raised specificity but lowered sensitivity to predict 90-day mortality. These results call for new models to determine frailty in older acutely admitted medical patients.

P-597

The relationship between FT3/FT4 ratio and frailty in the oldest adults: a longitudinal multicentre, multi-setting study

Abstract Area: Frailty and resilience

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Background: Various models have been proposed to measure frailty, including some based on clinical criteria and phenotypes, but a simple biomarker associated with this syndrome has been not yet recognized. The aim of the current study is to evaluate the relationship between FT3/FT4 ratio value and frailty degree across three different cohorts of older individuals: (i) patients hospitalized for acute disease, (ii) nursing-home living individuals, (iii) home-dwelling centenarians.
Methods: This multicentre, multi-setting study is based on a secondary analysis of data from a cohort of older patients admitted to a geriatric acute unit (GAU), a home-dwelling centenarians (CENT) cohort, and residents in two nursing homes (NH). Demographic and clinical characteristics along with a 30-items Frailty Index (FI) and, serum TSH, FT3, and FT4 measurements were obtained. Results615 subjects (aged 86.4 ± 8.9 years; 55.1% females) were enrolled: 298 (48.5%) GAU, 250 (40.6%) NH and 67 (10.9%) CENT. A significant inverse relationship between FT3/FT4 ratio and FI values was obtained [$\rho s = -0.17$ (95% CI − 0.092 0.252), $p < 0.001$], confirmed by logistic multivariate analysis [OR 0.64 (95% CI 0.47–0.87), $p < 0.001$] after adjustment for age, sex and cohorts. Moreover, a progressive decreasing mortality risk with rising FT3/FT4 ratio was observed [OR 0.60 (95% CI 0.44–0.80), $p < 0.001$].
Conclusions: FT3/FT4 ratio value is inversely correlated with frailty degree and mortality risk in a large cohort of older individuals, including centenarians, regardless of their sex and clinical condition. FT3/FT4 ratio value could represent an easy-to-obtain, independent biochemical marker of frailty degree in older people.

P-598

Intrinsic capacity and related factors in older inpatients

Abstract Area: Frailty and resilience

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Introduction: World Health Organization (WHO) defined the concept of intrinsic capacity (IC) as a composite of all physical and mental capacities of an individual in 2015 to help define healthy aging. There are e few studies on IC in inpatients. The aim of our study is to assess IC and related factors in older inpatients.
Material and methods: Eligible older inpatients from the Internal Medicine Department were enrolled in the study. Sociodemografic data, comorbidities, polypharmacy, length of hospital stay (LOS) and IC were evaluated. For locomotor, vitality, sensory, cognition and psychological capacity domains; 4-m gait speed, Mini-Nutritional Assessment-Short Form, self reported hearing and visual capacity, Mini-Mental Status Assessment, and depressive symptoms according to EuroQol-5D questionnaire were performed, respectively.
Results: A total of 155 inpatients (46.5% males; mean age 72.8 ± 8.6) were enrolled. Mean IC score was 2.9 (± 1.2). IC negatively correlated with age ($r = -0.462$, $P < 0.001$), and LOS ($r = 00.333$, $P < 0.001$). IC was not correlated with body mass index, the number of comorbidities-drugs, gender, education, income, comorbidities, and living alone. Deficit ratios for mobility (63.1%), vitality (67.9%), cognition (15.2%), depression (52.7%), and sensory (27.3%) domain varied. Of all, 1.5% was with no deficit, 35% with one or two deficits, and 63.7% with three and more deficits.
Conclusion: The higher the IC was the lower age and LOS were observed. The most frequent deficit was vitality domain, and older inpatients mostly presented loss in 3 or more domains. IC might predict poor outcomes such as longer LOS. Prospective large scaled studies are needed.

P-599

Body composition mediates the effect of insulin resistance on functional decline but not on mortality in a community-dwelling older adults: results from Toledo Study of Healthy Aging

Abstract Area: Frailty and resilience

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Introduction: Recent evidence suggested that insulin resistance (IR) is a risk factor for functional decline meanwhile it protects from mortality in older adults. Both age-related outcomes seem to be associated with body composition. We aim to assess the potential role of body composition in the association between IR with functional decline and with mortality risk in older subjects.
Methods: 978 non-diabetic subjects from the Toledo Study of Healthy Ageing cohort were included (mean age 74.50 ± 5.63; 56.65% female). IR was estimated by the homeostasis model

assessment index (HOMA-IR) at baseline while functional decline was determined by the Frailty Trait Scale (FTS) at 2.99 years median follow-up. Deaths were also registered (6.31 years median follow-up). Body compositions were determined using Dual-Energy X-ray absorptiometry. Nested multivariate regression models were used to analyze the effects of HOMA-IR on outcomes. Age, gender, and Charlson index were included in the basic adjustment model while fat and lean mass were included as potential confounding variables.
Results: HOMA-IR increased the risk of functional decline determined by worsening in FTS5 after basic adjustment (OR 1.52 [1.15–2.00], $p = 0.003$). This significant association was lost when further adjusted by total fat mass (OR 1.27 [0.94–1.72], $p = 0.113$). By contrast, HOMA-IR was inversely associated with mortality risk after basic adjustment (HR 0.72 [0.53–0.98], $p = 0.034$). Adjustment by total fat mass did not modify the association (HR 0.73 [0.53–1.03]).
Key conclusions: Fat mass mediates the associations of IR with functional decline but not with mortality in non-diabetic older adults.

P-600

Association of blood biomarkers with frailty: a literature review

Abstract Area: Frailty and resilience

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Background: Frailty describes a geriatric syndrome characterized by an increased vulnerability. Although a variety of potential blood-based biomarkers have been discussed for its characterization, a reliable protocol of blood-based biomarkers for this purpose is still missing.
Methods: As part of the Collaborative Research Center at Ulm University "Aging at Interfaces" we performed a review to identify blood biomarkers most consistently associated with frailty. Recent publications citing or cited by identified systematic reviews on these topics were critically reviewed. We extracted information on the identified type of association with frailty (positive, negative, no association) for each biomarker. Then, a correlation index (CI) describing the consistency of the association was calculated for each biomarker.
Results: Five systematic reviews published between 2018 and 2022 were identified. We critically reviewed 53 manuscripts included in or citing the reviews. A total of 87 biomarkers were identified. The most consistent unadjusted association ($CI \geq 0.7$ or ≤ -0.7) with ≥ 3 articles addressing the biomarker was shown for eGFRcys, cystatin C, hs-CRP, IL-6, TNF-α, DHEA-S, 25-OHD, NT-proBNP and hemoglobin. In fully adjusted analyses, eGFRcys, IL-6, 25-OHD, total and free testosteron in men, and albumin showed the most consistent association.
Key conclusion: Inflammatory biomarkers, Vitamin D and markers of testosterone balance in men show a consistent association with frailty. Renal function measured by cystatin C seems to be superior to creatinine, which is still more widely used in clinical settings. NT-proBNP, a well-established cardiac biomarker, may also play a role in a characterization of frailty based on blood biomarkers.

P-601

Effects of Vivifrail Exercise Program on intrinsic capacity among frail cognitively impaired community-dwelling older adults: secondary analysis of a multicenter randomized clinical tria

Abstract Area: Frailty and resilience

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Introduction: Following the re-envision of older adults' health towards a function-centered paradigm, WHO defined the construct of intrinsic capacity (IC), a function-based marker of older adults' health encompassing mental and physical capacities of the individual. Multicomponent physical exercise (MCE) has been proposed as an intervention to maintain/increase IC at older age, as means of postponing/avoiding disability onset. To date, no study has explored the effects of MCE and specifically with Vivifrail methodology, on IC and its domain in at-risk older populations.
Methods: Secondary analyses of a randomized clinical trial. 188 older adults (age = 84.06 ± 4.77, 70.2% women) presenting with pre-frailty/frailty (according to Fried Criteria) and mild-cognitive impairment/mild dementia were recruited in 3 hospitals (Pamplona, Getafe, San Sebastian). Subjects were randomized to participate in the 12-week home-based individualized Vivifrail MCE or usual care for three months. An IC index was created based on the z-score of the locomotion (Short Physical Performance Battery), cognitive (Montreal Cognitive Assessment), psychology (15-item GDS) and vitality (handgrip strength) domains.
Results: After the 3-month intervention linear mixed models showed significant between-group differences in the evolution of the IC composite score ($\beta = 0.46$; 95% CI = 0.20, 0.71; $p < 0.001$), IC Locomotion ($\beta = 0.37$; 95% CI = 0.14, 0.60; $p < 0.001$), IC Cognition ($\beta = 0.45$; 95% CI = 0.03, 0.87; $p < 0.05$) and IC Vitality domains ($\beta = 0.24$; 95% CI = 0.02, 0.45 at 3-month) favoring the MCE group.
Key conclusions: The present study showed that, among community-dwelling older adults presenting with pre-frailty/frailty and MCI/mild dementia, a 12-week Vivifrail multicomponent exercise program exerted compelling benefits in terms of IC and its domains evolution compared to usual care.

P-602

The positive impact of the frailty advanced clinical practitioner role on a frail patient's experience in an acute hospital setting

Abstract Area: Frailty and resilience

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Background: Advanced Clinical Practitioners (ACP) have an integrated and vital role in caring for frail patients both in enhancing

quality of care and providing the joined up, multi-disciplinary holistic approach. We are here providing qualitative proof of the added value of the ACP role in the care of frail population.
Methods: We have conducted a qualitative observational study by comparing the care journey of three patients with frailty. They were selected and matched based on nature of their acute presentation and Clinical Frailty Scale score. We also followed up and reviewed prospectively their length-of-stay (LoS), quality of life (QoL), health outcomes and service satisfaction post-hospital discharge. Care home residents were excluded. Two patients were over 76 years, one managed by the frailty team led by the ACPs. The second received general geriatric care with no ACP involvement. We further identified another frail patient under 76 who received general medical care.
Results: Compared to the two patients who did not receive any ACP frailty input, the patient who received a comprehensive geriatric input and multi-disciplinary review had a shorter LoS (2 days), remained independent for longer at home, QoL was preserved and a high satisfaction rate was reported on our patient survey. Where ACPs were not involved in care, patients experienced higher LoS (average, 7 days) and suffered in-hospital complications and harm.
Conclusion: The benefits of comprehensive geriatric assessment are well known. However, the added value of frailty ACPs in clinical practice is yet to be determined. We have shown the quality improvement in frailty care which can be achieved by the involvement of this particularly skilled group of healthcare professionals.

P-603

Role of Pharmacist's within primary care frailty multi-disciplinary team compared to non-intervention cohort

Abstract Area: Frailty and resilience

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Introduction: The impact of polypharmacy on the frail population is well documented with significant numbers of hospital admissions due to medication related adverse events. The role of pharmacists in reducing risk from medication is also well researched however pharmacists are not always a resource available due to lack of funding or resource pressure.
Aim: Here we will compare a cohort of patients that have received pharmacist intervention as part of a Frailty MDT review with a non-intervention cohort who have had no intervention from pharmacy or the MDT.
Method: The MDT collaborative is set across 4 primary care practices within NHS Lanarkshire. Electronic Frailty Index (eFI) and universal selection will be used to identify frail patients. These patients will form the "intervention cohort". Patients from the intervention cohort who have been reviewed by a pharmacist either by way of telephone/video or face-to-face review will be selected at random and compared with a cohort of patients with similar frailty levels and age however not receiving MDT intervention.
Results and conclusion: Deprescribing has been a common intervention with reduction in total number of medications when compared with non-intervention cohort. Anti-cholinergic burden scores which are a significant risk in cognition and falls in frail older adults have been reduced by an mean of 26%. Compared to non-intervention cohort, there was a reduction in pill burden, reduced number of practice contacts and falls. This work shows that pharmacists complement the Frailty MDT with their specialist knowledge on medication and there is a real benefit to patients and practice teams.

P-604

Obesity, low vegetable intake and low leisure time physical activity in midlife are associated with increased risk of later life frailty in older adults at risk of cognitive decline

Abstract Area: Frailty and resilience

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Objective: To study the effect of midlife cardiovascular (CVD) risk factors on later life frailty in the Finnish Geriatric Intervention Study (FINGER) population ($n = 1260$).
Methods: Data from CVD risk factors were available from previous population-based studies. Frailty status was determined on average 13.5 years later (SD 10.7) in the FINGER study baseline. Frailty index (FI) ja Frailty phenotype were used to assess frailty. Linear and logistic regression analyses were used to investigate the association between midlife CVD risk factors and later life frailty. Analyzes were adjusted significant demographic and clinical covariates.
Results: Obesity (RR 4.3, 95% CI 2.0–9.2), waistline obesity (RR 4.2, 95% CI 1.8–9.3), low level of leisure time physical activity (RR 4.8, 95% CI 1.4–16.9) and low vegetable intake (RR 2.2, 95% CI 1.0–5.5) in midlife were observed to increase the risk of later life phenotypic frailty. In the linear regression model being female (R2 0.28, B 0.08, $p < 0.01$) and low leisure time physical activity (R2 0.28, B 0.04, $p < 0.01$) were associated with increasing frailty index. There was a significant correlation between both body mass index & FI (R2 0.29, $B = 0.01$, $p < 0.001$) and waist circumference & FI (R2 0.28, $B < 0.01$, $p < 0.001$). Increasing education was negatively correlated with FI (R2 0.28, $B - 0.01$, $p = 0.01$). No associations with smoking, blood pressure or total blood cholesterol levels and frailty were observed.
Conclusions: Maintaining a normal body weight & waistline, healthy diet and good physical fitness throughout the life span should be encouraged to promote healthy.

P-605

Assessment of frailty in hospitalized geriatric greek patients using the Clinical Frailty Scale

Abstract Area: Frailty and resilience

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Introduction: Frailty is a major concern regarding older adults, indicating increased vulnerability to stressors and leading to high morbidity and mortality rates. Despite its clinical and predictive value, frailty has not been adequately investigated in Greece. The aim

of this study was to assess frailty in hospitalized geriatric patients using the Clinical Frailty Scale (CFS) and to examine its possible correlations with specific clinical parameters.
Methods: This study included 60 patients aged $\geq$ 65 staying at least one night at a private medical clinic, with CFS score being evaluated at their admission. Data were recorded and analyzed with IBM SPSS v.22. Spearman's correlation coefficient, Mann–Whitney and Kruskal–Wallis tests were used for variables' comparisons and Bonferroni correction was applied. Linear regression analysis was performed to examine independent factors related to CFS score and patients' mortality. Statistical significance was set at 0.05 ($p < 0.05$).
Results: Median age was 85 years and median length of stay was 26.6 days with an inpatient mortality of 15%. Median CFS score was 6.2 (IQR 5–7). Age (rho = 0.35, $p = 0.006$), length of stay (rho = 0.33, $p = 0.011$), dementia ($p = 0.008$) and pressure ulcers ($p = 0.002$) significantly affected frailty. After multifactorial analysis, age ($p = 0.003$), duration of hospital stay ($p = 0.009$) and pressure ulcers ($p = 0.003$) were also independently associated with CFS score. In addition, frailty independently predicted patients' mortality (OR = 2.71, $p = 0.012$).
Conclusions: Frailty is common among hospitalized geriatric patients, correlating with certain clinical characteristics and significantly affecting their prognosis. Additional studies are required for its further investigation and understanding.

P-606

The prognostic significance of clinical frailty scale to predict 2-years mortality in hospitalized patients

Abstract Area: Frailty and resilience

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Introduction: This study aimed to determine the impact of malnutrition, sarcopenia, and frailty on mortality within two years after being discharged from the hospital.
Methods: This prospective cohort study enrolled 118 patients who were admitted to internal medicine wards in a university hospital. Malnutrition and sarcopenia were defined according to GLIM criteria[1]and EWGSOP2[2], respectively. Clinical frailty scale (CFS) was used to assess patients living with frailty. Charlson comorbidity index (CCI) was calculated for all. All assessments were done by the same physician. The primary outcome was all-cause mortality within two years. Cox regression analysis was performed.
Results: The median (min–max) age of patients was 64 (18–93) years, 55.9% were female. Malnutrition prevalence was 46.7%, and sarcopenia was diagnosed in 9.7% of patients. There were 66.4% of patients living with frailty (CFS $\geq$ 4). CFS was independently associated with 2-year mortality after adjusting for age, sex, malnutrition, sarcopenia, and CCI. (HR = 1.37; 95% CI = 1.04–1.80; $p = 0.022$).
Conclusion: CFS is an easy and practical scale to estimate all-cause long-term mortality for hospitalized patients independently of age. Large sample studies are needed in future studies to support this data including all patients 18 years and older. Therefore, mortality estimation models according to CFS scores can be developed.
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P-607

The relationship between palliative care needs, frailty, nutritional status and depended living in elderly people: a cross sectional study

Abstract Area: Frailty and resilience

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Introduction: It is widely accepted that palliative care significantly reduces the use of health services in the elderly. Although palliative care should be provided equally to all, it is very common for elderly patients' needs for palliative care to remain undiagnosed and ultimately unsatisfied. The aim of this study is demonstrate how frailty, malnutrition and depended living are associated with increased needs for palliative care and how geriatric assessment can reveal those needs.
Methods: A cross sectional study was performed on adults over 65 years of age, living in a municipality of Greece, from October 2021 to February 2022. The data were collected using reliable questionnaires, while the frailty status was assessed by using the SHARE-Fi.
Results: The middle age of the participants was 75 years old. Totally, 25% of study participants were identified as frail. Among those frail old people, the average of PPS score was 57.6% while in the group of pre-frail the corresponding average was 72.7%. The study demonstrated that the lower extent to which somebody can function independently and has mobility in their activities of daily living (ADL) correlates significantly positively to the increase of needs for palliative care (0.595). Also, demonstrated that the level of malnutrition of the elderly is significantly positively related to palliative care needs (0.775).
Key conclusions: This study highlights the significant relationship between frailty, malnutrition and dependent living with increased palliative care needs of the elderly and the crucial role of implementation of geriatric assessment in this process.

P-608

Relationship of frailty syndrome with psychiatric problems in elderly patients

Abstract Area: Frailty and resilience

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Introduction: It is estimated that the proportion of individuals over the age of 60 worldwide will increase from 12 to 22% from 2015 to 2050. Fifteen percent of them live with a mental disorder. The majority of these mental disorders are dementia, unipolar depression and anxiety. One of the most important clinical conditions that occur

with aging in the population is frailty. Studies have concluded that physical frailty is also associated with psychiatric symptoms. In this study, we evaluated the relationship between frailty syndrome and other important psychiatric problems such as anxiety, depression and dementia.
Methods: This cross-sectional study was carried out for a period of 12 months from January 2021 to January 2022. Frailty was assessed by using the FRAIL scale. Dementia was evaluated with MMSE. Fifteen-item geriatric depression scale was used to evaluate status of depression. Beck Anxiety Inventory (BAI) is a self-report assessment of anxiety symptoms developed to differentiate between anxiety and depression.
Results: Of the 762 patients who were admitted to the study, 129 were frail, 208 were pre-frail, and 424 were robust. According to the results of the study, depression, anxiety and cognitive status were found to be associated with frailty ($p < 0.001$, $p = 0.002$, $p < 0.001$).
Conclusion: Cognitive frailty is an issue that cannot be considered independently with physical frailty. It is important in this respect that frailty is associated with neuropsychiatric problems. There is a need for more work to be done on this subject.

P-609

Descriptive study of the mortality of Fragile elderly patients treated by a geriatric home care unit of the red cross central hospital and its management in last-day situation

Abstract Area: Frailty and resilience

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Geriatric Home Care (GHC) is a hospital-based level of care that supports Primary Care, and managing last-day situations at home is one of his objectives.
Objective: To describe the characteristics of older patients who died during home follow-up or eventually in hospital between the period of June 2021 and November 2021.
Methodology: A prospective observational descriptive study. Data were collected from the patients' medical histories and were analyzed with SPSS v.26.
Results: 251 patients were collected, only 14 (5.6%) died during follow-up. 71.42% were > 90 years. 64.3% were women. The reasons for consultation were clinical control (85.7%) and pressure ulcer (7.14%). 92.85% were referred by Primary Care, 7.14% from Acute Geriatric Unit. 7.14% lived alone, 57.13% with their spouse or family and 35.71% with private-caregiver. The reason for disability was dementia (21.42%), osteoarticular (7.4%), cardiovascular (7.4%), parkinsonism (7.4%), neoplastic (21.42%) and depressive disorder (14.28%). 100% presented frailty. 100% had polypharmacy. Prior to admission, 64.28% were dependent in BADL. 35.7% did not have cognitive impairment. At admission, 85.71% were dependent and 71.42% had cognitive impairment. In the last 6 months, 64.28% had not hospitalized, but 57.14% went to the emergency room. 92.85% had visual deficit, 100% had urinary incontinence and 78.57% fecal incontinence. 28.57% had pain. 42.85% had pressure ulcers. 50% had caregiver-overload. 92.85% had insomnia. 100% had depressive syndrome.
Conclusions: Exitus in GHC are related to neoplasms, dependence, cognitive impairment, sensory deficit, insomnia and depressive syndrome. It is necessary to expand the sample for a better analysis.

P-610

Relationship of frailty syndrome with insomnia in elderly patients

Abstract Area: Frailty and resilience

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Introduction: It is estimated that the number of individuals over the age of 60 will increase from 900 million to 2 billion from 2015 to 2050. Sleep problems in the elderly are very common and associated with many co-morbid situations. Insomnia can be defined as deterioration in sleep duration and quality, and consequently, regression in daily functions. Frailty syndrome is one of the most important geriatric syndromes explaining the increased morbidity and mortality in elderly individuals. In this study, we evaluated the relationship between insomnia and frailty syndrome.
Methods: This cross-sectional study was carried out for a period of 12 months from January 2021 to January 2022. Frailty was assessed by using the FRAIL scale. Insomnia was evaluated with the Pittsburgh Sleep Quality Index (PSQI) and the Insomnia Severity Index.
Results: Of the 762 patients who were admitted to the study, 129 were frail, 208 were pre-frail, and 424 were robust. According to the results of the study, insomnia was found to be associated with frailty ($p = 0.001$).
Conclusion: It is understandable that co-morbid conditions that both cause insomnia and develop due to insomnia lead to fragility. Further studies on this subject would be beneficial.

P-611

Gerontogeriatric Nursing: how is evidence being reported?

Abstract Area: Frailty and resilience

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Introduction: Gerontogeriatric nursing is emerging as a specific field of Nursing in Portugal and globally (within the discipline and the professional fields). However, the Portuguese national nursing association still does not acknowledge gerontogeriatric nursing as a field of specialization.
Objective: To understand the global investment being made by nurses in the field of gerontogeriatrics.
Methods: An analysis of the literature regarding scientific evidence of gerontogeriatrics in the perspective of Nursing as a discipline was performed through a search in MEDLINE (PubMed). Using the concepts directly related to the phenomenon in question, a search

strategy was performed using nursing-related and gerontogeriatrics-related keywords. Afterwards, VOSViewer was used to construct and visualize bibliometric networks of the last five years to understand the emerging topics in this field.
Results: A total of 30.777 articles were published since 1947, with exponential growth in the production of scientific articles in the last two decades, with 2.150 articles having been published in just 2021. Bibliometric networks distinguished the concepts of "nursing role" and "nursing homes", with "qualitative studies" as the research concept most present in the network established.
Key conclusions: Gerontogeriatric nursing is emerging as a specific field and specialization in the discipline and profession of Nursing, with bibliometric networks indicating that nurses are trying to define their roles in this field. The requirement for client-centred care in this population is present in the resort to qualitative studies. Thus, we can expect that nursing research in this field can help better understand gerontogeriatrics.

P-612

Validation of a new short frailty screen for use in ED: the Quick Frailty Screen (QFS)

Abstract Area: Frailty and resilience

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Background: As populations age, the prevalence of frailty is expected to increase among older attendees to Emergency Departments (ED). Early identification of frailty on arrival to ED can improve outcomes but few instruments are available and bespoke for use in this setting. Given this, we developed a new short frailty screen, the Quick Frailty Screen (QFS), based on an international expert Delphi consensus to determine the core components of an ideal frailty screening instrument.
Methods: Consecutive adults aged $\geq$ 70 years were screened at triage after arrival at a university hospital ED in Cork city, Ireland. Screening was performed, where possible, 9 am–5 pm, Monday to Sunday inclusive, over a four-week period in December 2021. The QFS was compared against the ability of three validated, short, frailty screening instruments to identify frailty; the Clinical Frailty Scale (CFS), Variable Indicative of Placement (VIP) and The Programme on Research for Integrating Services for the Maintenance of Autonomy 7 item questionnaire (PRISMA-7). An independent CGA using a battery of assessments determined each patient's frailty status.
Results: In total, 313 patients aged > 70 were available, median age 78 IQR $\pm$ 9 years (Q3–Q1 = 83–74), range 70–97; 46% were female (n = 143). Approximately half (51%; n = 160) were frail based on CGA. All four short frailty screens were accurate at identifying frailty (Fig. 1). The median QFS score was 3 IQR $\pm$ 3 (Q3–Q1 = 4–1). The QFS had an AUC of 0.92 (95% CI 0.89–0.95), indicating it had excellent diagnostic accuracy for frailty. Of the four instruments, the VIP had the lowest accuracy, AUC 0.82 (95% CI 0.77–0.87). The QFS had statistically significantly greater accuracy than the VIP ($p < 0.001$). There was however, no significant difference between the QFS and either the CFS, AUC 0.95 (95% CI 0.92–0.97), $p = 0.021$ or the PRISMA-7 AUC 0.90 (95% CI 0.86–0.93), $p = 0.058$.
Conclusion: The QFS showed excellent diagnostic accuracy for frailty when compared to three other validated instruments. This rapid, ED-specific frailty screening tool may help accurately identify at-risk older adults in busy acute care environments.

P-613

Sporadic Ogilvie's syndrome in a 72-year-old patient with dementia

Abstract Area: Geriatric emergency medicine

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A 72-year-old female with a history of Alzheimer's disease and chronic constipation under treatment with memantine presents to the clinic with a 2 week history of hyporexia, abdominal pain and tenderness, constipation and diminished bowel sounds. She was admitted to the emergency service for further evaluation with blood test revealing hypernatremia (149 mmol/L) and elevated lactate (2.2 mmol/L). Contrast enhanced tomography revealed a dilated colon (9 cm in diameter) at the level of the transverse colon without pneumoperitoneum. A flatus tube and nasogastric probe was placed with significant improvement. She was discharged with a diagnosis of Ogilvie's syndrome (OS). Two weeks after she is seen in the clinic with the same signs and symptoms so as second line therapy, prokinetics are initiated. A two day follow up revealed marked improvement in abdominal perimeter, with no pain and tenderness and daily stool passage. Ogilvie's syndrome refers to a massive dilatation of the colon without mechanical obstruction. It´s well known in the clinical literature and may be associated as a complication of abdominal, pelvic or hip surgery. Sporadic cases are rare and only a few cases have been reported [1]. The most recognized hypothesis relies on an imbalance of the autonomic nervous system regulation of the colon, however, most authors believe that it is a decrease in parasympathetic activity that creates an adynamic colon [2]. Toxic megacolon should be differentiated from OS when bowel dilation occurs in association with systemic toxicity, usually in the context of inflammatory bowel disease or infectious colitis [3].
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P-614

Geriatric emergency medicine 'Pearls And Pitfalls': an interdisciplinary approach to education

Abstract Area: Geriatric emergency medicine

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Background: In recent years we have seen increased awareness of the terms 'frailty' and 'Geriatric Emergency Medicine' in many of our Emergency Departments (ED). A clear understanding of these terms within the context of Emergency Medicine is essential in order to provide a holistic approach to patient care and to best meet the needs of older adults presenting to the ED. It has been highlighted internationally that current training programmes do not sufficiently address the learning needs of trainees to optimise care of this cohort for patients. The European Geriatric Medicine Society and the European Society for Emergency Medicine has attempted to address this gap through the introduction of a core GEM curriculum in 2016, however, at a local level many EDs are not utilising this resource for a number of reasons including lack of awareness and prioritisation of other local learning needs as determined by specialist training. To address the GEM learning needs at a local level an initiative idea was trialled in the form of a GEM teaching wall with dedicated monthly topics chosen from the above curriculum.
Methods: The initiative was led by a Senior Physiotherapist working on the Frailty Intervention Therapy Team and a Senior House Officer (SHO) working in ED with collaboration from other ED members as identified. A brainstorming session took place to identify potential topics. A poster was created by the project leads each month focusing on a core topic including an overview on the subject, national/international guidelines and top tips how to best manage in ED. Relevant team members contributed to different topics. Monthly posters were displayed in the ED.
Results: The project has been successfully running for the past four months with topics to date include 'Abdominal pain in the Older Adult', 'Silver trauma' and 'Delirium' and 'Falls'.
Conclusion: GEM teaching is a cornerstone of successful management of older adults presenting to our EDs. Novel MDT teaching approaches can address the identified learning gap in this area and highlight international recommendations with minimum cost but significant gain to any ED.

P-615

Trialling extended hour's service provision of a Frailty Intervention Therapy Team (FITT) within the Emergency Department

Abstract Area: Geriatric emergency medicine

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Background: Older adults with frailty in the Emergency Department (ED) often present with complex needs requiring a holistic approach to their care. Many ED's are addressing these needs through the introduction of FITT however the majority of these teams in Ireland work standard office hours with many complex patients presenting outside of these times. The Royal College of Physicians (2020) recommends '' An MDT capable of assessing and managing geriatric syndromes should be available 10 h a day, 7 days a week'' therefore to attempt to bridge the gap between current service provision and service needs an extended hours trial was completed.
Methods: Over a two month period an extended hour trial was completed by existing FITT staffing to include cover until 8 pm on Friday evenings & from 8 am to 2 pm on Saturdays. A total of 11 additional shifts were completed. The current blanket referral system those $\geq$ 75 were screened by FITT and verbal referrals were taken for those under that age limit if they had frailty needs to be addressed.
Results: 112 patients were screened with 78 deemed appropriate for a FITT assessment. Outcomes Directly Home: 45 Admission; 33—primarily for further medical intervention Average CFS 5 36 Additional HSCP referrals were highlighted in ED 51% of those discharged home required onward referral 60% of those admitted required further HSCP input at ward level. Feedback surveys were also completed with ED staff, patients and family members reported; 100% of service-user's were happy to be assessed & 82% were happy with the recommendations ED staff scored FITT an average of 9.8 for the extended hours and ease of access 100% of ED staff felt the extended hours improved patient flow Other feedback highlighted need for further investment for FITT and extended hours services as a priority.
Conclusion: The provision this service allows for a larger proportion of frail older adults to be assessed. For long-term sustainability s further investment and additional staffing would need to be considered.

P-616

Re-admissions to hospital within 7 days of discharge. Is it avoidable? Frail elderly patients?

Abstract Area: Geriatric emergency medicine

Salma Sidahmed[1], Aamer Ali[1], Abeed Fayaz[1], Nicholas Turner[1], Mahir Yousuff[1], Claudius Ho[1]

[1]Nottingham University Hospital

Introduction: NICE guidelines rationale ensure that the coordinated discharge plan reflect the quality of care provided within the NHS and the 7 days and 30 days rule assessing it. NHS England's National Tariff payment system describes the 30-day readmission rule in which commissioners set a threshold above which payment for emergency readmissions is not reimbursed. Reasons for hospital readmission are complex and multifactorial.
Methods: We have carried out a retrospective audit of emergency readmission within 7 days of discharge from our department. Data was collected form 92 readmission episodes to study the reasons for hospital readmission.
Results: Readmissions triggered by social carers in over 59% of cases. Nearly two thirds of readmissions were due to inability to cope at their discharge destinations. 32% of re-admissions were after

increased social support in previous discharge. In 14% of cases, there was a delay in commencing the planned social support in the community. The majority of medical readmission were due to falls followed by delirium and a quarter came back with sepsis.
Key conclusions: A significant number of patients admitted soon after discharge are due to failures in support systems for patients and their carers. Deconditioning after inpatient hospital stay, communication gaps and medical conditions not optimally treated could have resulted in re-admissions. The capacity and capability of community social services are insufficient to mitigate the risks of readmission. There are some suggested evidence-based plans to avoid subsequent readmissions.

P-617

Re-admissions to hospital within 7 days of discharge. Is it avoidable ? Frail elderly patients?

Abstract Area: Geriatric emergency medicine

Salma Sidahmed[1], Aamer Ali[1], Abeed Fayaz[1], Nicholas Turner[1], Mahir Yousuff[1], Claudius Ho[1]

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P-618

Diagnosis of Cholangitis in an elderly woman with dementia: a case report

Abstract Area: Geriatric emergency medicine

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Introduction: Cholangitis is a life threatening condition. Diagnosis in elderly individuals with dementia represents a challenge, since they not always present or communicate abdominal pain. Prognosis will depend on how quickly the diagnosis is made and treatment is started [1,2].
Case report: An 83 year old woman with dementia and type 2 diabetes had been presenting with functional decline for seven days. A geriatric home visit was made, the patient was icteric and drowsy. Her physical examination revealed a cardiac rhythm of 125 beats per minute, fever of 38 °C and hypotension of 60/40 mmHg. She did not had pain upon abdominal examination and a referral to the hospital was made. Laboratory workup revealed: Anemia (Hb 11.2 gr/dl), leukocytosis (WBC 14.47 × 103), neutrophilia (11.87 × 103), elevated procalcitonin (2.86 ng/ml), elevated serum creatinine (1.2 mg/dl) and hyperbilirubinemia (1.29 mg/dl) with a Cholestatic injury pattern (R factor 0.9): elevated alkaline phosphatase (585 U/L), and elevated AST (74 U/L) and ALT (195 U/L). An abdominal CT was ordered, revealing an enlarged gallbladder, with inflammatory changes and hyperdense material associated with wall thickening (6 mm). The diagnosis of cholangitis was confirmed and the patient was started on antibiotics and fluids. A percutaneous drainage of the gallbladder was made on the next day. After drainage, fluids and antibiotics the patient had a full recovery to her previous basal functional status.
Conclusion: A low threshold for suspicion of cholangitis should be kept in mind, even in the absence of abdominal pain, especially in elderly individuals with dementia.
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P-619

Embedding treatment escalation plan in a Community Hospital Clinical Practice

Abstract Area: Geriatric emergency medicine

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[1]Buckinghamshire Healthcare NHS Trust

Introduction: The complexity of older patients makes it difficult for healthcare professionals to make challenging decisions. Buckinghamshire Healthcare NHS Trust developed and enrolled Treatment Escalation Plan (TEP) to communicate appropriate level of management for a patient in the event of clinical deterioration [1]. The aim of this study was to ensure that patients admitted to Buckinghamshire community hospital had valid TEP in order to share communication

about appropriate level of treatment for each frail individual with doctors, nurses, therapists, families and patients themselves.
Methods: We undertook two cycles of prospective data collection using case record evaluation against BMA recommendations [1] and NICE guidelines [2] in October and November 2021. In total 35 patient records were reviewed before and after implementation of intervention.
Results: 63% of patients had a TEP completed by the community hospital team. After intervention, the completion rate increased to 94%. Community specific TEP templates completion increased by 49% between two cycles. The staff felt more supported in decisions making when TEPs were in place.
Conclusions: Implementation of TEP in community hospital supported development of an integrated care systems-wide task group to enrol TEP in wider community in order to reduce potential harm associated with non-beneficial interventions.
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P-620

Hyperacute stroke presentations leading to the diagnosis of cerebral amyloid angiopathy related inflammation

Abstract Area: Geriatric emergency medicine

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Introduction: Cerebral Amyloid Angiopathy-related Inflammation (CAArI) should be considered in the differential diagnosis of rapid cognitive impairment. We present two cases that were presented as neurological emergencies and after initial hyperacute stroke care were diagnosed with CAArI.
Case 1: 63 years, Asian male presented to stroke service with left-sided sudden onset of weakness. Non-contrast CT brain imaging showed no bleed and was given thrombolysis. He rapidly developed dense left weakness and visual field changes. Collateral history suggested rapidly progressive cognitive decline. Magnetic Resonance Imaging (MRI) showed features consistent with Cerebral Amyloid Angiopathy (CAA). CSF analysis and PET scan were inconclusive. Brain biopsy was consistent with CAArI. He was treated with steroids and cyclophosphamide. His cognitive condition stabilized for a year before progression. Case 2:86 years, Caucasian female who was treated for a spontaneous right parietal lobe haemorrhage represented a week later with a fall, new-onset left focal seizures and delirium on the background of recently diagnosed severe cognitive impairment. MRI showed massive edema with worsening of ICH in the right parietal lobe region. She was treated for status epilepticus. Her family declined CSF analysis due to severe frailty and previously advanced directives. Outcomes of neuro-oncology, neuroradiology and complex neurological multidisciplinary meetings suggested CAArI. She received a course of steroids but was later actively palliated and fast-tracked to a care home.
Conclusion: CAArI is an uncommon condition that significantly impacts management and prognosis. A high index of suspicion, multidisciplinary approach, shared decision-making with patients and family would be helpful in individualised care plans.
References: On request.

P-621

Management of elderly patients with suspected abdominal diseases: role of ultrasound

Abstract Area: Geriatric emergency medicine

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Introduction: Aim of the study is to illustrate the role of ultrasound (US) in the management of the elderly patients with suspected abdominal diseases. Material and Methods. US was performed in 600 elderly patients (70–95 years old, 320 women and 280 men) with suspected abdominal diseases. In 100 patients with the diagnosis of suspected acute abdomen US was performed in emergency room, in 250 patients with suspected liver and gallbladder and pancreatic diseases the US was performed in geriatrics department. In 150 patients with suspected urological diseases the US was performed in emergency room with the urologist and geriatric consultant. In 100 patients with abdominal pain the geriatric consultant performed US before to prescribe other diagnostic procedures.
Results: In the group of elderly patients with suspected acute abdomen US revealed 35 cholecystitis, 20 diverticulitis, 7 peritoneal carcinomatosis, 9 abdominal aortic aneurisms,, 5 colon neoplasms, 4 appendicitis. In the group of elderly patients with suspected diseases of liver, gallbladder and pancreas, US revealed liver cirrhosis and ascites in 20 patients, gallbladder stones in 50 patients, acute pancreatitis in 20 patients, chronic pancreatitis in 10 patients, biliary tract stones in 5 patients, gallbladder cancer in 3 patients, biliary tract cancer in 4 patients, pancreatic cancer in 5 patients, liver cancer in 6 patients, liver metastases in 7 patients, cholecystitis in 15 patients.
In the group with urological diseases US revelad renal stones in 30 patients,, hydronefrosis in 30 patients, renal cancer in 4 patients,uterus cancer in 7 patients, prostatic cancer in 4 patients, ovarian cancer in 4 patients, bladder stones in 6 patients and bladder cancer in 4 patients. In the group of elderly patients with abdominal pain the geriatric consultant performed US and diagnosed 8 gallbladder stones, 4 ascites, 2 diverticulitis, 1 abbdominal aortic aneurism, 3 renal stones, 2 hydronefrosis, 3 cholecystitis.
Discussion and conclusion: US can be considered the most appropriate diagnostic method for elderly patients, in emergency room and in geriatrics departement. In the elderly patient with several chronic diseases,acute abdominal diseases can be quickly detected with US before prescribing invasive investigations. The diagnostic accuracy of US is higher is the geriatric consultant performs an appropriate clinical examinations. Often signs and symptoms in elderly patients are few or absent, also when the patient has a serious disease or a cancer: in these cases US allows to increase effectiveness and efficiency of health care in geriatrics.

P-622

A rare case of recurrent ischaemic stroke due to thrombosed aneurysm of extracranial internal carotid artery

Abstract Area: Geriatric emergency medicine

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Introduction: The incidence of extracranial carotid artery aneurysms (ECCAs) is less than 1% [1, 2]. We report a case of recurrent ischaemic stroke secondary to thrombosed ECCA.
Case report: An 83-year-old Caucasian male presented with left-sided weakness with facial asymmetry, which resolved within 24 h. He had hyperlipidaemia, chronic idiopathic thrombocytopenic purpura with intermittent epistaxis, latest platelet counts of 190–220 × 109/L and previous history of ipsilateral ischaemic stroke. Neurological examination was unremarkable. His functional activity level deteriorated over the last one year with Modified Rankin Score of 3. Computed tomography (CT) of brain was normal. CT angiogram revealed a 2.5 cm partially thrombosed aneurysm at the proximal cervical internal carotid artery with a small filling aneurysmal portion of 5 mm without stenosis, likely secondary to an unnoticed previous traumatic dissection. Magnetic resonance imaging (MRI) of brain demonstrated acute embolic infarcts in the right head of the caudate nucleus and the parietal lobe. Other relevant investigations were normal.
Discussion: Anticoagulation was high-risk in this case due to frequent epistaxis. Haematologists agreed for dual antiplatelet (DAPT) due to the high risk of transient ischaemic attack. It was later switched to single antiplatelet as the patient could not tolerate DAPT. Carotid endarterectomy was not recommended due to declining health, frailty, and patient refusal. Antiplatelet therapy inhibits platelet aggregation within aneurysmal sac and reduces the risk of ischaemic events [3]. Manipulation of intravascular thrombus during coiling can cause further thromboembolic events [4].
Conclusion: Decisions for managing stroke in elderly are complex and require a holistic overview. Multidisciplinary approach and shared decision making with patients are crucial.
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P-623

Complications in older adults with traumatic brain injury in the Emergency department

Abstract Area: Geriatric emergency medicine

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Introduction: Patients with mild traumatic brain injury (TBI) under antithrombotic treatment, remain by protocol 24 h under hospital observation to monitor the occurrence of complications. The aim of this study is to determine whether this measure is justified.
Methods: Retrospective cohort study. Patients over 75 years under antithrombotic treatment who attended the emergency department for TBI during 2019 were included. Medical history, baseline characteristics and complications presented during the 24-h hospital observation were collected: those related to TBI (seizures, impaired level of consciousness, hyponatremia, appearance of CT lesions), those derived from the hospital stay itself (fall, acute urine retention, appearance of respiratory symptoms, hypernatremia, hypoglycemia) and those that could be attributed due to both processes (fever, confusion).
Results: A total of 268 patients over 75 years of age with mild TBI were included. The 64.9% were women with a mean age of 86 (5.1) years. One hundred and forty-three patients were observed in the emergency department for 24 h. 25 patients (7.4%) presented complications: 8 (32%) complications only attributable to TBI (none serious: seizures or CT lesions), 12 (48%) complications only derived from their stay in the ED and 5 (20%) had complications attributable to both processes, being the frequency of complications derived from their stay in the ED significantly higher ($p = 0.009$).
Conclusions: Complications in patients over 75 years of age under antithrombotic treatment with TBI are infrequent being those derived from hospital observation higher than those derived from the trauma itself, so we should rethink this usual practice.

P-624

The Quick Sequential Organ Failure Assessment (qSOFA) score predicts mortality and complications during hospitalization both in infected and non-infected hospitalized elderly patients

Abstract Area: Geriatric emergency medicine

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Introduction: The qSOFA score (respiratory rate > 22 breaths/min, systolic blood pressure < 100 mm Hg and altered mental status) was introduced as an initial way to identify infected patients at high risk. Aim was to determine the association between qSOFA scores and mortality and between qSOFA scores and the existence of complications during hospitalization in elderly admitted patients with and without infection.
Methods: In 488 consecutively admitted elderly patients (48.4% women), median age 82.00 ((IQR 75.00–87.00), patient characteristics were recorded. Symptom severity at admission was assessed by qSOFA score. Receiver Operating Characteristic Curve (ROC) was used to analyze how well the qSOFA is capable of discriminating between deceased and discharged elderlies and between elderlies who were presented complications during hospitalization and those who do not.
Results: Complications' and mortality rate were 52.4% and 16.2% respectively. qSOFA scores were associated with mortality (0[5.5%], 1[19.6%], 2[32.9%], and 3[66.7%]) and complications (0[35.3%], 1[63.4%], 2[84.8%], and 3[87.5%]). The ROC analysis showed that qSOFA has almost similar accuracy for predicting inpatients' mortality both in infected (AUC 0.693 [95% CI 0.601–0.785] $p \leq 0.001$) and non-infected (AUC 0.771 [95% CI 0.676–0.866] $p \leq 0.001$)

elderly patients. Moreover, qSOFA has almost the same accuracy for predicting complications during hospitalization both in infected (AUC 0.692 [95% CI 0.606–0.778] $p \leq 0.001$) and non-infected (AUC 0.680 [95% CI 0.620–0.740] $p \leq 0.001$) patients.
Conclusions: qSOFA scores may be useful for mortality and complications' prediction both in infected and non-infected hospitalized elderly patients.

P-625

Relevance and feasibility of chest ultrasound in the evaluation of acute dyspnea in the elderly patients

Abstract Area: Geriatric emergency medicine

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Background: Acute dyspnea is one of the most common causes of admission in acute geriatric units (AGU), atypical clinical representations as well as the standard diagnostic approach based on radiological and biological results can delay the diagnosis and alter the prognosis. Point-of-care chest ultrasound in elderly patients can shorten the time needed to formulate a diagnosis and adapt therapy.
Methods: Consecutive patients admitted in AGU for acute dyspnea were prospectively included. Chest ultrasound (pulmonary, cardiac and inferior vena cava) was performed upon admission by an ultrasound trained geriatrician blinded to clinical history. The initial ultrasound diagnosis was compared to the final diagnosis confirmed by two experts based on clinical/biological/radiological data, treatment and evolution. Time of performing the chest ultrasound was recorded, Accuracy and concordance of diagnoses were calculated.
Results: 35 patients were included. The mean age was 87.7 years, 60% were over 85 years old and 45% were women. Average time needed to formulate ultrasound diagnosis was 10 min. The main causes of dyspnea were, cardiac decompensation, pneumonia and pleural effusion. "Initial ultrasound diagnoses" and "final diagnoses" showed a good overall concordance with a Kappa index of 0.91 (0.92 for acute heart failure, 0.76 for pneumonia and 0.89 for pleural effusion). Sensitivity and specificity were respectively 100% and 96% for acute heart failure, 86% and 90% for pneumonia and 88% and 100% for pleural effusion.
Conclusion: Chest ultrasound represents a reliable and rapid approach in the diagnostic orientation of elderly patients admitted for acute dyspnea. Training geriatricians in this technique appears essential in AGU.

P-626

Relevance and feasibility of chest ultrasound in the evaluation of acute dyspnea in the elderly patients

Abstract Area: Geriatric emergency medicine

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P-627

Diseases of the liver and biliary tract in the elderly patients associated with the metabolic syndrome: role of ultrasound

Abstract Area: Geriatric emergency medicine

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Introduction: Objective of the work is to illustrate the role of ultrasound in detecting diseases of the liver and biliary tract not known in the elderly patients with metabolic syndrome. The frail elderly patient with symptoms related to diseases of the liver and biliary tract often undergoes instrumental investigations multiple and invasive that can further compromise clinical conditions. Ultrasound is therefore proposed as the first diagnostic technique in the patient frail elderly, complex, with metabolic syndrome, diabetes mellitus, hypertensive heart disease, chronic earth failure, cerebrovascular and cardiorespiratory insufficiency, with signs and symptoms that allow to formulate the diagnostic hypothesis of disease of the liver and biliary tract, with the aim of verifying whether it is possible to increase appropriateness, effectiveness and efficiency of care in Geriatrics.
Material and methods: 100 clinical cases were analyzed, 50 women and 50 men, aged between 65 and 90 years, in which it was formulated at the time of admission the diagnosis of Metabolic Syndrome with related complications to the coexistence of diabetes mellitus, obesity, heart diseases, hypertension, dyslipidemia. In all patients one or more suspicious signs and symptoms have been reported for pathologies of the liver and biliary tract deserving further diagnostic procedures. All patients underwent abdominal ultrasound in Emergency Room or within 24 h of admission to Geriatrics department. In most patients (90%) it was requested gastroenterological or general surgery or oncology consultancy, immediately after performing the ultrasound examination, in relation to the disease highlighted. 50% of patients was transferred in other departments and 50% was subjected

during the hospitalization in Geriatric department to further ultrasound scans, in order to monitoring the diseases of the liver and biliary tract.

Results: Ultrasound showed 35 cases of hepatic steatosis and asymptomatic gallbladder stones were present in 9 of them, while in 9 other cases they were present both dyspeptic symptoms and gallstones. In 8 cases biliary sand was present. Diagnosis of gallbladder lithiasis and biliary sand has always been readily formulated. In 12 patients with jaundice, ultrasound showed 6 cases of lithiasis of the choledochus, 2 cases of neoplasia of the biliary tract, 4 patients with jaundice in cirrhosis. Liver cirrhosis was reported in 8 patients, including 5 cases of ascites. Hepatocarcinoma was highlighted in 5 patients with HCV-related cirrhosis. In 11 patients hepatomegaly was related to heart failure congestive and ultrasound diagnosis was made smoothly, also highlighting pleural effusion and pericardial effusion. In 2 patients with metabolic syndrome the ultrasound made it possible to formulate the diagnosis of cirrhosis with multifocal and severe hepatocarcinoma, portal hypertension, with recanalization of the vein umbilical and splenomegaly. In 3 patients with metabolic syndrome and diabetes mellitus ultrasound showed multiple liver metastases with thrombosis of the left portal branch. The esophagogastroduodenoscopy allowed to highlight a gastric neoplasm.

Conclusions: Based on the results it has been confirmed that ultrasound allows to highlight early and easily,liver and biliary tract diseases which are frequently associated with the metabolic syndrome. Elderly patients often complain of signs and symptoms (dyspepsia, bloating, volume increase of abdomen, abdominal pain, abdominal mass, jaundice, melena) which are related to acute or chronic diseases of the liver and biliary tract. Ultrasound can be performed easily within 24 h from admission to Geriatrics and it allows to select subsequent diagnosticand therapeutic decision. Diagnoses easily formulated with the ultrasound examination allows for early programming transfer to other departments and reduce the length of stay in geriatrics department. Often numerous diseases associated with the Metabolic Syndrome cannot be diagnosed by taking into account only the data from the clinical examination and the patient's symptoms. Indeed the elderly patients frequently report symptoms in an inadequate and incomplete manner. Therefore for confirm the diagnostic hypotheses often both doctors of the Emergency Department and the doctors of the hospital wards prescribe invasive, complex contrast examinations,expensive and with risk for elderly patients. Hepatobiliary diseases in elderly patients often are diagnosed in association with metabolic syndrome and therefore it is desirable that the doctors of the emergency room and the doctors of the internal medicine and geriatrics departments have adequate ultrasound skills. Training programs should include theoretical-practical training in ultrasound with practical courses and preferably at the bed of the patient, analysis of the problems of frail elderly patient who needs a multidimensional assessment and appropriate prescriptions of diagnostic and therapeutic procedures especially in those clinical situations, such as metabolic syndrome, in which the complexity of the patients and the associated diseases require the management with effectiveness and efficiency.

P-628

Hemolytic uremic syndrome (HUS) is ageless: case of multiple organ failure in an 85-year-old patient

Abstract Area: Geriatric emergency medicine

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Introduction: Hemolytic uremic syndrome (HUS) is a complication occurring in 5–20% of Shiga toxin-producing Escherichia coli infections (STEC) and mainly affects pediatric population. Incidence in the adult population (1/1,000,000 person-year), is ten times lower than in pediatrics (1/100,000 child-year). We report the case of an 85-year-old woman whom presented HUS with multiple organ failure. Methods The patient presented walking disorders with falls, tremor of the 4 limbs and language disorders for a week. Clinical examination found cerebellar syndrome and paraphasia. Brain Magnetic Resonance Imaging was normal. On day 2, a status epilepticus occurred needing transfer in an intensive care unit. Concomitantly, hemolytic anemia, thrombopenia and acute renal failure appeared. These markers allowed the suspicion of HUS. Highlighting STEC in the stool confirmed the diagnosis. Treatment was symptomatic and 2 months after she has recovered her previous autonomy.

Results: Between January and March 2022, an outbreak of HUS secondary to STEC infection was responsible for at least 26 cases in France. Even if pediatric population is more affected, prognosis is more severe in old population, whether in terms of mortality (33% vs 15%) or long-term disabilities (50% vs 30%). There is no semiological characteristics distinctive of geriatric population. Clinical characteristics associated with typical biological results of STEC-HUS, should make physicians consider more frequently this diagnosis, especially in the epidemic context.

Conclusion: The diagnosis of STEC-HUS has to be considered as soon as possible, particularly in old patients, in order to allow optimal management of this serious pathology.

P-629

AEGIS: AcutE Geriatric Intervention Study—implementing frontline geriatric assessment in Emergency Department

Abstract Area: Geriatric emergency medicine

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Introduction: With elderly taking up to 12–24% of all emergency department (ED) visits, there is a need for geriatric expertise in ED surroundings. Our study aims to quantify the amount of frail elderly in ED and to verify the magnitude of non-medical (ie. social) ED visits in this group. Methods: Patients over 75 years admitted to ER are screened using Triage Risk Screening Tool (TRST) questionnaire and Clinical Frailty Scale (CFS). Patients with CFS 4–9, but not presenting acute condition such as e.g. hip fracture, acute myocardial infarct or stroke, undergo Targeted Geriatric Assessment (TGA) by multidisciplinary geriatric team. TGA includes validated questionnaires and tests to scan for risk of delirium, cognitive impairment, change of functionality, risk of falls, malnutrition and alcohol abuse. Observed problems are informed to ED doctor responsible for the patient. A comprehensive patient record is made with recommendations for the future.

Results: Preliminary data shows the majority of the patients being acutely ill when admitted to ED. Social reasons are a minority. 30% of all patients over 75 are independent, with TRST negative or CFS of 1–3. Main recommendations for future care are needs for cognitive evaluation, rehabilitation or medication alterations.

Key conclusions: Preliminary data shows urgent need for geriatric care units in ED, where acutely oriented geriatricians take responsibility for the frail and old. This approach provides more structured and accurate information on elderly patients' functional capacity and background, which may lead to more accurate diagnostics and more considered hospital intake.

P-630

Characteristics of nursing home patients in Emergency Department

Abstract Area: Geriatric emergency medicine

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Introduction: The urgent need to improve the coordination between hospitals and nursing homes emerged because of COVID-19 pandemic. As an effective solution, the Liaison Geriatrics teams were created at public hospitals. Our aim was to understand the demographic and functional characteristics of the nursing homes patients (NHP) who were coordinated by our hospital, and were attended in the Emergency department (ED).
Methods: A descriptive retrospective observational design was used. The medical data was collected from medical electronic database, from 1st June 2020 to 31th June 2021. Barthel Index (BI), and Functional Ambulation Category (FAC) evaluated functional situation. The Global Deterioration Scale (GDS) evaluated cognitive impairment.
Results: 680 ED visits were registered. Mean age of the patients was 86.7 (7.5) years. 69.7% were female. Number of medications mean was 9.1 (3.9). BI mean was 34.2 (30.5); FAC mean was 1.7 (1.8) GDS mean was 4.8 (1.9). The medical indications for visiting the ED were: falls 20.4%, acute respiratory failure 18.8% (39% of them caused by aspiration); fever or infectious symptoms 17.2%; gastrointestinal pathology 10.6%; neurologic symptoms 6%; cardiovascular pathology 5.7%; SARS-COV-2 infection 4.4%; and other causes in 16.7%. Among the fall cases, 35 patients (25.2%) suffered from bone fracture. Pressure ulcers were detected in 55 patients (8.1%).
Conclusions: NHP attended in ED were very dependent. One in five patients visited ED because of falls, and 25.2% suffered from bone fracture. Pressure ulcers and acute respiratory failure caused by aspiration were detected in 8.1% and 7.3% respectively.

P-631

Factors at admission associated with delirium in a large series of very older patients admitted for traumatic intracranial hemorrhage

Abstract Area: Geriatric emergency medicine

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Introduction: Traumatic intracranial hemorrhage (TIH) generates a high burden of morbi-mortality. The objective was to analyze in-hospital delirium related factors in very older patients with TIH.
Methods: Observational study of patients aged > 80 years admitted to an acute geriatric unit with a TIH between December 1, 2016 and April 30, 2022. Demographic, clinical, functional, cognitive and neuroimaging variables were included. We performed univariate and multivariate analysis.
Results: One-hundred sixty-nine patients were included (87.6 + 4.4 years, 61.5% women), whom 91 (53.8%) developed delirium during hospitalization. Patients who developed delirium were older (88.22 vs 86.77 years $p = 0.033$), most of them were treated with dexamethasone (36.7 vs 19.5% $p < 0.05$ OR 2.393 95% CI 1.178–4.860), they had more infections (59.3 vs 29.5% $p < 0.001$ OR 3.490 95% CI 1.837–6.630), more diagnostics at discharged (13.19 vs 10.74 $p = 0.001$) and a longer hospital stay (9.6 vs 7.15 days $p = 0.012$). In multivariate analysis, predictors of delirium were treatment with dexamethasone (OR 2.358 95% CI 1.114–4.991 $p < 0.025$), infections (OR 2.967 95% CI 1.499–5.873 $p < 0.002$), and number of diagnostics at discharged (OR 1.085 95% CI 1.008–1.169 $p < 0.031$). The area under the ROC curve was 0.723 (95% CI 0.646–0.799, $p < 0.001$).
Conclusion: The development of delirium is common in very older patients with TIH and its presence is associated with treatment with dexamethasone, infections and number of diagnosis at discharged. The management of doses of corticosteroids and strategies to prevent infections in these patients could help to reduce the incidence of in-hospital delirium.

P-632

Pattern of Emergency Department use by short-term geriatric frequent attenders

Abstract Area: Geriatric emergency medicine

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Objectives: To determine if distinct patterns of use exist in geriatric patients with multiple emergency department (ED) visits over a short period and to describe their patient and visit characteristics.
Methods: Patients > = 65 years covered by the Quebec public health insurance plan with an index ED visit between July 2014 to December 2015 (n = 519,484) and > = 3 ED visits in preceding 90 days were included in the study. Group-based trajectory modelling was used to identify trajectories of use in the 90 days before the index visit.
Results: Of the patients with an eligible index visit, 2.1% (n = 10,741) had > = 3 visits in the preceding 90 days which accounted for 7.1% of total visits. The study group was subdivided into patients who had only ED visits without admission and patients with at least one visit leading to an admission. The No admission group had three trajectories—stable, increasing, and hyperacute probability. The Admission group had two trajectories—stable and increasing probability. The stable groups had a near constant probability of presenting to the ED over the 90 days whereas probabilities increased 60 days prior to the index in the increasing trajectories. The hyperacute trajectory had all of their visits within 30 days of the

index. The trajectory groups had different profiles of medical acuity, co-morbidity, discharge diagnoses, and ED location.
Conclusion: Different patterns of use appear to exist in geriatric patients presenting frequently to the ED over 90 days and may represent clinically relevant subgroups.

P-633

Elderly patients at emergency department during the fifth wave of COVID-19 pandemic in Poland

Abstract Area: Geriatric emergency medicine

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Introduction: Older age is associated with poorer outcomes of COVID-19. Elderly patients are also at higher risk of limited access to health care during the pandemic.
Methods: The key factors under analysis were functional status and medical and caregiving needs of elderly patients admitted at emergency department (ED).
Results: Out of 62 patients, 62.3% were women. The average age was 83.25 ± 6.2 years. The Activities of Daily Living scale (ADL) median value was 4.0 and The Instrumental Activities of Daily Living Scale (IADL)—4.4. The reasons for ED visiting included exacerbation of chronic disease (50%), acute illness (40.32%), injuries (8.06%) and unmet caregiving needs (1.61%). The median of visit delay at ED in case of acute illness and injuries was 1 day [0.5–4.0], while in other cases was 2 days [0.5–7.0]. The majority of participants (56.45%) declared a poor access to health care: most often to specialist outpatient care, followed by primary health care (45% and 28%, respectively). There was no association between ADL/IADL and the poor access to health care. A significant relationship was observed between ALD and IADL values and the declared caregiving needs, whereas the degree of meeting these needs correlated with IADL level.
Key conclusions: During the COVID-19 pandemic, a significant proportion of elderly patients experienced difficulties in accessing the medical services, regardless of their degree of functional status. At the same time elderly patients looked for a help at ED not only because of acute illness and injuries.

P-634

Delirium identification at initial triage in an Irish Emergency Department setting

Abstract Area: Geriatric emergency medicine

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Background: Over 10% of older adults are affected by delirium on presentation to Emergency Departments (ED), with many more developing it during a prolonged ED stay. Early detection is key to delirium management, but the diagnosis is often missed, with over 50% of delirium going undetected in the ED. In 2019 the HSE guideline on Early Identification and Management of Delirium in the ED recommended that all those over 65 years be screened on presentation to ED using the 4AT, a validated instrument in delirium screening. Through our ED's delirium working group, we conducted a baseline audit on current rates of screening for delirium, ahead of a quality improvement project on management of patients with, or at risk of delirium in our ED.
Methods: A retrospective review was conducted of consecutive patients > 65yrs who presented to ED in one month with the following terms mentioned in the presenting complaint at Triage: confusion/delirium/memory/speech/language disturbance/agitation i.e. terms that could indicate possible delirium as considered by the Triage practitioner. We also recorded whether a 4AT was recorded. An additional 50 charts from the consecutive series were randomly selected and examined for probable delirium on presentation which was not captured at Triage.
Results: n = 23/1,597 (< 1%) had possible delirium recorded at Triage as per our criteria. In-depth case note review supported the diagnosis of delirium in 20 of the 23 initially identified at Triage. Only 5 of these had a documented 4AT score. Of the additional 50 charts screened, a further 6 had likely delirium of whom n = 3 had a 4AT score completed. N = 16 required hospital admission.
Conclusion: Delirium screening and detection rates at Emergency Triage are less than expected, and below the 2019 national screening recommendations. Implementing same in any busy ED is challenging. We are developing a multifaceted educational program to address this, and plan a repeat audit following implementation.

P-635

Frequencies and reasons for unplanned emergency department return visits by older adults

Abstract Area: Geriatric emergency medicine

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Introduction: As unplanned Emergency Department (ED) return visits (URVs) are associated with adverse health outcomes in older adults, many EDs have initiated post-discharge interventions to reduce URVs. Unfortunately, most interventions fail to reduce URVs, including telephone follow-up after ED discharge, investigated in a recent trial [1]. To understand why the intervention was not effective, we analyzed patient and ED visit characteristics and reasons for URVs within 30 days for patients aged ≥ 70 years.
Methods: Data was used from a randomized controlled trial, investigating whether telephone follow-up after ED discharge reduced URVs compared to a satisfaction survey call [1]. Patient and index ED visit characteristics were compared between participants with and without URVs. Two independent researchers categorized URVs into: patient-related, illness-related, new complaints, and other reasons.
Results: Of the 3175 participants in the trial, 450 (14%) had at least one URV within 30 days. Male sex, living without partner, not being referred by the general practitioner, ED visit in the 30 days before the

index ED visit, longer length of ED stay, urinary tract problems, dyspnea, and abdominal pain were associated with URVs. Of the 450 participants with an URV, 63 (14%) returned for patient-related reasons, 205 (46%) for illness-related reasons, 141 (31%) for a new complaint and 41 (9%) for other reasons. URVs of participants who returned $\geq$ 3 times were mostly illness-related (62%).

Conclusion: As the majority of patients had an URV for illness-related reasons or new complaints, these data fuel the discussion whether URVs can or should be prevented.

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P-636

Geriatric emergency care—it's a team sport!

Abstract Area: Geriatric emergency medicine

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Introduction: The emergency department (ED) is often the first port of call for older adults during times of acute illness or injury. In this busy, time focused environment, providing care to those with complex health and social care needs is challenging. New ways of working to improve patient assessment, interventions and coordination of acute and community services from the hospital front door are needed [1].

Methods: A multidisciplinary team, consisting of an Advanced Nurse Practitioner, Physiotherapist, Medical Social Worker and Occupational Therapist was embedded within the ED of a large Irish inner city teaching hospital to: Begin a Comprehensive Geriatric Assessment Provide alternatives to admission and facilitate discharge from ED as timely and safely as possible Develop rapid access pathways to Geriatric Ambulatory Care Services and Community Primary Care Services ResultsFrom May 2017 to May 2022, 10,754 older patients were triaged and/or assessed by the multidisciplinary team on presentation to ED. 6704 patients (62%) were discharged directly from ED. For those discharged, 1010 rapid access referrals to Geriatric Ambulatory Care Services were required. 1728 referrals to community, primary and voluntary care services were made.

Conclusions: A transdisciplinary approach is needed to ensure that geriatric emergency medicine plans of care align with individual patient goals. Skilled teams are needed in the ED setting to ensure coordination of services spanning the patient healthcare journey, from prehospital through ED to inpatient settings and onwards to community based care.

Reference

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P-637

Increased use of point-of-care technology versus usual care during in-home assessment among older adults for preventing acute hospital admissions: study protocol of an individual randomised controlled trial

Abstract Area: Geriatric emergency medicine

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Background: Due to ageing-related physiological changes, diagnosing older adults is challenging. Delayed disease recognition lead to adverse health outcomes and increased hospitalisation, which is why there is a need to develop new procedures for timely diagnosis and treatment of older adults. Point-of-Care-Technology (POCT), e.g. Focused Lung Ultrasound Scan (FLUS) and bedside analysis of blood samples (leucocytes, electrolytes and creatinine) carried out in the patients' home may support clinical decision-making, and potentially reduce acute hospital admissions.

Aim: The trial's overall aim is to investigate whether increased POCT, i.e. FLUS and bedside blood analysis, used as in-home diagnostics in older adults with acute respiratory symptoms, can qualify the general practitioner's clinical decision-making for early treatment initiation and eventually reduce acute hospital admission.

Method: We will carry out an individual randomised controlled trial (RCT) in an acute community health care setting. The study populations is older adults (65 + year), with at least one of the following inclusion criteria: Cough, dyspnoea, fever, fall, or rapid functional decline. Participants in the control group will undergo normal procedure, whereas the intervention group will undergo FLUS and bedside blood analysis beside normal procedure. The primary outcome is acute hospital admission.

Discussion: This is, to our knowledge, the first RCT to examine increased use of POCT carried out in an in-home setting. We expect that the results may contribute to further development of new interventions that improve early diagnostics, timely treatment, and reduced acute hospital admissions, which are all relevant in light of the ongoing demographic change.

P-638

What does a speech and language therapist add to frailty teams in the Emergency Department?

Abstract Area: Geriatric emergency medicine

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Introduction: The role a Speech and Language Therapist (SLT) plays within Interdisciplinary Frailty Teams in the Emergency Department (ED) is an emerging specialty, and little has been documented in the literature.

Method: A retrospective audit was completed on a sample of patients (n = 107) that were seen by the Frailty Team SLT over the course of 6 months.
Results: Age and Gender: 81.7 (mean), 60% Female, 40% Male Patients seen by SLT most commonly attended ED due to falls, LRTI/UTI, and/or shortness of breath 78% were admitted to hospital from ED, 22% avoided admission 55% scored 1 or more on the 4AT 64% of patients scored 6 or more on Clinical Frailty Score. 42% were referred due to the presence of respiratory risk factors (eg. COPD, lung cancer etc.), 53% were referred due to the presence of neurological risk factors (eg. dementia, Parkinson's Disease etc.) 46% of patients had communication impairment 23% of patients resided in a long term care setting.
Conclusion/Findings: Frail older patients who required SLT in the ED tend to; Have moderate to severe frailty Have cognitive impairment or delirium Require admission to hospital Have communication impairment Have a decompensated swallow presentation on the background of a chronic dysphagia. Interdisciplinary ED Frailty Teams can offer an expanded scope of management options that can greatly improve the care of frail older patients. SLTs have a unique role in the timely and accurate detection of communication and swallow impairments, and the provision of personalised management plans.

P-639

Point-of-care-technology for in-home assessment among older adults; a pilot and feasibility study

Abstract Area: Geriatric emergency medicine

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Introduction: Timely recognition of disease symptoms among older adults is challenging, potentially causing delays in treatment initiation, and increased risk of acute hospital admission. Point-of-Care-Technology (POCT), such as Focused Lung Ultrasound Scan (FLUS) and bedside analysis of biological material (blood, oral swab, urine) carried out in the patients home may support clinical decision making when acute disease is suspected.
Aim: To examine the feasibility for health care professionals to use relevant POCT in older adults' home.
Methods: A FLUS trained physician accompanied an acute community nurse (ACN) when visiting community-dwelling citizens, aged 65 + y, referred to the ACN for an in-home acute health assessment during the study period (September–November 2021). The ACN made a clinical assessment, recorded vital parameters, and gave a presumptive diagnosis before FLUS and bedside biochemical analyses were carried out by the physician.
Results: One hundred consecutive participants in Kolding municipality, referred to an ACN assessment, were included. The average age of participants was 81.6 (SD ± 8.4), 54% were female, and 78% consumed > 8 medications daily. FLUS was carried out in all cases. Oral swabs detected two cases of RS-virus, while only four urine samples could be collected. In 21% of the cases, FLUS changed the ACN's presumptive diagnoses from no action to a diagnosis with a need for treatment initiation.
Conclusion and perspectives: In-home assessment including POCT for bedside FLUS and biochemical analyses is feasible, supports the diagnostic work-up in older adults with suspected emerging acute disease, and may potentially prevent reduce acute admission.

P-640

Pharmacist interventions for Frail older adults presenting to a level 4 Emergency Department

Abstract Area: Geriatric emergency medicine

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Background: Inappropriate polypharmacy and 'Potentially Inappropriate Prescriptions' (PIP) are associated with increased morbidity and hospitalisation, in particular among frail older persons. A structured medication review, in conjunction with a Comprehensive Geriatric Assessment (CGA), can address PIP. The aim of the study was to review Frail Intervention Team (FIT) pharmacist interventions for frail, older adults presenting to the Emergency Department (ED) and experiencing medication compliance difficulties, polypharmacy and PIP.
Methods: Patients identified for medication review included those experiencing polypharmacy or medication compliance issues, presenting with a fall, delirium and/or frailty syndromes or complex comorbidities. The medication review process involved completion of medicines reconciliation and medication appropriateness review in accordance with the 7-Steps Medication Review Model [1]. Pharmacist optimisation recommendations were reviewed by a Consultant Geriatrician or Registrar and discussed with the patient prior to implementation.
Results: The FIT Pharmacist completed medication reviews for 765 patients between May 2021 and April 2022. The mean age (± SD) was 83.1 (± 7.0) years with a median Clinical Frailty Score (CFS) of 5 (mildly/moderately frail). Medication Optimisation recommendations were actioned in 63% (n = 483) of patients reviewed. The most commonly encountered PIP's were excessive anti-hypertensive/diuretic therapy; long-term acid suppression therapy, anticholinergics and long-term prophylactic antimicrobials. Prescribing opportunities identified including; bone protection, laxatives and pain management.
Key conclusions: FIT pharmacist review, in conjunction with the CGA, led to medication optimisation interventions in the frail older

adult cohort presenting to the ED. Future studies should examine the impact of medication review on patient outcomes post discharge.

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P-641

A comparative study for the Emergency Department boarding time for elderly patients before and on-going COVID-19 pandemic in qatar

Abstract Area: Geriatric emergency medicine

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Introduction: Several difficulties have been identified by the Healthy ageing/Geriatric team regarding the emergency or urgent care and primary healthcare needs for geriatric population during the pandemic in Qatar. This study was designed to compare the ED boarding time and clinically important outcomes in elderly patients [age 65 and above] before and on-going COVID-19 pandemic.

Methods: We conducted a retrospective study from the data retrieved from the Cerner database to include all ED admissions before COVID-19 (01 Sep 2019 to 29 Feb 2020) and during COVID-19 (01 Mar 2020 to 31 August 2020).

Results: Out of 116 patients, 57 were before COVID-19 and 59 were during COVID-19. Females were presented more to the ED before COVID-19 i.e. 32 (56%) and male were more during COVID-19 i.e. 31 (52.5%). Falls were more frequent during COVID-19 i.e. 12 (20.3%) compared to before 8 (14%). Trauma cases [n = 12 (20.3%)] were more during the COVID-19 as compared to before 7 (12.3%), respiratory infection was also more 28 (47.5%) as compared to 19 (33.3%) and Mild cognitive impairment were more 12 (20.3%) compared to 5 (8.8%). Boarding time was significantly reduced during COVID-19 [52.02; 95% CI (44.4–59.6)] as compared to before COVID-19 [79.78; 95% CI (64.8–94.8)].

Conclusion: The present study highlighted that there was a reduction in ED boarding time during COVID-19 for elderly patients which could be attributed to the new initiative undertaken by the geriatrics department including the geriatric day care unit.

P-642

Frailty instruments in the Emergency Department

Abstract Area: Geriatric emergency medicine

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Background: With increasing age complexity rises. Emergency Department (ED) settings are in overwhelmingly increasing need for instruments able to disentangle complexity. Unfortunately, disentangling complexity needs time, but high-performance medical settings like ED lack of time. At the ED of the University Hospital of Cologne, several instruments for the measurement of frailty are being used to compare feasibility.

Patients and methods: The Multidimensional Prognostic Index (MPI) as a validated comprehensive geriatric assessment (CGA) as well as its short version the BriefMPI, the Clinical Frailty Scale (CFS) and the Acutely Presenting Older Patient (APOP) screener are being performed in a cohort of older patients (age 65 years and older) admitted to the ED, which reached up to June 2022 a size of 1008 participants which will be followed up to one year after baseline.

Results: Considering the MPI as the most validate and accurate CGA-based multidimensional frailty indicator so far, the CFS showed a correlation of 0.722 with the MPI ($p < 0.0001$) slightly decreasing to 0.718 after adjusting for age and gender ($n = 62$, 27F, 76.9 ± 5.8y, $p < 0.0001$). The BriefMPI showed a correlation of 0.91 with the MPI ($p < 0.0001$) slightly decreasing to 0.88 after adjusting for age and gender ($n = 409$, 181F, 74.8 ± 6.4y, $p < 0.0001$). The APOP showed a correlation of 0.69 with the MPI ($p < 0.0001$) slightly decreasing to 0.62 after adjusting for age and gender ($n = 53$, 20F, 77.3 ± 5.3y, $p < 0.0001$).

Conclusion: Several feasible multidimensional frailty measurements are being tested worldwide which appear to correlate well which each other. Analyses are ongoing to increase the population size for the comparisons and evaluate feasibility, accuracy, predictive value and clinimetric properties in general of the individual frailty assessments.

P-643

Prehospital fracture management

Abstract Area: Geriatric emergency medicine

Patrick Hillery[1], Rosa Mc Namara[1]

[1]SVHG

Over the last 2 years we our department has developed the ED in the home (EDITH) project to provide ED level care to frail patients without the need for them to attend hospital. Since January 2022 a service level agreement (SLA) allowed us public funding to perform XR in the community for frail patients. We have utilised this to bring diagnostic imaging to nursing home residents to avoid their presentation to ED. Initially this was with the intention of treating patients on a rule out only basis, with hospital attendance if positive findings. As this service evolved, we have taken on ongoing management of non-operative fractures due to fracture pathology or patient comorbidities. These patient undergo clinical assessment by an emergency department registrar level doctor, have appropriate imaging and where appropriate undergo serial imaging and are discussed with the orthopaedic registrar on call and/or the emergency consultant with a special interest in geriatrics. Most common injuries are distal radius fractures. Other pathologies treated have been suspected pubic rami fractures, lateral malleolus fractures and surgical neck of humerus

fractures. The intention of this service is to offer fracture management to a similar level as would be undertaken in the normal emergency while taking into account the geriatric 5Ms to allow appropriate escalation of care while taking into account what matters most to the individual requiring care.

P-644

Prehospital emergency catheter care

Abstract Area: Geriatric emergency medicine

Patrick Hillery[1], Rosa Mc Namara[1]

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Catheter care is conducted in on a planned basis by community care teams most commonly in our catchment to remove the need for frail patients to have to attend hospital services. This procedure is safely and appropriately conducted in patient own homes with high levels of patient satisfaction. It also removes burden on overstretched hospital services and prehospital crews who frequently must transfer these patients due to lack of mobility. Unfortunately, unplanned catheter issues often have no option but to attend the emergency department to have acute catheter care. As part of the ED in the home (EDITH) project, we have worked with nursing homes, community intervention teams and other community providers to become a resource to avoid hospital attendance for this patient cohort. Over the last year, 119 patients were review purely for catheter care. The majority were due to blockage (60) or dislodgement (22). Others were reviewed for reasons ranging from acute retention, clinical assessment with potential urosepsis managed in the community, complex anatomy, haematuria to palliative care requests to manage distressing symptoms. Of these only 3 required acute hospital transfer (1 due to clinical septicaemia, 2 due to failure) and 4 required new arrangements of OPD follow up. Approximately 60% of these patient were nursing home residents, while the remaining 40% were in their own homes. The majority of these patients were CFS 6 or above. These frail patients avoid morbidity and distress associated with hospital transfer and received appropriate safe emergency care.

P-645

The effectiveness of a specialized geriatric multidisciplinary Team for quality geriatric care

Abstract Area: Geriatric rehabilitation

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Introduction: The population of older adults is growing rapidly worldwide. It is a well-known fact that older adults have complex and multiple health issues and needs. Therefore, offering comprehensive and high-quality health care services to older adults is demanding and remains a challenge for the geriatric health care professionals. This review aims to present an overview of the effectiveness of a specialized geriatric multidisciplinary team for quality geriatric care.

Methods: A review of the recent literature was conducted in PubMed, Scopus and Google scholar databases using the key words "geriatric multidisciplinary team", "effectiveness", "comprehensive geriatric care", "older adults", "quality of life".

Results: There is not a defined geriatric multidisciplinary team model whereas it is a personalized form of care. The majority of studies shows that specialized geriatric multidisciplinary teams are conductive to the provision of high-quality health services. The key benefits of a specialized geriatric multidisciplinary team are comprehensive geriatric care (CGC), quality of life, quality of care, economic efficiency and fewer nursing home and hospital admissions. Moreover, prevention of potentially inappropriate medication, reduction of polypharmacy, improvement of patient safety, improvement of psychosocial functioning and depression symptoms are noted in resent studies.

Key conclusions: Creating and enhancing a specialized geriatric multidisciplinary team should be a priority for geriatric health care professionals for it is proven to be crucial for the achievement of comprehensive geriatric care and health related quality life for older adults.

P-646

A self-evaluation tool for a challenging rehabilitation environment: results of a concept mapping study

Abstract Area: Geriatric rehabilitation

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Introduction: A Challenging Rehabilitation Environment (CRE) involves the comprehensive organisation of care, support and the environment on a rehabilitation ward. Until now, literature about the principles of CRE is scarce and instruments to evaluate the challenging character of rehabilitation wards are still lacking. The aim of this study is to develop a self-evaluation tool by prioritizing and clustering essential characteristics of a CRE.

Methods: Between November 2021 and June 2022, healthcare professionals, rehabilitants and informal caregivers with recent experience in rehabilitation in the Netherlands were invited to participate in a concept mapping study. Firstly, characteristics of CRE were extracted out of literature and focus groups with healthcare professionals, rehabilitants and informal caregivers. Secondly, participants clustered these characteristics. A multi-dimensional scaling procedure and a hierarchical cluster analyses resulted in a cluster solution which represented the concept of CRE the best.

Results: 70 unique characteristics were used in the concept mapping procedure. 60 participants participated: 20 nurses, 20 other health care professionals, 15 rehabilitants and 5 informal caregivers. Preliminary results of the concept mapping resulted in six clusters, concerning therapeutic activity, learning skills, self-management, staff, informal caregivers, and environment. Definitive results will be presented at EuGMS 2022.

Conclusions: The results from this study are the base for a self-evaluation tool for CRE. Research into the feasibility of this tool is necessary. Afterwards, this tool can be used for further research into the CRE concept and its effectivity.

P-647

Prevention of sarcopenia syndrome in the early postoperative period in elderly and senile patients

Abstract Area: Geriatric rehabilitation

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Introduction: Sarcopenia syndrome is increasingly appearing in clinical practice, in most cases, patients at an early stage do not pay due attention to the first symptoms, blaming everything on age. But sarcopenia syndrome can serve as a trigger for subsequent geriatric syndromes, which all together lead to the development of senile asthenia. Surgical treatment always has an effect on the body, and can worsen or exacerbate chronic diseases, including the manifestation of sarcopenia. All this shows the need for targeted rehabilitation of elderly people after surgical treatment, aimed at preserving their health status after surgical treatment, and in some cases improving it.
Objectives: The aim of the study is to develop targeted rehabilitation aimed at preventing sarcopenia in the preoperative and early postoperative period.
Material and methods: Materials and methods of the study: the object of the study are elderly and senile patients who underwent planned surgical treatment for cholelithiasis and hernias of the anterior abdominal wall. Our proposed rehabilitation algorithm includes physical exercises to strengthen the respiratory system, increase muscle tone, behavior training and self-service in the early postoperative period. The strength of the hand was determined using a dynamometer, and the Functional mobility assessment scale in elderly patients was used to assess the ability to move.
Results: In elderly and senile patients, when using this algorithm, the following indicators are observed: the force of wrist compression before surgery was 18.0 ± 2.846 kg, 30 days after surgery 18.95 ± 2.964 kg. Walking parameters improved by 9%, stability improved by 16%. Quality of life by 46.1%.
Conclusion: Our study proved and justified the need to use an algorithm for the rehabilitation of sarcopenia syndrome in elderly patients during planned surgical treatment.

P-648

Physical activity and quality of life in community-dwelling older adults

Abstract Area: Geriatric rehabilitation

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Introduction: One of the most important inhibitors of the declining state which characterizes the aging process is physical activity, which offers older adults benefits related to maintaining and improving their overall health and quality of life. This review aims to highlight the mechanisms that govern the causal relationship between physical activity and quality of life in older adults.
Methods: A review of the recent literature was conducted in PubMed, Scopus and Google scholar databases using the key words aging, older adults, physical activity, exercise, quality of life.
Results: The literature review showed that the active lifestyle of older adults is consistent with a better quality of life and a reduced risk of disease and mortality. Strengthening fitness with activities such as walking, housework, gardening, dancing and swimming have been found to prevent disease and improve physical and cognitive function by providing short-term and long-term benefits thus contributing to a better quality of life. The promotion of autonomy and self-confidence, well-being and sociability as well as the multiple benefits in many aspects of health were found to be the main mechanisms that govern the causal relationship between physical activity and quality of life in older adults.
Key conclusions: Healthy and active aging is considered more important than a simple increase in the duration of life. Physical activity should be a priority in public health strategies as it can be an effective preventive measure to maintain physical fitness, cognitive functioning and quality of life in community dwelling older adults.

P-649

Can behavioural change interventions improve self-efficacy and exercise adherence among people with Parkinson's? A systematic review

Abstract Area: Geriatric rehabilitation

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Background: People with Parkinson's (PwP) lead sedentary lifestyles compared to healthy peers. Personal influences including low self-efficacy and poor outcome expectation appear to predict exercise adherence more accurately than disease severity. The purpose of this review is to identify successful behavioural-change interventions that promote self-efficacy and exercise adherence among PwP.
Methods: Databases including EBSCO, Medline, CINAHL, Web of Science, PubMed, Embase, Scopus, Google Scholar and Cochrane Library were searched from inception to 2020. Interventional studies including a behavioural-change intervention were included. Title, abstract and full-text screening was conducted by two independent reviewers. The Cochrane Risk of Bias Tool and Robins-I were used to assess the Risk of Bias. Data was extracted by two independent reviewers. The outcomes of interest were self-efficacy, quality of life, physical function, and exercise adherence. A narrative synthesis was completed and mapped to the Theoretical Domains Framework, to produce practice-orientated outcomes.
Results: Seventeen studies ($n = 1319$) were included. Risk of bias was generally moderate. A multicomponent behavioural-change intervention encompassing education, behavioural strategies and support groups appeared to improve quality of life, physical function, and exercise adherence in PwP. No intervention improved self-efficacy. Self-monitoring, goal setting, social supports, feedback, self-managements skills and action planning improved long-term adherence.
Conclusion: No intervention changed self-efficacy. However, it appears that a multicomponent intervention is essential to improve exercise adherence. Trials directly comparing different intervention types and adequate follow-up periods are limited, preventing a conclusive finding of the most effective behavioural-change intervention to promote exercise adherence among PwP.

P-650

Effectiveness of ambulatory geriatric rehabilitation after inpatient geriatric rehabilitation or hospitalisation: a systematic review and meta-analysis

Abstract Area: Geriatric rehabilitation

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Background: Due to the increasing number of older people with multi-morbidity, the demand for ambulatory geriatric rehabilitation (AGR) will also increase.
Objective: To assess the effects of AGR on functional performance, length of in-patient stay, re-admission to hospital or a nursing home, patients' and caregivers' quality of life, mortality, and cost-effectiveness. We also aim to describe the organisation and content of AGR.
Methods: Systematic review and meta-analysis. Five databases were queried from inception to May 2021. We selected randomised controlled trials written in English, focusing on multidisciplinary interventions related to AGR, included participants aged > 65, and reported one of the main outcomes. A meta-analysis was performed on functional performance, patients' quality of life, length of stay and re-admissions. The structural, procedural, and environmental aspects of AGR were systematically mapped.
Results: The meta-analysis showed a significant effect of AGR on shortening length of in-patient stay ($p = 0.03$, MD = − 2.41 days, 95% CI [− 4.61 to − 0.22]), with no significant results from the other outcomes. Most studies (75%) that reported cost-effectiveness ($n = 6$) demonstrated a significant favourable effect of AGR. Frequently used elements of AGR are: in-patient start of AGR with an interdisciplinary rehabilitation team, close cooperation with primary care, an AGR coordinator, individual goal setting, and education for both patient and caregiver.
Conclusion: This review showed that AGR is effective in reducing the length of in-patient stay and is as effective as usual care on functional performance activity, patients' quality of life, and re-admission. Further research is needed on the various frequently used elements of AGR.

P-651

Optimising recruitment of frail older people to a novel swallowing exercise rehabilitation intervention (CTAR-SwiFT) in the acute hospital setting in the UK: preliminary data from a feasibility study

Abstract Area: Geriatric rehabilitation

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Introduction: Swallowing difficulties (dysphagia) are common in frail older people and may be addressed through targeted training of the anterior neck musculature that affects the swallow. We are conducting a feasibility study to assess the willingness of patients to participate in a novel swallowing exercise rehabilitation intervention (CTAR-SwiFt), involving an exercise ball squeezed under the chin, with real-time feedback via a mobile application.
Methods: The study aims to recruit 60 medically stable patients admitted with pneumonia to the acute frailty wards at two UK hospitals. Preliminary data relating to feasibility outcomes, including rates of recruitment, retention, compliance and adverse incidents are recorded. To optimise recruitment, informal data is also collected, to assess the reasons why some patients do not meet recruitment criteria or are not willing to participate.
Results: To date, 36 patients have been eligible, of which 16 consented to participate, with retention at 56%. Recruitment numbers are impacted by large numbers of co-morbidities in this frail elderly population, and a shortened acute admission due to the COVID-19 pandemic reducing the recruitment window. Participants prefer data collection not involving a return to the hospital site.
Conclusions: Recruitment of participants to our intervention has been promising and is equivalent to previous studies involving similar interventions [1]. The informal data collected will help optimize recruitment in the study's later stages (and in any subsequent multicentre trial), through review of inclusion criteria, better timing of initial approach, gaining consent after discharge, and removing the requirement for a return to the hospital site.
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P-652

Effects of a multicomponent high intensity exercise program on physical function and health-related quality of life in older people with or at risk of mobility disability after discharge from hospital: a randomised controlled trial

Abstract Area: Geriatric rehabilitation

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Background: Although studies have shown that many older people have declined physical function and reduced health-related quality of life (HRQOL) after discharge from hospital, knowledge about effective interventions for this population is still scarce. Hence, our objective was to evaluate the effects of a group-based multicomponent high intensity exercise programme on physical function and

HRQOL in older people with or at risk of mobility disability after discharge from hospital.
Methods: This single blinded parallel group randomised controlled trial recruited eighty-nine home dwelling older people (65–89 years) while inpatient at medical wards at a general hospital in Oslo, Norway. The intervention group performed a group-based exercise program led by a physiotherapist twice a week for 4 months. Both groups were instructed in a home-based exercise program and were encouraged to exercise according to World Health Organisation's recommendations for physical activity in older people. The primary outcome, physical performance, was measured by the Short Physical Performance Battery. Secondary outcomes were 6-min walk test, Berg Balance Scale, grip strength, Body Mass Index, and HRQOL (the Short-Form 36 Health Survey (SF-36)).
Results: Intention-to-treat analysis showed that the intervention group improved their functional capacity (6MWT) and the physical component summary of SF-36 significantly compared to the control group. No further between group differences in change from baseline to 4 months follow-up were found.
Key conclusions: A high intensity multicomponent exercise program significantly improved functional capacity and physical HRQOL in older people with or at risk of mobility disability after discharge from hospital.

P-653

Potentially inappropriate medication of community dwelling older patients in a geriatric day clinic using the START/STOPP criteria: a different way of application

Abstract Area: Geriatric rehabilitation

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Introduction: The aim of the study was to evaluate the progress of drug treatment in a geriatric daily clinic using the START/STOPP version 2 criteria.
Methods: The retrospective longitudinal study included 193 patients with the diagnoses pain/dementia/depression; data were collected at admission and discharge using a new type of START-application which records practically realized STARTs. STOPP criteria were specified and checked with the help of information from current patient information leaflets and the Gelbe Liste.
Results: During the progress of treatment, there was a significant increase of 0.65 realized START criteria per patient, which was primarily due to the administration of vitamin D and calcium, increasing analgesia and antidepressant therapy. No significant change was observed in STOPP, with an increase in indicated medication (especially opiates, followed by tetracycline antidepressants and anticholinergics) and a decrease in non-indicated medication. The PIM prevalence decreased from 82.9% at admission to 81.4% at discharge, the polypharmacy rate increased from initial 85.5–90.7%. The rise in the number of diagnoses and medications has a highly significant positive correlation with START/STOPP. In addition, diagnosed pain and depression showed a correlation with realized STARTs and fulfilled STOPPs.
Conclusion: The high values of realized STARTs, constant STOPPs with increasing medication during the treatment and the absolute growth in indicated STOPPs with a reduction in non-indicated medication speak for the quality of medicinal treatment. The START/STOPP criteria are appropriate for pharmacotherapeutic optimization, but should be critically questioned in the future with the help of the new START methodology.
Keywords: inappropriate prescribing; START/STOPP Version 2 criteria; new START methodology;

P-654

Use of geographical information systems (GIS) towards an age friendly environment for older adults

Abstract Area: Geriatric rehabilitation

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Introduction: The World Health Organization (2018) launched an initiative aimed at improving the age-friendly environment for older adults. Geographic Information Systems (GIS) are able to help health professionals preserve health and safety and improve the quality of life of older adults. This literature review aims to present an overview of the contribution of GIS to the success and sustainability of age-friendly policy initiatives.
Material and methods: A review of the recent literature was conducted in PubMed, Scopus, and Google Scholar databases using the keywords "GIS", "gerontology", "older adults", "Public Health", "age-friendly environment", and "accessibility" and "falls".
Results: The use of Geographic Information Systems (GIS) in the field of gerontology has been acknowledged as a vital tool for analyzing the accessibility of older adults in various areas (health, entertainment, and everyday services). The various studies that have been conducted in this field have also shown the importance of this technology in helping researchers study individuals with dementia. Creating an information system for the care of these individuals, using their location data, can reduce the response time of professional community caregivers. Moreover, mapping and visualizing the falls of the older persons may help administration units ensure the older persons' safety from falls through a systematic maintenance service.
Key conclusions: Collaboration between gerontology and geography scientists may be achieved by understanding the various factors that affect healthy aging and constitutes a vital component of developing effective policies and programs for a friendlier environment for older adults.

P-655

Systematic review of measurement properties of the Canadian Occupational Performance Measure in geriatric rehabilitation

Abstract Area: Geriatric rehabilitation

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Introduction: The Canadian Occupational Performance Measure (COPM) is used to inventory problems experienced by patients in order to set goals and evaluate treatment. In geriatric rehabilitation (GR) the COPM can be of value. We aimed to make a systematic overview of measurement properties for people in GR.
Methods: Seven electronic databases were searched for publications from 1991 to March 2022. Psychometric studies investigating content validity, construct validity, responsiveness, or reliability in GR populations aged ≥ 60 were selected. Two reviewers independently abstracted data and assessed methodological quality from included studies.
Results: Of 292 identified articles, 12 were included in the review. The COPM showed good test–retest reliability (two studies), moderate interrater reliability (one study) and good content validity (one study with some risk of bias). Four studies with minimal risk of bias showed good construct validity as their hypotheses were confirmed. Responsiveness was moderate in three studies with adequate methodological quality.
Conclusions: All measurement properties have been studied in GR populations, and indicate that the COPM gives relevant information for GR, and scores can be assessed reliably and are responsive to change. Although there were enough studies on construct validity, authors had different opinions on what exactly COPM scores tell us, as they used a variety of comparator instruments and different hypotheses. Consensus on the exact interpretation of the scores is needed, especially of aggregated scores outside the context of direct patient care, e.g., when comparing groups of patients in research or in benchmarking.

P-656

Acute short-term hospital physical rehabilitation of bedridden geriatric patients after serious illness increases Barthel Scale Score at discharge

Abstract Area: Geriatric rehabilitation

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Introduction: Treatment of geriatric patients with severe or total dependency should be comprehensive and include physical therapy to reduce dependency at discharge. Our aim was to see if the ten-day inpatient physical therapy program provided by a multidisciplinary team (physiatrist, physiotherapist, nurse, nutritionist) influences Barthel scale score (BS) at discharge.
Methods: Geriatric patients with $BS < 60$ were prospectively included in the study. The reason for hospitalization, complications during the stay, sarcopenia assessment (SARC-F and grip strength evaluation using hand-held dynamometer), and BS at discharge were noted.
Results: From July 2021 to April 2022, 77 patients were included (26 M, 51 F), median age of 78 (72–83.5 IQR). Hip fracture, cerebral stroke and vertebral fracture were the main reasons for hospitalization (45%, 17% and 10% respectively). After a ten-day physical therapy programme significant increase of Barthel Score from 32.9 ± 15.8 (mean $\pm$ SD), to 52.8 ± 24 was detected (t test, $p < 0.001$, $n = 40$). Altogether 45% of patients changed from severe to moderate dependency ($BS > 60$). SARC-F > 4 was reported in 83% of patients. Low grip strength was detected in 42% of patients (57% M, 33% F). We did not observe significant difference in grip strength between hands ($p = 0.3$ M; $p = 0.27$ F). Complications caused by immobilization after serious illness occurred in 68% of patients (urinary infection 34%, cardiovascular complications 10%, psychoorganic syndrome 8% and other diagnoses).
Conclusion: Increase of Barthel scale score is seen in bedridden geriatric patients after a short-term hospital rehabilitation and in 45% of patients it changed from severe to moderate dependency.

P-657

The efficiency of dual-task walking to identify fall risk and frailty status through the analysis of spatio-temporal walking parameters

Abstract Area: Geriatric rehabilitation

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Introduction: As the proportion of older adults in the population increases, so does the associated prevalence of falls and frailty. In response, researchers and clinicians seek to develop a clinical tool that accurately predicts fall risk and frailty status as clinical mobility and balance tests, mean and variability of gait measures. While there is evidence that gait conditions are sensitive indicators of fall risk, the ratio between dual-task (DT) and single-task (ST) gait conditions (DTE) have not been explored yet to predict fall risk and frailty status.
Method: This study investigated the ability of DTE to identify fall risk and frailty status through the analysis of 9 spatio-temporal gait parameters. Factorial discriminant analysis (FDA) were used to determine the best combination of parameters that identify fallers from non-fallers and frail, pre-frail and non-frail older adults among 73 participants (mean age $= 75.5 \pm 6.5$-year-old, mean height $= 165.3 \pm 8.3$ cm, mean weight $= 68.2 \pm 13.8$ kgs).
Results: FDA correctly classified and recognized the 73 participants based on their frailty status. A subset of 10 participants was used to build predictive scores and the validated model correctly classified 75% of frail patients, 100% of non-frail patients and 76.19% of pre-frail patients. Concerning fall risk, the FDA correctly recognized 68% of fallers and 68.42% of non-fallers with an AUC > 0.7.
Conclusion: The study revealed the power of dual-task walking in identifying frailty status and fall risk when analyzing DTE. This novel, statistical approach provides reliable information on which gait parameters better distinguish frailty status and fall risk.

P-658

The expectations and needs of patients with stroke for upper limb rehabilitation with table games

Abstract Area: Geriatric rehabilitation

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Research purposesIn the face of physical disabilities, patients with stroke who often cannot accept that they must actively rehabilitate, and moved independently. Therefore, the rehabilitation affects the motivation and needs to be overcome. To explore the relevance of rehabilitation needs of patients with stroke, it is necessary to develop measurement tools, and to analysis the reliability and validity of using the questionnaire of the "Desktop Game Willingness Scale". This study is purpose to explore using the table game willingness questionnaire for patients with stroke, and to measure its reliability and validity. Research methodsThe validity of the "Desktop Game Willingness Scale" of this questionnaire was scored by professional experts for the relevance and clarification of the content by a doctor in the field of long-term care (LTC), two rehabilitation physicians, and a functional therapist in the rehabilitation department. The content validity index (CVI) after expert scoring is used as the expert validity index. There are 20 questions in total. Grading method 1presents very inapplicable and should be deleted; 2 presents inapplicable and need to be revised significantly; 3 presents acceptable; 4 presents applicable and 5 presents very applicable. Cronbach's α is used as the reliability analysis of the internal consistency reliability analysis of the 10 cases in the overall acceptance questionnaire. Research resultThe internal consistency reliability analysis of the overall acceptance questionnaire in this study is Cronbach's α value of 0.83, and the content validity index (Content Validity Index) CVI value of the "Desktop Game Willingness Scale" is 0.96, which has a good validity. Nursing applicationThe above research shows that the reliability and validity of the "Desktop Game Willingness Scale". This tool can collect the expectations of patients with stroke on the rehabilitation results, and to help clinical caregivers how to better understand the rehabilitation status of those people needs. The results of this study is expected to provide appropriate supplementary questionnaires for clinical caregivers of rehabilitation for patients with stroke, and to facilitate and adjustment of the related rehabilitation assessment.

Keywords: stroke, table games, rehabilitation, reliability, validity.

P-659

User experience of the virtual museum augmented reality game; towards tailor-made neglect treatment

Abstract Area: Geriatric rehabilitation

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Introduction: Visuospatial neglect (VSN) is one of the most hampering consequences after stroke. Current guidelines advise Visual Scanning Training (VST) to ameliorate VSN during inpatient rehabilitation. As VST is often regarded as repetitive, un-motivating, and far-transfer effects are generally lacking, tailormade treatment in more daily life situations is needed. Therefore, an Augmented Reality (AR) game, The Virtual Museum Game (VMG), was developed.

Aim: The aim was to gather the end-user experience of the VMG to further improve tailoring.

Methods: 10 Patients with VSN played the VMG and were subsequently interviewed semi-structurally about Usability, Grading and Likability as important aspects of tailoring. Patient observations during gameplay were used to gain additional input on these themes.

Results: Observations learned that instructions and especially the start of the game-play needed extra guidance. Also, there was a difference in amount of feedback the patients needed to scan the environment. Despite the extra guidance the patients found the game relatively easy to play (i.e. Usability). The positioning and size of the paintings may vary to appropriate with the needs of the patient (i.e. Grading). The most common feedback for further development was to create more variety in the content (i.e. Likability), for example, themes such as nature (e.g. animals/flowers), politics and important historical events (e.g. Delta Works).

Key conclusions: Based on the user experience of the VMG, further development should focus on the possibility to tailor the degree of guidance integrated in the game and create more variety in content.

P-660

Botulinum toxin injection for the treatment of acquired deforming hypertonia in geriatric patients. Preliminary results

Abstract Area: Geriatric rehabilitation

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Introduction: After a stroke in geriatric patient, it is common to observe acquired deforming hypertonia secondary to reduced joint mobility and abnormal postures. Patients are often seen with a completely closed fist due to overactivity of palmar and dorsal interosseous muscles which block the metacarpophalangeal and interphalangeal joints in a flexed position. The fist is often impossible to open and causes several problems: pain, poor hygiene with skin maceration and lesions caused by the nails digging into the skin. This condition also causes great discomfort to caregivers during daily care. Others patients have contractures in the pelvis with the iliac muscle which locks the thigh in an internally rotated position. Treatment with botulinum toxin reduces the injected muscle overactivity, allowing an amplitude of movement gain. This technique is not yet widely used in geriatric practice.

Methods: We followed 120 geriatric patients with these severe contractures. These patients were all painful, had maceration and poor hygiene. We performed toxin injections in interosseous or iliac muscles depending on the patient's condition. The patients were later reviewed in a follow-up consultation.

Results: Clear improvement of the patients' condition with a reduction of pain and muscle contractions: extension of the fingers or rotation of the thigh became possible in most cases.

Conclusions: Deforming muscle contractures treatment with botulinum toxin injections leads to clear improvements of treated patients and to greater comfort for the caregiver during daily care. These positive results should encourage the wider use of this method in geriatrics.

P-661

Assessment tools used for inpatient rehabilitation admission of older adults: a systematic review

Abstract Area: Geriatric rehabilitation

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Objective: To identify the assessment tools and outcome measures used to assess older adults for inpatient rehabilitation.
Design: Systematic review.
Data sources: ProQuest, PEDro, PubMed, CINAHL Plus with full text, Cochrane Library and EBSCO and reference lists from published literature.
Review methods: Studies including patients aged > 60, focussing on rehabilitation assessments delivered in hospitals and community settings were included. Studies reporting on rehabilitation specifically designed for older adults, testing for at least one domain that effects rehabilitation or assessments for admission to inpatient rehabilitation were included. Results were described both quantitatively and narratively.
Results: 1404 articles were identified through selected databases and registers. After removing duplicates, 1186 articles were screened. Following inclusion criteria screening, 37 articles were included in the final review. The majority of assessments for geriatric rehabilitation were carried out by the multidisciplinary team. Most assessments were done at multiple time points, namely, at admission and discharge. Multiple studies looked at more than one domain during assessment, but the majority evaluated a specific outcome measure used in geriatric rehabilitation. The commonest domains assessed were function, cognition and medical status, with communication, vision and pain, being the least common. A total of 172 outcome measures were identified in this review, with MMSE, BI, FIM and CCI, being the most frequent.
Conclusion: Current older adult rehabilitation assessments fail to capture the patient's rehabilitation potential in a holistic manner. Having a predictive model of rehabilitation, used to assess patients at the initial stages, is useful in planning a patient-specific rehabilitation programme, aiming to maximise functional independence and thus quality of life.
Keywords: rehabilitation; outcome measures; geriatrics; older adults; geriatric assessments
Key points: Rehabilitation of older adults; outcome measures for geriatric rehabilitation; assessments for geriatric rehabilitation potential; holistic approach to geriatric rehabilitation.

P-662

Effects of cardiac rehabilitation in older female coronary artery patients

Abstract Area: Geriatric rehabilitation

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Objectives: Previous studies have shown that females were less likely to refer and enroll in cardiac rehabilitation (CR) and tend to have lower adherence and higher dropout rates, while the skeletal muscle mass after myocardial infarction has a positive correlation with cardiopulmonary fitness, and that the fatality rate increases when the skeletal muscle mass is low. The purpose of this study was to compare the effects of CR program on cardiorespiratory fitness (CRF) in patients with myocardial infarction over 65 years of age according to gender.
Methods: From January 2012 to December 2021, female patients aged 65 or older who underwent percutaneous coronary intervention for coronary artery disease who underwent CR were enrolled.. Afterwards, we retrospectively reviewed the medical records of patients who underwent exercise tolerance test (ETT) at the initial and 3 months later. As a result, a total of 23 patients were enrolled, 12 of whom received education and exercise therapy and 11 received education therapy only. Both groups performed 12 weeks CR exercise training. Outcome was CRF parameters examined by cardiorespiratory exercise test. Outcome measures were assessed before and after completion of the CR program, and to reflect the results of sufficient exercise performance, we selected patients with an RER value of 0.8 or higher at both tests.
Results: The mean age of the exercise group were 69.75 ± 3.98 years, and that of the education-only group were 70.54 ± 5.16 years. There was no difference between the two groups in general characteristics except BMI, weight and baseline SMI (Table 1). Those who received any cardiac rehabilitation program showed significant increase in SMI, maximal Heart rate, MET, VO_2max, and VO_2max/weight as of 3 months later (Table 2). When the exercise capacity and SMI before and after CR was compared in the two groups, SMI, exercise time and VO_2max/weight in exercise group were significantly higher than those of the group receiving only educational therapy at 3 months. In comparison of the percent changes in SMI and the exercise capacity before and after CR, the percent change of exercise time showed significant difference between the two groups, while the percent change of SMI and VO_2max/weight showed no significant difference between the two groups (Table 3).
Conclusions: There was significant improvement on SMI and exercise capacity except exercise time in both groups after CR, and there was a significant difference between the two groups in the rate of change in exercise time before and after CR. Despite various studies that CRF is improved through CR, the participation in CR in elderly women is not active, so active participation in rehabilitation should be encouraged.

P-663

Quality of geriatric rehabilitation from the patients' perspective: a scoping review

Abstract Area: Geriatric rehabilitation

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Background: The efficacy and outcomes of geriatric rehabilitation (GR) have been investigated previously. However, a systematic synthesis of aspects important to patients regarding the quality of GR does not exist.
Objective: The aim of this scoping review was to systematically synthesise the patients' perspective on the quality of GR.

Methods: We followed the Scoping Review (ScR) methodology framework and gathered literature with a qualitative study design from multiple databases. The inclusion criteria were: a qualitative study design; geriatric population; patients had participated in a geriatric rehabilitation program; and that geriatric rehabilitation was assessed by the patients. The result sections of the included studies were analysed using a thematic analysis approach.
Results: Twenty articles were included in this review. The main themes identified were: (1) the need for information about the rehabilitation process, (2) the need for telling one's story, (3) support in being hindered by limitations (physical, psychological and social), (4) shared decision-making and autonomy, (5) the rehabilitation climate (social and environmental), (6) rehabilitation in the home setting.
Conclusion: Our findings highlight the need for patients to express their questions and needs during the rehabilitation process. These consist of: the wish for more information, retain autonomy in the process, have the opportunity to tell their story, feeling supported by professionals, a good rehabilitation environment and the need for support in the discharge process. More attention to the questions and needs of the patient articulated in these themes might ensure that rehabilitation will be better adapted to the patients' preferences and needs. This might contribute to successful rehabilitation from the perspective of the patient.

P-664

Predictors of health-related quality of life 12 months after non-catastrophic road traffic injury in older age: an inception cohort study

Abstract Area: Geriatric rehabilitation

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Background: A range of health, injury and compensation-related factors contribute to long-term health following non-catastrophic road traffic injury (RTI). Most of the evidence is from working-age cohorts. Less is known about the impact of RTI on older peoples' long term health.
Aim: To describe and identify sociodemographic, health, injury and compensation-related factors independently associated with physical and mental health-related quality of life 12 months after non-catastrophic RTI in a population representative cohort of older people ($\geq$ 65 years) in New South Wales, Australia.
Method: Participants aged $\geq$ 65 years were identified from a large inception cohort study in New South Wales, Australia. The primary outcome measure was physical and mental health-related quality of life (SF-12 PCS and MCS). Multiple linear regression models with backward elimination were used to identify variables independently associated with PCS and MCS at 12 months post-injury. Age and sex were retained a priori.
Results: 193 older people completed the baseline interview; 129 people were followed up at 12 months. At 12 months mean PCS and MCS were the same as age-matched population norms, but all the improvement had occurred by 6 months. Several variables were independently associated with PCS and MCS that have been identified in other studies. Additional key findings included a very strong association between extremity injury and worse PCS; an association between torso injury and MCS; and no association between multimorbidity and PCS or MCS. Poorer pre-injury health and legal representation had a large negative impact on HRQL.
Discussion: Older people generally recover well following non-catastrophic RTI. At 6 months post-injury, a clinically significant improvement in PCS was observed. The improvement in MCS was smaller and not clinically significant. The findings from the study enable early identification of older people at increased risk of poorer long-term health following RTI and inform targeted delivery of additional support services to optimise long-term health. Trial registration: Australia New Zealand clinical trial registry identification number ACTRN12613000889752.

P-665

Trunk and upper limb suspension exercises in PostCOVID patients: use of TRX

Abstract Area: Geriatric rehabilitation

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Introduction: Post-intensive care unit myopathy is very common, especially in Covid-19 pandemic. We tested an active approach with psychological support and core work with non-elastic bands in suspension (TRX).
Case description: Patient 72 years old, admitted to ICU due to Covid19 pneumonia, complicated with sepsis, aspergillosis, pressure ulcer, periarticular calcifications and colonized by Candida Parapsilosis, remaining isolated throughout the process. At admission Barthel Index 10, doesn't tolerate sitting because of pain (less tan 1 h).
Material and methods: Conventional phisiotherapy from 1 to 29th day, with no functional gain. Start TRX day 29, with arms, trunk and core exercices. Handgrip strenght 17 lb (7.7 kg); Day 37 mobilizes trunk (10°); Day 41 starts standing, day 51 separates back completely (30°) and walks with the support of a person, with a walker on day 54 (hand grip 31 lb (14 kg). Improvement in sitting time, pain and mood. Ambulation is achieved 12 days after starting therapy, after 8 months of immobilization. **Discussion:** Post-ICU myopathy is a frequent entity that requires a physical and psychological approach, especially due to prolonged isolation. The combination of a novel therapy, with a trained professional who motivates daily, achieves results in a very short time compared to conventional therapy. TRX therapy can help patients with severe trunk mobilization disability but with preserved arm mobility, easy to teach and with measurable progression.

P-666

Geriatric neurorehabilitation: predictors of functional recovery and hospital discharge

Abstract Area: Geriatric rehabilitation

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Introduction: This study aims to compare the predictors of functional recovery and home discharge among a specialized geriatric neurorehabilitation program compared to a standard neurorehabilitation unit in the University Hospitals of Geneva.
Methods: Observational retrospective study carried out in hospitalized patients admitted to the neurorehabilitation program from 01.01.2018 to 30.04.2020. We compared a geriatric neurorehabilitation unit (NBR) with a standard neurorehabilitation unit (NBS) regarding functional recovery defined as Δ Functional Independence Measure (FIM at discharge—FIM at admission) $\geq$ 10, or a Montebello score (MRFS) $\geq$ 0.5, together with discharge home. Chi2 and t test were used for statistical analyses.
Results: Of a total of 701 patients, 188 were in NBR and 513 in the NBS unit. Mean length of stay was significantly different with 34.3 $\pm$ 24.4 days in NBR compared to 21.3 $\pm$ 25.6 in NBR ($p < 0.001$), with a set of polymorbid patients (CIRS 16.5 $\pm$ 5.8 against 13.7 $\pm$ 6.7 ($p < 0.001$). Patients presented a similar Δ FIM $\geq$ 10 on both units (27.7% and 33.7% respectively, ($p = 0.128$)) but NBR Montebello Score $\geq$ 0.5 was lower in NBR (10.8%) compared to NBS (20.8%) ($p = 0.002$). In the NBR unit, discharge home reached 44.1% of cases, while 87% of patients in the NBS unit ($p < 0.001$).
Conclusion: Older and polimorbid patients in the NBR unit were less discharged home then younger patients. Meanwhile, regarding functionality recovery (Δ FIM $\geq$ 10), the same proportion of patients recovered on both units. These findings underscore the utility of neurological rehabilitation in elderly and polymorbid patients, regardless of discharge location.

P-667

The Utrecht Scale for Evaluation of Rehabilitation (USER) in geriatric rehabilitation: construct validity, responsiveness and interpretability

Abstract Area: Geriatric rehabilitation

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Background: The Utrecht Scale for Evaluation of Rehabilitation (USER) is a multidomain measurement with good validity and reliability for measuring physical functioning (PF) and cognitive functioning (CF) in geriatric rehabilitation (GR). The construct validity of both scales and the responsiveness and interpretability of the USER-PF in GR remain unknown.
Methods: A prospective multicenter (n = 4) study was performed (2021–2022) among patients admitted for inpatient GR. Data collection included USER, Mini-Mental State Examination, Barthel Index and a global rating scale anchor on recovery. Hypothesis testing was used to determine construct validity and responsiveness. Minimal Important Change (MIC) was assessed using predictive modelling. The percentage of minimum (floor-effect) and maximum (ceiling-effect) scores were determined, and > 15% was used for cut off.
Results: Mean age of participants (n = 211) was 77 (SD 10.4). Mean length of stay was 39 days (SD 26.3), and 81% returned home. The USER-CF scale showed adequate construct validity, with all three hypotheses confirmed. The USER-PF scale showed adequate construct validity and responsiveness, with all three and all five hypotheses confirmed. The mean change for USER-PF (scale range 0–70) was 14.2 points (SD 18.3). The MIC for USER-PF was 14 points difference for improvement. There were no floor and ceiling-effects at admission (2%;2%) and discharge (1%; 14%).
Conclusions: The USER has good measurement properties for screening cognitive functioning as well as evaluating physical functioning during GR. A 14 points difference has been established as a minimal important change for physical functioning. We recommend the use of the USER for GR.

P-668

Bedridden patients with prolonged immobility: a scoping review of physical rehabilitation programs

Abstract Area: Geriatric rehabilitation

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Introduction: Bedridden patients are at risk for presenting several problems caused by prolonged immobility, leading to a long recovery process [1]. Thus, identifying physical rehabilitation programs for bedridden patients with prolonged immobility requires urgent research.
Objective: To map existing physical rehabilitation programs for bedridden patients with prolonged immobility, the rehabilitation domains, the devices used, the parameters accessed, and the context in which these programs were performed.
Methods: Scoping review, guided by the Joanna Briggs Institute's (JBI) methodology [2], conducted in different databases (including grey literature).
Results: From the 475 articles initially identified, 27 were included in this review. The observed contexts included research institutes, hospitals, rehabilitation units, nursing homes, long-term units, and palliative care units. Most of the programs were directed to the musculoskeletal domain, predominantly toward the lower limbs. The devices used included lower limb mobilization, electrical stimulation, inclined planes, and cycle ergometers. Most of the evaluated parameters were musculoskeletal, cardiorespiratory, or vital signs. Programs also included a combination of nutritional interventions with exercise and pharmacotherapy.
Key conclusions: The variability of the programs, domains, devices, and parameters found in this scoping review reveals no uniformity, a consequence of the personalization and individualization of care, which makes the development of a standard intervention program challenging. This occurs since the programs, and their components are adjusted to the specificities of the population under study. Each program's core elements, common to each one, are frequency,

intensity and progress, represented by increased resistance and velocity of movements [3].

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P-669

Development of an intermediate care service in aged residential care facilities with several workstreams in a Provincial Hospital in Aotearoa New Zealand

Abstract Area: Geriatric rehabilitation

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Hospitals have pressure to discharge patients earlier. For some, mainly younger, patients "early supported discharge" can be arranged, e.g. home IV antibiotic, but many elderly patients struggle following acute illness. Some only need support in their activities of daily living, which can be provided at home, but others also need assistance or supervision of mobility or help overnight. Traditionally elderly patients that cannot return home safely are referred to Geriatric Assessment, Treatment & Rehabilitation (ATR) wards and can spend several weeks there. It is difficult to predict how much therapy a patient needs and whether their admission is truly rehabilitative or simply recovery with adequate supports. There are also patients where acute illness has worsened chronic conditions or frailty, such that they need longterm aged residential care (ARC). We developed an Intermediate Care (IC) program with workstreams tailored to our health service serving 72,000 people. Eligible patients get comprehensive geriatric assessment by our multidisciplinary team (MDT), including a geriatrician. Patient are considered for ATR or for slow stream rehabilitation via IC in an ARC, where an individual rehabilitation plan is executed by trained ARC staff regularly supervised by our MDT. Some patients require supported recovery in ARC with little MDT input. Others may not have resolvable problems and only require ARC. IC assessments happen on all wards and our Emergency Department. IC is useful for patients recovering from subacute delirium, for slow stream rehabilitation following fractures of pelvis or spine, and for those who likely qualify for permanent ARC that no longer need inpatient hospital care pending assessment and service coordination. IC has resulted in an overall reduction of hospital length of stay.

P-670

Is early postoperative albumin a predictor of recovery success after hip fracture surgery in a dedicated orthogeriatric rehabilitation unit?

Abstract Area: Geriatric rehabilitation

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Introduction: Preoperative serum albumin predicts postoperative rehabilitation outcome following hip-fracture surgery, but this assay is rarely routinely available. The aim of the present study was to investigate the association between early post-operative hypoalbuminemia, reflect of severity of post-operative stress, and functional outcome in hip-fractured patients.

Methods: We retrospectively analyzed data of OrthoGerontolRehab database from May 2012 to July 2018 of patients in a dedicated orthogeriatric rehabilitation unit. Patients were classified either with early post-operative hypoalbuminemia < 30 g/dl or without hypoalbuminemia ≥ 30 g/dl. Their functional recovery was assessed using Agence Technique de l'Information et de l'Hospitalisation (ATIH) motor autonomy instrument and Groupe Iso Ressource (GIR) scale.

Results: In the 295 hip-fractured patients aged 86.9 ± 5.8 years, median post-operative serum albumin was 28.5 ± 3.7 at day 4 post-operative, and 59% ($n = 174$) of them had hypoalbuminemia, 39% ($n = 116$) between 30 g/L and 35 g/L and 5 (2%) patients > 35 g/L. Patients with serum albumin < 30 g/dl had worst autonomy at admission in rehabilitation unit and were more dependent at discharge with worst ATIH score ($p = 0.0006$) and GIR groups ($p = 0.0508$), but also returned home less ($p = 0.037$), than patients with serum albumin ≥ 30 g/dl.

Key conclusions In a sample of hip-fractured patients of a dedicated orthogeriatric rehabilitation unit, early post-operative hypoalbuminemia was associated to worst functional recovery and rehabilitation success.

P-671

Impact of malnutrition measured by BMI on walking recovery after hip fracture surgery in a subacute orthogeriatric care unit

Abstract Area: Geriatric rehabilitation

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Introduction: Hip fractures are common in the elderly population, and often generate gait disorders motivating a hospitalization for rehabilitation in a subacute care unit. The impact of malnutrition on walking recovery after a hip fracture is subject to debate. The

objective of this study was to evaluate the impact of malnutrition measured by BMI on walking recovery after a hip fracture at discharge of subacute care unit.
Methods: An observational retrospective study is conducted with patients admitted in the orthogeriatric subacute care unit of Hospital Charles Foix between 2013 and 2018. Two groups are accessed according to the BMI at admission: malnourished (< 21 kg/m^2) and not malnourished (≥ 21 kg/m^2). Walking recovery is evaluated at discharge by the walking perimeter, the use of a walking aid and the move/locomotion ATIH score.
Results: 227 patients with an average age of 86.6 years are included of which 83.3% women. 32.2% of patients are malnourished. 64.3% of patients are discharged with a walking perimeter > 45 m with no difference according to BMI ($p = 0.73$). 74.4% of patients use a walking aid with 2 ground supports without difference between BMI groups ($p = 0.83$). 57.3% of patients leave the subacute care unit with a move/locomotion ATIH score of 1 or 2, with no difference according to BMI ($p = 0.73$).
Key conclusions: According to our study, elderly subjects considered malnourished based on BMI don't recover walking less well at discharge of subacute care unit after a hip fracture in terms of walking perimeter, use of walking aid and move/locomotion ATIH score, compared to non-malnourished patients.

P-672

Characteristics of patients referred to geriatric rehabilitation and outcome of the rehabilitation trajectory

Abstract Area: Geriatric rehabilitation

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Introduction: Acute hospitalization of older and/or vulnerable people is associated with functional decline and adverse outcomes. Geriatric rehabilitation programs aim to restore the functional status and can prevent admission to long-term care facilities. We studied associations of patient characteristics with discharge destination after rehabilitation.
Methods: Transmural cohort study of acutely admitted hospital patients referred to geriatric rehabilitation. Liaison nurses of a tertiary hospital recruited patients between January 15 and May 15 2019. Demographic, clinical and functional data were retrieved from hospital and rehabilitation medical records. Primary outcome measure was discharge destination after rehabilitation. We fitted a multivariate logistic regression model predicting discharge destination.
Results: Out of 87 patients initially referred to geriatric rehabilitation, 11 patients (12.6%) were re-indicated for chronic, palliative, respite or hospital care after hospital discharge. The other 76 patients received rehabilitative care. Data of 71 rehabilitation patients could be included; 47.9% were female and mean age was 76.3 years (range 53–101). Between admission and discharge the median delta Barthel Index for functional status was 7 (IQR 3–10.25). 58 (81.7%) patients returned home after a median length of stay of 36.5 (IQR 22–64) days, versus 70 days (IQR 14.5–129) in 13 (18.3%) non-home discharged patients. In the regression model having a partner was associated with a higher chance of home discharge ($p = 0.031$). Cognitive symptoms nor comorbidity reached statistical significance.
Conclusion: The majority of a cohort of tertiary hospital patients referred to geriatric rehabilitation were discharged home. 'Having a partner' gave higher chances for discharge to the original living situation.

P-673

Prevalence of bilateral vestibulopathy among older adults above 65 years on the indication of vestibular impairment and the association with Dynamic Gait Index and Dizziness Handicap Inventory

Abstract Area: Geriatric rehabilitation

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Purpose: To estimate the prevalence of bilateral vestibulopathy (BV) and evaluate the association with, and concurrent validity of the Dynamic Gait Index (DGI) and the Dizziness Handicap Inventory (DHI) in diagnosing BV based on vHIT among older adults ≥ 65 years referred to a geriatric falls clinic on suspicion of vestibular impairment.
Materials and methods: The video head impulse test (vHIT) was applied as a reference standard of BV to estimate diagnostic parameters for optimal cut-off scores of DGI and DHI applied separately and in combination.
Results: Two-hundred medical records were reviewed (70% women, mean age 79.4 years). The prevalence of BV was 9%. DGI was weakly associated with BV: Odds Ratio (OR) 1.15 (95% confidence interval (CI): 1.01; 1.31), with a 93% sensitivity and 47% specificity of a cut-off score of 16. The total score of DHI showed no association with BV: OR 1.01 (95% CI: 0.98; 1.04). The concurrent validity for BV and DGI and/or DHI were found to be inadequate.
Conclusion: A prevalence of 9% underlines the relevance for assessment of BV. Only a weak association between DGI and/or DHI and BV was found. Thus, vHIT remains the preferred test for detecting BV in geriatric fall assessments.

P-674

Effect of inpatient rehabilitation treatment ingredients on functioning, quality of life, length of stay, discharge destination, and mortality among older adults with unplanned admission: an overview review

Abstract Area: Geriatric rehabilitation

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Introduction: To synthesise the evidence for the effectiveness of inpatient rehabilitation treatment ingredients (versus any comparison) on functioning, quality of life, length of stay, discharge destination, and mortality among older adults with an unplanned hospital admission.
Methods: A systematic search of Cochrane Library, MEDLINE, Embase, PsychInfo, PEDro, EMBASE, and OpenGrey for systematic reviews of inpatient rehabilitation interventions for older adults following an unplanned admission to hospital. Duplicate screening for eligibility, quality assessment, and data extraction (including treatment components and respective ingredients employing the Treatment Theory framework). Random effects meta-analyses were completed overall and by treatment ingredient. Statistical heterogeneity was assessed with the inconsistency-value (I2).
Results: Twelve systematic reviews of moderate to low quality, including 44 non-overlapping relevant RCTs were included. When incorporated in a rehabilitation intervention, there was a large effect of endurance exercise, early intervention and shaping knowledge on walking endurance after the inpatient stay versus comparison. Early intervention, repeated practice activities, goals and planning, increased medical care and/or discharge planning increased the likelihood of discharge home versus comparison. Rehabilitation interventions were not effective for functional mobility, strength, or quality of life, or reduce length of stay or mortality.
Conclusion: Benefits observed were often for subgroups of the older adult population e.g., endurance exercise was effective for endurance in older adults with chronic obstructive pulmonary disease, and early intervention was effective for endurance for those with hip fracture. Future research should determine whether the effectiveness these treatment ingredients observed in subgroups are generalisable to older adults more broadly.

P-675

Measurements for post-stroke fatigue: a review of literature

Abstract Area: Geriatric rehabilitation

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Introduction: Post-stroke fatigue (PSF) is a very common and persistent sequela of stroke and negatively affects daily activities, social participation, quality of life, and rehabilitation outcomes. Various assessments are used to measure PSF. However, none of them were explicitly developed for stroke patients. We aim to review the recently published studies investigating fatigue after stroke to update the current situation of PSF measurements usage.
Methods: Database searches of PubMed, Embase, and CINAHL for the recent five years of studies were undertaken. We included all studies that used fatigue measurements for stroke survivors. Three reviewers independently selected the studies and assessed each study for inclusion.
Results: The search presented 458 potential articles, of which 145 met the inclusion criteria. The most used measurements for PSF are Fatigue Severity Scale (FSS) (76 studies), Fatigue Assessment Scale (FAS) (33 studies), and Multidimensional Fatigue Inventory (MFI) (18 studies). The Neurological Fatigue Index, which targets stroke survivors and reported good reliability and validity, was still limited tested and used in very few studies.
Conclusions: These most frequently used scales have many limitations in accurately focusing on the core characteristics of PSF. Despite this, they remain preferred in current stroke research, and the specific screen tools for PSF patients are still scarce. Persistent lack might bias fatigue results, impair progress in PSF, and even influence patient care. The development of an independently used, valid, and reliable stroke-specific measure for the PSF population is urgent.

P-676

Dynamics of functional activity status using geriatric rehabilitation (21 days) of the elderly patients

Abstract Area: Geriatric rehabilitation

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Aim of the study: Evaluate the impact of geriatric rehabilitation on the functional activity status of patients over 60 years old.
Materials and methods: It was a multicentre prospective study, including 82 centenarians (60 years and older). For geriatric rehabilitation we used physical therapy and cognitive trainings for 30 min every day within 21 days. We evaluated results of complex geriatric assessment before and after rehabilitation, such as: SPPB, Bartel, IADL-C, MNA, GDS-15, MOCA, dynamometry, walking test/walking speed. The statistical analysis was performed using analysis of variance (ANOVA)—for numerical variable and using the χ^2-test (or Fisher's exact test)—for categorical variable. Statistically significant were differences with $p < 0.05$.
Results: Mean age of the patients was 80 (79.4 ± 7.09) years, while 83.8% of the cohort were women. According to SPPB: 25 patients had range 10–12, 17 patients had range 8–9, 20 patients had range 7 and less than 7 points. Chronic pain syndrome had 51 patients: intense—3 (4.4%), moderate—48 (69.6%), 18 patients (26%) had none of it. Difficulties in everyday life had 36 (52.2%) patients: moderate—35 (50.8%), intense—1 (1.4%), 33 patients (47.8%) had none of them. When evaluating the effectiveness of geriatric rehabilitation we received such result: SPPB before the rehabilitation—9 (8.82 + \−2.85), after the course—11 (9.99 + \−2.78), r = 0.0176 (p less then 0.05). Conclusion: Geriatric rehabilitation of the elderly patients increases functional activity status.

P-678

Gonarthrosis and Functionality in Elderly Patients

Abstract Area: Geriatric rehabilitation

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Introduction: Osteoarthritis is a common disease and accounts for 10% of the population worldwide. Gonarthrosis is a form of degenerative rheumatism found both in adults and elderly. Study objective was to evaluate patients with gonarthrosis, factors that influence the selection of therapeutic scheme, the impact of triple therapy (local NSAID, systemic NSAID and physical therapy) on symptoms (especially pain) and the effects of triple knee therapy on biomechanical parameters of functionality.
Material and methods: A total of 325 subjects, age-range 50–95 years, with a diagnosis of gonarthrosis were included. Patients were divided into several categories according to age, sex, degree of impairment, comorbidities and functional biological status. The reference age groups were: 50–64 years (adults), 65–74 years (group A) and 75 + years (group B).
Results: Severe stages of osteoarthritis were detected in the elderly with the indication that stage IV (aggravated by joint damage) was reported especially in patients older than 75 years. The 6-Minute Walk Test at baseline showed that the majority of patients with poor performance (below 200 m) were women over 75 years of age, differences being statistically significant ($p < 0.05$). The majority of patients in the age group beyond 75 years failed to achieve a range of motion over 60° before treatment. Moreover, before therapy, very elderly patients who presented with pain described their intensity as high or very high, with a statistical tendency towards male predominance. After 30 days of complex triple therapy we noticed a significant trend of increasead performance in patients over 75 years of age who reached the threshold of 400 m, male gender having higher prevalence of improvement. Both range of motion and pain improved after the triple therapy.
Conclusions: Triple therapy intervention, employed as early as possible in the case of gonarthrosis, but targeted especially at the patient's main complaints, demonstrated a favorable outcome mainly in older patient.

P-679

Perceptions of older persons on exercise

Abstract Area: Geriatric rehabilitation

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Background: Exercise is a contribute towards the health of older adults. Guidelines recommend that older adults engage in strength and balance exercises in addition to aerobic physical activity. Achieving the recommended levels of physical activity assist in maintaining independence in old age. The study aimed to explore the perceptions of exercise from older persons living in a Maltese community.
Method: An Interpretative Phenomenological Analysis (IPA) was used to obtain an in-depth perspective from the participants, about the phenomenon of exercise. Quota sampling of nine participants was used. The participants were residents in a sea side village, lived independently and attended the local community centre. Data was collected between July and August 2020 through semi-structured interviews.
Results: The study included nine participants over the age of sixty-four; six (6) female and three (3) males. Five (5) main themes emerged;[1]Self-efficacy and perceptions of one's own ability, (2) personal biography, health literacy, knowledge and information sources, (3) exercising within a group versus individualized settings, (4) adjusting to new circumstances and (5) accessibility and opportunities to carry through and/or initiate exercising. It was down to each individual's preference to choose to exercise how she/he wished.
Conclusion: Through this study, it emerged that older persons had different views and opinions about exercise. There were varying reasons as to why they would want to initiate exercising and what kept them from doing so. The study highlighted the importance of considering older persons perceptions when promoting exercise.

P-680

Usual care in geriatric rehabilitation after hip fracture in the Netherlands

Abstract Area: Geriatric rehabilitation

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Introduction: In the Netherlands, after acute hospital admission, more than half of patients with a hip fracture are discharged to geriatric rehabilitation (GR) facilities. This study aims to describe the usual care during GR.
Method: Descriptive study analyzing the care pathways from eight facilities regarding the scheduled healthcare professionals involved, scheduled treatment time, scheduled total length of stay and assessment instruments. Based on diagnostic treatment combinations (DBCs) of 25 participants, the registered actual treatment time was calculated.
Results: Care pathways were available from six facilities, varying in length from 5 to 20 weeks. The mean actual length of stay was 46 days (range 11–101 days). The care pathways pivoted on the medical team (MT), physiotherapy (PT), and occupational therapy (OT). Comparison of the scheduled time (represented as range) and the calculated mean (SD) of the DBCs showed some discrepancies. First week: MT range 120–180 min, mean 120 (SD 59) minutes, PT range 120–230 min, mean 129 (SD 58) minutes and OT range 65–165 min, mean 93 (SD 61) minutes. Week two onwards: MT range 15–36 min, mean 49 (SD 29) minutes, PT range 74–179 min, mean 125 (SD 50) minutes and OT range 25–60 min, mean 47 (SD 44) minutes. The scheduled assessment instruments varied in the care pathways.

Key conclusions: Currently in the Netherlands, usual care in GR after hip fracture is difficult to define due to diversity in care pathways and practice variation. This complicates randomized effectiveness research with usual care as a control group.

P-681

ROBot assisted physical training of older patients during acUte hospitaliSaTion (ROBUST): study protocol for a randomised controlled trial

Abstract Area: Geriatric rehabilitation

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Introduction: Inactivity during hospitalisation is associated with significant risk of functional decline especially in older patients. This have major impact on the individual level due to decreased wellbeing and higher level of dependency and on the society level due to increased caregiver burden following hospital discharge. This study aims to address if robot assisted physical training can prevent functional decline during acute hospitalisation in older geriatric patients.
Methods: ROBUST is a blinded RCT. Patients (n = 488) admitted with acute medical illness to Department of Geriatric Medicine, Odense University Hospital will be randomised to usual care and robot assisted active strength training twice daily (intervention group) or usual care and robot assisted passive sham training (control group) until discharge. Both groups will receive protein supplements. Inclusion criteria: ≥ 65 years of age, able to ambulate before hospitalisation, expected length of stay ≥ 2 days. Exclusion criteria: Able to ambulate without assistance during current hospitalisation, severe dementia, delirium, conditions contradicting robot training. The primary outcome, functional decline, will be assessed by Barthel-Index and 30 s chair stand test. Secondary outcomes include Quality of life (EQ-5D), Geriatric Depression Scale, Fear of falling (FES-I), cognition (MMSE), qualitative interviews, falls, caregiver burden, discharge destination, readmissions, healthcare costs, sarcopenia, and mortality. Outcomes will be assessed at admission, discharge, and 1- and 3 months follow-up. Data on comorbidity, medications, blood samples, and clinical frailty scale will be collected.
Discussion: This study will investigate the effects of in-hospital robot assisted strength training on functional status in older patients with multimorbidity.

P-682

Orthogeriatric home visit is associated with overall reduced 30-day readmission following surgical treatment in + 65-year-old patients with hip fracture

Abstract Area: Geriatric rehabilitation

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Introduction: High readmission rates are common in patients following a hip fracture. However, evidence indicates that multidisciplinary home visits after hip fracture may improve care and reduce overall readmission rate. We investigated whether an orthogeriatric home visit was associated with overall 30-day readmission in + 65-year-old patients surgically treated for hip fracture.
Method and material: Two 1-year-cohorts were compared. Thus, 246 patients (mean age 81.9 years, 71% female) admitted with hip fracture between 12th June 2020 and 13th June 2021, discharged to own home or care facilities, and visited ≥ 1 time were compared with a non-visited historical cohort of 247 patients (mean age 81.5 year, 72% female) admitted between 1st January and 31st December 2018. Home visits were performed by an orthopaedic nurse specialist at day two and nine after discharge. Treatment, and care were decided in collaboration with a hospital based geriatric medical specialist. Data were extracted from hospital medical records. Primary outcome was overall 30-day readmission defined as ≥ 12 h length of stay, regardless of reason or place, within the first 30 days after discharge. Covariates used for statistical adjustment included demographic, mental and physical functioning, medication, co-morbidity, severe complication, and residential status. Cox Regression models were used for analysis.
Results: The readmittance rate was reduced from 27 to 19% (p = 0.03). Crude and fully adjusted Hazard Ratio in patients visited were 0.67 (CI 95% 0.46–0.97) and 0.58 (CI 95% 0.39–0.85) compared with non-visited patients, respectively.
Conclusion: An orthogeriatric team visiting older patients discharged after hip fracture seems to be associated with overall reduced 30-day readmission.

P-683

Physical activity monitors to enhance amount of physical activity in older adults

Abstract Area: Geriatric rehabilitation

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Background: The body of evidence related to the effect of physical activity monitor-based interventions has grownover the recent years. However, the effect of physical activity monitor-based interventions in older adults remainsunclear and should be systematically reviewed.
Objective: The objective of this systematic review was to estimate the effect of physical activity monitor-basedinterventions on physical activity behavior in participants aged 65 and above. Subsequently we explored the effecton body mass index, physical capacity, and health-related quality of life and finally the impact of patient-andintervention characteristics.
Methods: Searches in MEDLINE, EMBASE, SPORTDiscus, CINAHL, and CENTRAL were performed on April 26, 2018. No publication date filters were applied. References of eligible studies were scrutinized and relevant journals werehand-searched. Randomized controlled trials and randomized cross-over trials investigating

the effect of a physicalactivity monitor-based intervention on physical activity were included. Studies were included if the mean age ofthe participants was above 65 years, and participants could walk independently with or without walking aids. The Cochrane handbook was used as a template for extracting data and the RoB 2.0 tool was used to assess risk of bias. Random-effects meta-analysis using Hedges g, were used to pool the study results. The main outcome of this studywas physical activity.

Results: Twenty-one studies with 2783 participants were included. The median participant age in the studies was70.5 years, the median percentage of male participants was 42%, and the median baseline daily step count was 5268. Physical activity monitor-based interventions had a moderate effect (SMD = 0.54, 95% CI 0.34–0.73)compared to control interventions, corresponding to an average increase of 1297 steps per day in the interventiongroups. No impact of patient and intervention characteristics on the effect estimates were found.

Key conclusions: Low quality of evidence was found for a moderate effect of physical activity monitor-basedinterventions on physical activity compared with control interventions. More studies with higher research methodologystandards are required.

P-684

Interdisciplinary home-based rehabilitation following inpatient rehabilitation: utilization rate and patients' characteristics

Abstract Area: Geriatric rehabilitation

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Introduction: Designed as an alternative to inpatient rehabilitation, home-based interdisciplinary programs are increasingly offered to older patients to complete their rehabilitation in their usual environment.

Objectives: (1) To determine the utilization rate of home-based rehabilitation; (2) to investigate the profile of users from the home-based rehabilitation program.

Methods: Patients who benefited from home-based rehabilitation after an inpatient rehabilitation stay between June 2018 and May 2021 were identified from the hospital database (N = 1623). Socio-demographic, health and functional status characteristics were retrieved from electronic medical records. Bivariable and multivariable analysis was performed.

Results: Over the study period15.5% (253/1623) patients benefited from home-based rehabilitation. Compared to the others, they were more frequently women (68.0% vs 59.3%, $p = 0.009$), suffering from multiple comorbidities (60.9% vs 53.7% with ≥ 14 conditions, $p = 0.034$), admitted for orthopaedic problems (63.6% vs. 47.8%, $p < 0.001$), with poorer functional performance at admission (mean MIF score: 80.1 ± 15.7 vs 88.3 ± 14.7, $p < 0.001$) and at discharge (95.2 ± 13.8 vs 101.3 ± 13.2, $p < 0.001$), but greater functional gain during their inpatient stay (15.1 ± 10.3 vs 13.0 ± 9.6, $p = 0.002$). In multivariable analysis, being a woman (adjOR 1.45, 95% CI 1.07–1.97, $p = 0.018$), admission for orthopaedic problems (adjOR 1.80, 95% CI 1.34–2.40, $p < 0.001$), and greater gain in mobility (adjOR 1.11, 95% CI 1.07–1.17, $p < 0.001$) remained predictors of orientation towards home-based rehabilitation.

Key conclusions: One in six patients benefited from home-based rehabilitation after their inpatient stay. Although these patients had poorer functional performance at admission and discharge, they showed greater functional improvement over their inpatient stay, strongly suggesting that their good recovery potential was a key determinant of their orientation toward home-based rehabilitation.

P-685

How the VIVIFRAIL © Multi-Component Exercise Program can improve the functional capacity of older patients admitted to a functional recovery unit

Abstract Area: Geriatric rehabilitation

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Purpose: The aim of our study was to determine the effect of the multicomponent exercise intervention Vivifrail© as an effective and safe strategy to improve functional capacity and the symptoms associated to frailty in octogenarians hospitalized in a functional recovery unit of the Andorran Health Care Service.

Methodology: Eighteen frail elderly patients (85.17 ± 3.9 years old) were randomized into the intervention or the control group. The intervention group underwent a multicomponent exercise program combined with the usual rehabilitation treatment during the hospitalization, while the control group received the usual rehabilitation treatment. The Short Physical Performance Battery (SPPB), handgrip strength test (kg) and the measurement of the gait speed in six meters walk (ms^{-1}) were performed.

Results: In the SPPB test, statistically significant differences were observed between the two assessments and groups ($p < 0.001$), in addition to improved performance on the handgrip strenght test and gait speed 6 m walk.

Conclusion: The Vivifrail© multicomponent physical exercise intervention combined with the usual rehabilitation treatment in octogenarian elderly patients hospitalized into a functional recovery unit of the of the Andorran Health Care Service is an effective strategy to improve the global functional capacity, muscular strenght and gait speed of this population.

Key words: Multicomponent physical exercise; elderly; frailty.

P-686

Rehabilitation of rehabilitation ward: a workflow quality improvement project

Abstract Area: Geriatric rehabilitation

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Introduction: Ward environment is designed for rehabilitation in the community hospitals. Pressures at the front end of secondary care meant that increasingly subacute patients are transferred to the rehabilitation ward. The Pandemic affected our workforce and recruited new doctors who were new to our system. Hence there was a pressing need to rethink our workflow. We aimed to streamline the

process of Multidisciplinary team (MDT) meetings, and ward rounds [1,2].
Methods: Between January and February this year, in our twenty-four-bedded ward, we timed our MDTs and ward rounds over six weeks. MDT members standardized templates of data capture for meetings, ward round entries, filing order of medical notes, doctors' priorities, step-up transfer documents and discharge notifications. We timed again for six cycles till the end of March.
Results: After the implementation of changes, the average time in minutes for MDT improved from 171.66 to 110 (35.9%) and ward rounds from 308.33 to 137.5 (55.4%). This is a significant improvement in the duration of MDTs and ward rounds.
Key conclusions: Simple cost-neutral changes made MDTs and ward rounds more efficient and effective. The time saved was used to interact with patients, update relatives, and do bedside teaching. A sense of pride in MDT inspired colleagues from other wards to implement similar changes. Sharing good experiences and learning, helped to bring out the best of MDT.
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P-687

Transfer to acute care during inpatient geriatric rehabilitation: Incidence, causes, risk factors, and associated outcomes

Abstract Area: Geriatric rehabilitation

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Introduction: Unplanned transfers from geriatric rehabilitation to acute care disrupt patients' recovery. This study examined the incidence and causes of unplanned transfers, patients' characteristics associated with such transfers, and associated outcomes.
Methods: Consecutive stays ($n = 2375$) in an academic geriatric rehabilitation unit were examined. Discharge summaries of patients with unplanned transfers were reviewed to determine the cause. Data on demographics, medical, functional, and mental status, as well as about length of stay, and discharge destination, were extracted from the hospital database. Multivariable logistic analyses examined the association between patients' characteristics and unplanned transfers.
Results: One in six (16.7%) rehabilitation stays was interrupted by an unplanned transfer, most often because of infectious (19.3%), cardiac (16.8%), and digestive (12.7%) problems. Being older (adjOR per year: 0.98; 95% CI 0.96–0.99, $P = 0.013$), and admission for gait disorder (adjOR 0.72; 95% CI 0.53–0.99, $P = 0.041$) were associated with lower odds of transfer, whereas being a man (adjOR 1.69; 95% CI 1.27–2.23, $P < 0.001$); medical severity (adjORCIRS: 1.05; 95% CI 1.02–1.07, $P < 0.001$), and functional impairment (adjOR IADL impairment: 1.73; 95% CI 1.08–2.78, $P = 0.023$; adjOR BADL impairment: 2.11; 95% CI 1.58–2.82, $P < 0.001$) were associated to higher odds of transfer. Patients with any unplanned transfer were less likely to return home than those without transfer (63.5% vs 84.3%, $P < 0.001$).
Key conclusions: A significant proportion of patients, notably men, those with more severe illness or functional impairment, experienced an unplanned transfer that potentially interfered with their rehabilitation program and translated into poorer outcomes. Further studies should investigate whether and how some transfers might be prevented.

P-688

Implementation of a practice improvement pilot to reduce hospital readmissions from skilled nursing facilities: lessons learned

Abstract Area: Geriatric rehabilitation

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Introduction: Patients discharged to skilled nursing facilities (SNFs) are at risk for repeated hospitalization. We discuss the implementation and impact of a quality improvement pilot involving multidisciplinary case management in patients determined to be at high-risk ($> / = 20\%$) of rehospitalization by the SNF readmission risk instrument.
Methods: 3 SNFs were selected for the pilot starting October 2019. The multidisciplinary team included admission coordinators, registered nurse case managers, advanced practice nurses and physicians. Core domains of the planned intervention were early communication about readmission risk and weekly team meetings, early assessment by providers, prioritized medication review and advanced care planning and protocolized heart failure and dismissal management. We evaluated both process and outcome measures. The primary outcome was 30-day rehospitalization. We compared pre and post intervention readmission rates using Chi square analysis.
Results: The project concluded prematurely in March 2020 due to the COVID 19 pandemic. Of 128 SNF admissions, 38 (29.7%) were identified as high-risk. One and 6-month mortality were 14.1 and 36.7% respectively. 75 (58.6%) had physician visits within 2 days and 122 (96.1%) within 14 days. 28.1% were hospitalized within 30 days. Upon comparing outcomes 1 year prior to the intervention there was no significant change in 30-day rehospitalization rates (Chi-Square 0.96, p value 0.32).
Key conclusions: We were unable to demonstrate improvement in 30-day hospital readmission rates in this pilot. However, analysis of its preliminary data revealed valuable information on its feasibility and highlighted the need to additionally consider patients' mortality risk and facility factors in future interventions.

P-689

Functional evolution and prognostic factors in older stroke survivors admitted into a geriatric rehab

Abstract Area: Geriatric rehabilitation

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Introduction: Stroke is a leading cause of long-term functional disability in Europe. Therefore, rehabilitation is essential for stroke survivors to recover functional abilities. Although older people have a higher risk of developing a stroke, often requiring a subsequent admission to geriatric rehab, there is a lack of information on its specific functional evolution and prognostic factors.
Methods: Prospective, multicenter, longitudinal, observational study. We analyzed functional progress of 261 older stroke survivors admitted to 3 different geriatric rehab hospitals in Spain after a mild-moderate stroke. Sociodemographic, clinical, functional, nutritional, cognitive and psychological data were collected at admission, 30 days and 3 months after admission.
Results: We observed a relevant increase of autonomy in basic ADLs. Independent or minimally dependent individuals increased from a 22.4% at admission to over 50% at 30 days, and up to over 60% at 3 months. The % of non-ambulatory individuals decreased from 41.5 to 21.4% at 30 days, and 12.8% at 3 months. At admission, the presence of urinary incontinence (OR = 4.3 [IC 95% 1.6–11.5]), neglect (OR = 7.6 [IC 95% 1.6–34.9]), severe dependency (BI < 35) (OR = 8.4 [IC 95% 3.1–22.5]), cognitive impairment (MOCA < 21) (OR = 0.3 [IC 95% 0.1–0.8]), and low self-efficacy or confidence (General Self-Efficacy Scale > 27) (OR = 4.1 [IC 95% 1.6–10.2]), were independently associated to ADL dependence at 3 months.
Key conclusions: After 3 months, almost 2/3 of older stroke survivors admitted into geriatric rehab are independent or minimally dependent. Functional gain persist even after discharge. Risk factors for ADL-dependency at 3 months are urinary incontinence, neglect, severe dependency, cognitive impairment or low self-efficacy at admission.

P-690

Multidisciplinary perceptions of team members roles in a specialist geriatric rehabilitation unit

Abstract Area: Geriatric rehabilitation

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Background: Effective geriatric rehabilitation is best delivered by consultant-led multidisciplinary teams (MDT) that must collaborate effectively to provide high-quality care. If team members do not understand each other's roles, there may be a lack of buy-in to shared goals and objectives, resulting in inferior patient care. This study aims to explore the multidisciplinary perceptions of each professional's role within the team in the context of MDT working in a specialist geriatric rehabilitation unit.
Method: A descriptive qualitative survey was distributed to all team members (n = 58). The survey template contained open-ended questions allowing for in-depth answers through free text description, encouraging participants to report directly on their own thoughts and feelings regarding their understanding of team members roles. Free-text analysis was preformed using Braun and Clarke's thematic analysis. Two researchers independently generated codes by identifying key words and phrases, which were collated into broader themes and refined to achieve consensus that was internally and thematically consistent.
Results: Forty-five team members completed the survey (77% response rate). These included nurses, healthcare assistants, doctors, physiotherapists, occupational therapists, dietitians, speech and language therapists, and social workers. Four themes were generated: (1) an in-depth understanding of allied health (AHP) roles (2) a non-specific understanding of doctor's and nurse's roles (3) the importance and prevalence of shared tasks and goals and (4) the patient as an equal partner in their care and team member. ConclusionThis study highlights a need for intradisciplinary MDT education at an undergraduate level to foster increased understanding of team members roles.

P-691

Fear of falling, frailty tool (CFS), walking ability (SPPB) and assessed with short falls efficacy scale-international in geriatric ward patients

Abstract Area: Geriatric rehabilitation

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Introduction: Fear of falling is a common, very common problem among older people, affecting at least 25% of the population who have experienced falling in the past. Fearing a fall, older people limit their current activity even more, which contributes to the deterioration of their physical fitness abilities.
Objectives: This study aimed to verify to what walking ability, frailty syndrome and sarcopenia affect the fear of falling measured by the short version of The Falls Efficacy Scale-International (Short FES-I).
Material and methods: One hundred and ninety-nine patients consecutively admitted to the geriatric ward at the turn of 2019–2020 participated in the cross-sectional study. We analyzed the severity of fall fear measured by the Short FES-I according to the weakness syndrome, mobility, sarcopenia assessed by the Clinical Frailty Scale (CFS) and the Short Physical Performance Battery (SPPB).
Results: The mean age of the participants was 81 (6.35) years, and 76.3% of the study group were women. 42% of patients reported more than one fall in the last 12 months. According to the Short FES-I scale, the severity of the fear of falling was classified as "low" (9.0 (8.0–12.0) points; 41% of patients), "medium" (16.0 (15.0–18, 0) points; 23% of patients and "high" (25.0 (23.0–27.0) points; 36% of patients); no patient reported no fear of falling. The greater the severity of fear of falling was reported by the patient, the showed a higher risk of sarcopenia as measured by SPPB ≤ 8 points and also CFS. The median CFS score was 3.0 (2.0–4.0) in patients with "low fear of falling"; 4.0 (3.0–5, 0) with "moderate fear of falling"; and 5.0 (4.0–6.0) with "high fear of falling", P = 0.001. The median SPPB score was similar to CFS and amounted to 8.0 IQR (6, 0–11.0) in subjects with "low fear of falling"; 5.0 (3.0–8.0) with "moderate

fear of falling"; and 2.0 (1.0–4.0) with "high fear of falling", P = 0.001.
Conclusions: The severity of fall fear as assessed by Short FES-I correlates with the risk of sarcopenia as measured by CFS and SPPB ≤ 8 points. Improving balance capacity, vertigo physiotherapy and increasing the functional fitness of gait seems to be crucial for reducing the psychological consequences of the fear of falling in elderly patients and their negative consequences.
Key words: fear of falling, CFS, geriatric ward, FES-I, gait and balance, SPPB.

P-692

Blood flow restriction training and sarcopenia: preliminary results of a scoping review

Abstract Area: Geriatric rehabilitation

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Introduction: With ageing, degenerative processes occur, contributing to the surfacing of multiple conditions. One of the most prominent and prevalent conditions is muscle weakness (MW). Sarcopenia is one of the most common syndromes related to the occurrence of MW. According to Cruz-Jentoft et al. [1], sarcopenia can be characterized as "a muscle disease (muscle failure) rooted in adverse muscle changes that accrue across a lifetime". Accordingly, treatment of this condition is severely compromised due to the inability of the elderly with sarcopenia to execute high-intensity or isometric training. Thus, due to the hypertrophy responses very similar to that observed with high-intensity training, Blood Flow Restriction Training (BFRT) may be a tolerable alternative to prevent muscle loss in this frail population.
Objective: To map the knowledge related to BFRT (Concept) and its application to the elderly with or at risk of developing sarcopenia (Population) in all types of settings (Context).
Methods: Scoping review, guided by the Joanna Briggs Institute's (JBI) methodology [2], conducted in different databases (including grey literature), will be developed to map (a) the characteristics of the studies targeting the application to the elderly of BFRT; (b) the contexts where BFRT is used; (c) the contra-indications and outcomes reported.
Results: A preliminary search in MEDLINE (PubMed) indicates BFRT is being used as a novel therapeutic strategy targeting elders with sarcopenia but requires personalization.
Key conclusions: We hope this scoping review will help guide future primary and secondary research studies.
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P-693

The effect of resistance training combined with blood flow restriction in the elderly population: a randomized control trial protocol

Abstract Area: Geriatric rehabilitation

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Background: During ageing, there is a reduction in muscle strength and cognitive function. Considering that high loads are contraindicated, low-load resistance training combined with blood flow restriction (RT-BFR) is an alternative strategy capable of preserving or improving aspects of physical health. BFR is a process of using inflatable cuffs to generate vascular occlusion within a limb during training. The technique can stimulate muscle hypertrophy and improve physical function.
Aim: This study is designed to describe a randomized controlled clinical trial that will examine the effects of RT-BFR on physical and physiological function in the elderly population.
Method: Participants will be randomly assigned (true random) into one of the following clusters: RT-BFR or Control group (will keep the same activities as usual). The intervention group will complete 16 weeks of RT-BFR, three times a week (45 min each), consisting of four upper and lower body exercises, including three sets of ten repetitions each. The study's primary outcomes will be Barthel Index for Activities of Daily Living (ADL), Muscle strength, and static and dynamic balance. Secondary outcomes will include evaluation of the Geriatric Depression Scale (GDS) and quality of life (WHOQoL-Bref).
Conclusions: This study will add evidence to existing knowledge, providing information about the viability and effectiveness of RT-BFR as a strategy to maintain or promote muscle mass gains in the elderly population. The intention is to delay the decline in functional capacity and quality of life associated with the ageing process, contributing to active and healthy ageing.

P-694

Computer habits and digital literacy in geriatric patients

Abstract Area: Geriatric rehabilitation

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Introduction: Among hospitalized geriatric patients, half are computer users. However, many of them refrain from using telehealth solutions. One of the cited reasons is that they do not consider themselves sufficiently digitally literate to use the basic computer functions even though they are computer owners.
Purpose: Investigate digital literacy and computer and internet habits of geriatric patients and their associations with stress levels and internet use frequency.

Methods: Inpatients and outpatients all computer users were consecutively surveyed. Besides information about computer and internet habits, computer help, and computer stress, the survey also collected information about digital literacy using the digital part of the electronic Health Literacy Assessment toolkit.
Results: A total of 124 computer users with a mean age of 80.6 ± 7.4 years participated in the study. Most patients (39%) had a higher education level, whereas only 18% had primary school education. Sixty-five percent received computer help from their children and grandchildren, whereas 5% did not seek any help. The most familiar computer functions were using a keyboard and writing their User Name, whereas functions as Copy Paste, and use another computer than their own were functions the responders found less familiar. Digital literacy was associated with internet use frequency $p = 0.001$, but only associated with stress levels in men $p = 0.05$.
Conclusion: If telehealth solutions are to succeed among geriatric patients, computer help and instruction in basic computer use is a prerequisite which might also impact any stress among male gender.

P-695

Oral hygiene practices in nursing homes: a qualitative approach among supervisor nurses

Abstract Area: Gerodontology

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Introduction: The number of dentate older people increases constantly in developed countries. Daily oral care in various care institutions has been found to be inadequate in Finland and in other developed countries. There aren't many studies about the role of supervisor nurses in the organizing of dental services. The aim of the study was to deepen the vision of the role of supervisor nurses in organizing day-to-day oral care and dental care services in private enhanced service housing units and nursing homes in Finland.
Methods: 19 supervisor nurses in six larger Finnish cities were interviewed in June–November 2021. The interviews were done face-to-face, recorded and transcripted afterwards. There were fifteen open questions concerning units' daily oral care, professional dental care and diet and questions about nurses' continuing education. Sociodemographic, occupational and oral health-related data were also asked.
Results: There are adequate oral hygiene equipment in units and residents are assisted in daily oral care. There is some collaboration with dental professionals. Meal times are regular in units and sugary snacks are given. On-the-job training in oral care is negligible and more are desired.
Key conclusions: It can be concluded that education in oral care is needed more, and professional oral health care collaboration is wanted more. Before COVID-19 pandemic there were quite regular dental hygienist or dentist visits in units.

P-696

Evaluation of job satisfaction and occupational stress among greek NHS dentists of Crete

Abstract Area: Gerodontology

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Introduction: The purpose of this cross-sectional study was to assess the level of job satisfaction and occupational stress among dentists working in the public sector and the way in which job satisfaction affects various dimensions of their lives.
Method: The survey involved 41 dentists (85.4% response rate) who were working in Hospitalsand National Primary Healthcare Units (Health Units and Health Centers) of 7th Health Region of Crete, from December 2017 until April 2018. The participants were asked to answer, through email, the Greek version of the Effort-Reward Imbalance Questionnaire (ERI) while some demographic characteristics were also recorded. All statistical controls were performed using SPSS, Version 24.0.
Results: A moderate degree of job satisfaction and professional stress among dentists was found. The percentage of the participants for whom the ER (Effort/Reward) ratio was greater than 1 was 53.7%, while 24.4% of the dentists had an over-commitment/dedication to work rate greater than 16. Statistically significant differences in age, employment relationship, years after graduation and total seniority in the National Health System were observed both in the "Professional Safety/Reward Expectations" sub-scale and in the "Fair Professional Reward" sub-scale.
Conclusions: The findings of the present study highlight the need for intervention and might be helpful in planning further activities in order to improve the working conditions and increase the level of job satisfaction among dentists in the public sector and thus to ensure quality of care. Further research in the same direction is also necessary.

P-697

Association between handgrip strength and indicators of oral function in nursing home residents: a pilot study

Abstract Area: Gerodontology

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Introduction: There is increasing evidence of an association between handgrip strength and oral function indicators in community-dwelling older adults. This pilot study aimed to investigate the above association in nursing home residents.
Methods: This cross-sectional study was conducted in two nursing homes in Athens. Handgrip strength (HGS), measured with a digital

dynamometer, was used as a dichotomous variable with the 20th percentile, adjusted for gender, considered as the cut-point. Masticatory performance (MP) was evaluated using a mixing ability test with two-colour chewing gum chewed for 50 cycles. Motor function of lips, anterior and posterior region of the tongue were evaluated with the number of the syllables pa/, ta/ and ka/ produced per second. Maximum tongue pressure (MTP) was measured with a digital device by squeezing a bulb against the hard palate. Maximum bite force (MBF) was measured with an electronic gnathodynamometer.
Results: The sample consisted of 26 nursing home residents (five males, 21 females) with a mean age of 89 ± 5.3 years. Student's-T tests revealed positive but not statistically significant associations between HGS and MP ($p = 0.181$), motor function of lips ($p = 0.802$), anterior ($p = 0.404$) and posterior region of tongue ($p = 0.647$), and MTP ($p = 0.065$). Mann–Whitney U test did not indicate any statistically significant association between HGS and MBF ($p = 0.709$).
Key conclusions: Although the values of all oral indicators were higher in residents with higher HGS, these associations were not statistically significant. These findings may serve for sample size calculations for further studies investigating the relationship between HGS and oral function among nursing home residents.

P-699

Advanced cancer and hiccups (singultus): a case report

Abstract Area: Gero-oncology

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Case report: 68-year-old female attended due persistent hiccups of 6 months of evolution with postprandial worsening. The patient has a history of lumbar pain of 6 years of evolution and long-lasting hypertension. Hiccups is associated with early satiety, hyporexia with unquantified involuntary weight loss, epigastric abdominal pain, which worsened in the supine position and failure to thrive with dependency of BADL. Physical examination was unremarkable. Hematic biometry with elevated hemoglobin (17.2 mg/dL) MCV and HCM normal. Blood chemistry, liver function tests, urinalysis, alpha-fetoprotein and Ca 19–9 levels, without alterations. MRI of the spine reported a lytic lesion at T12. Contrast-enhanced CT scan report hepatocellular carcinoma of metastatic origin. Liver biopsy: poorly differentiated carcinoma of metastatic origin. Immunohistochemistry: TTF-1, GATA3, Muc5AC, IMP-3 negative, CK-19, and retention of BAP-1 positive with probable origin from the bile ducts or pancreas. EC IV T3N1M1 intrahepatic cholangiocarcinoma was diagnosed, ECOG 1; palliative cancer treatment whit gemcitabine and cisplatin was decided due to the stage of the disease and functionality (CFS 7) of the patient, and a single dose of radiotherapy for pain management, surviving seven months after the diagnosis.
Conclusion: Persistent hiccups is rare. Its main etiologies are related to the central nervous system, nerve irritation, gastrointestinal, thoracic, cardiac, toxic-metabolic, and postoperative or psychogenic disorders [1]. This case represented a diagnostic challenge because it is not the typical presentation of a cholangiocarcinoma, and definitively, the decisive factor for the diagnosis was the evaluation of the exacerbation of lumbar pain.

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P-700

Pleural trasudate: an uncommon presentation of multiple myeloma

Abstract Area: Gero-oncology

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A 74-year-old female with a past medical history of hypertension presented with a history of at rest dyspnea, dry cough, orthopnea and unintentional 10 kg weight loss over the past 6 months. Physical examination revealed rhythmic, diminished heart sounds; pulmonary findings included dullness to percussion, decreased tactile fremitus with bilateral bronchial breath sounds and bronchophony as well as lower limb edema. Initial workup revealed a markedly elevated globulin 7 g/dL, diminished albumin at 2.1 g/dL and altered albumin/globulin ratio at 0.30. Chest radiograph revealed bilateral pleural effusion, rest of findings were normal. A thoracentesis was performed with Light's criteria being positive for trasudate. A 24 h protein urine recollection resulted negative. An transthoracic echocardiogram revealed a left ventricular ejection fraction 64% with no signs of valve prolapse or regurgitation. A contrast enhanced tomography was performed with no evidence of malignant masses, enlarged lymph nodes or lytic lesions. An electrophoresis was performed revealing elevated levels of gammaglobulin M (4 g/dl). Bone marrow biopsy revealed > 30% plasma cells confirming multiple myeloma. This entity is a rare malignancy characterized by presence of abnormal clonal plasma cells in the bone marrow [1] that exhibits a wide range of possible clinical presentations, most common being anemia, osteolytic bone disease, acute kidney injury and elevated serum calcium levels at the time of presentation [2], all of which were not present in our patient. We believe it is essential for clinicians to report atypical presentations and consider it as a possible diagnosis in a patient with serious, atypical symptoms.
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P-701

Real-world experience on toxicity and survival in older patients with HR + /HER2-breast cancer treated with CDK 4/6 inhibitors

Abstract Area: Gero-oncology

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Introduction: This study describes characteristics, toxicity and survival in old patients with HR + /HER2-breast cancer (BC) treated with CDK4/6 inhibitors.
Methods: Retrospective observational study that included patients ≥ 75 years with HR + /HER2-BC treated with CDK4/6 inhibitors between 2017 and 2021. Patients' general and cancer-related data were collected. Comprehensive Geriatric Assessment scales were gathered. Adverse events reported before each cycle were included. At the end of the follow-up period, mortality was retrospectively registered from medical records.
Results: All 19 patients (94.7% women, median age 77.9 ± 10.1) were at risk of frailty (G8 ≤ 14) and malnutrition (MNA-SF ≤ 11). Most were independent (52.7% Lawton ≥ 6), had no cognitive impairment (89.5%, MMSE ≥ 24), poor physical performance (70%, SPPB < 8; 62.5% TUG, ≥ 12'') and polypharmacy (72.2%). Almost half had stage IV disease (47.1%). Palbociclib + letrozole was the most frequently prescribed treatment (36.8%). All patients developed some toxicity (94.7% hematologic, 36.8% renal). Over the 42 month follow-up period, 10 reported progression and 8 died. No significant association was observed between patients' age or basal characteristics and toxicity, disease progression or mortality, or survival and CDK4/6 type (LogRank 3.946; p = 0.26). The median survival time was 19.9 ± 3.4 months. Five months after starting treatment, the probability of survival was 73%. At 30 months, 53% of patients survived.
Key conclusions: We found a high risk of frailty and drug toxicity in this small sample but no association between basal characteristics and toxicity, disease progression or mortality. The probability of survival increases with treatment.

P-702

The association of blood biomarkers with outcomes in older patients with solid tumors: a systematic review

Abstract Area: Gero-oncology

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Introduction: Blood biomarkers are potentially useful prognostic markers and may support treatment decisions in older patients with solid tumors, but it is unknown which biomarkers are most useful. The aim of this systematic review was to review the available evidence on the association of blood biomarkers with outcomes in older solid tumor patients.
Methods: A literature search was conducted in 5 databases in March 2021 to identify studies on blood biomarkers measured before treatment initiation, not tumor specific, and outcomes in patients aged ≥ 60 years with solid tumors.
Results: Forty-nine studies were included, with a median sample size of 126 patients (IQR 96–260) aged 76 years (IQR 71–78). Twenty-one studies (43%) had a high risk of bias. Thirty nine studies (80%) examined mortality outcomes, 18 (37%) adverse events and 13 (27%) treatment response. In total, 62 unique markers were studied in patients with over 10 different tumor types and a large variety of treatment modalities. Albumin (19 studies), neutrophil-to-lymphocyte ratio (NLR), C-reactive protein (CRP) and hemoglobin (13 studies each) were studied most often. Mortality was associated with low albumin in 6 out of 15 studies, high NLR in 5 out of 12, high CRP in 2 out of 9 and low hemoglobin in 2 out of 11.
Conclusion: Evidence on prognostic blood biomarkers is limited due to small sample sizes and inconsistent results between studies. Further research is needed in larger and more homogenous cohorts that combine clinical parameters and biomarkers before these can be used in clinical practice.

P-703

Association of metabolomics mortality score with geriatric assessment and mortality in older patients with solid tumors

Abstract Area: Gero-oncology

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Introduction: Treatment decisions in older patients with solid tumors are currently primarily based on clinical judgement and sometimes aided by a geriatric assessment (GA). Addition of a metabolomic biomarker-based risk score, developed to predict long-term mortality, could potentially support treatment decisions. Our aim was to assess the association of the metabolomics mortality score (MMS) with mortality and geriatric deficits in older solid tumor patients.
Methods: A prospective cohort study was performed that included patients aged ≥ 70 years with a solid malignant tumor, who underwent GA and blood sampling before treatment initiation. The MMS was associated with one year all-cause mortality with Cox regression. Frailty was defined as deficits in ≥ 2 geriatric domains.
Results: In total, 192 patients with a median age of 77 years were included. One year all-cause mortality rate was 30%. The MMS was associated with increased risk of mortality after adjusting for clinical variables (HR 2.1; 95% CI 1.4–3.2) and had a modest prediction accuracy (AUC 0.66). Patients in the highest tertile MMS group had more geriatric deficits compared to patients in the lowest tertile, including malnutrition (median MNA-SF®10.0 vs. 12.5) and frailty (76 vs. 47%).
Conclusions: The MMS was associated with 1 year mortality and geriatric deficits in older patients with solid tumors and could potentially support treatment decisions. Future research should explore its value on top of tumor characteristics and GA data in specific tumor types.

P-704

Total pain experienced by older people with gastrointestinal cancer receiving palliative chemotherapy

Abstract Area: Gero-oncology

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Introduction: The concept of total pain describes the interrelatedness of different experiences of pain and helps to understand the multi-faceted burden of advanced and terminal illness [1]. However, little is known about concurrent physical, emotional, social, and existential distress experienced by older patients during early stages of advanced cancer while receiving life-prolonging treatment. Drawing on the concept of total pain, this study explores the multi-faceted symptoms of pain in older patients with advanced cancer.
Methods: A total of 14 in-depth interviews with seven participants were conducted, one interview at the beginning and one after completion of chemotherapy. Participants were ≥ 70 years, diagnosed with advanced gastrointestinal cancer and receiving palliative chemotherapy.
Results: Thematic analysis revealed that the participants experienced all aspects of total pain. Physical symptoms such as fatigue, nausea, dizziness was experienced inevitable due to cancer disease and cancer treatment. The need of independency and living life as usual was a way of coping with emotional and social pain. The participants embraced that severe disease and death could happen at their age, but unresolved life circumstances were a source of existential pain. Further, old age was experienced as an integral part of how these participants interpreted their situation and promoted an accepting approach.
Key conclusion: Older adults with advanced cancer are affected by multiple-faceted symptoms brought about by cancer disease and treatment. The concept of total pain is suggested for monitoring symptoms and guiding multidisciplinary approaches during the shifting needs of treatment, rehabilitation, and palliative care in earlier stages of advanced cancer.
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P-705

Association between martial deficiency and mortality in oncogeriatric patients with solid cancers

Abstract Area: Gero-oncology

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Introduction: Ferritin value is influenced by cancer. Transferrin saturation coefficient (TSAT) completes the evaluation of iron status.
Primary objective: To evaluate the association between iron deficiency (ID) and mortality in patients ≥ 75 years with solid cancers.
Methods: Retrospective study of prospective oncogeriatric (OG) monocentric cohort including patients evaluated for the diagnosis of solid cancer, during a 1st OG consultation at Poitiers University Hospital, France, between 2009 and 2018, having had a martial workup in the 12 months surrounding the consultation.ID, absolute ID (IDA) or functional ID (IDF) were defined according to the NCCN (National Comprehensive Cancer Network) and ESMO (European Society for Medical Oncology) criteria. Variables studied: tumor site, metastatic status, ferritin and TSAT values, anaemia, vital status at 22/01/2022. Statistical analyses by Logrank, Kaplan–Meier, and Cox proportional hazards model test.
Results: We included 556 patients (44% women, mean age 82.1 ± 7 years, most frequent cancer: colon 19%, n = 104, metastatic cancers in 38%, n = 213). Median follow-up: 483 days. In anaemic patients, ID (HR = 1.519, 95% CI [1.124, 2.052] p = 0.0065) and IDF (HR = 1.734, 95% CI [1.261, 2.385] p = 0.0007) according to ESMO criteria were independently associated with an increased risk of mortality. In non-anaemic patients, IDF (HR = 0.655, 95% CI [0.430, 0.999] p = 0.0495) according to ESMO criteria was independently associated with better survival.
Conclusion: ID is significantly associated with mortality in the OG patients with solid cancers. These results raise questions about the prognostic value of iron supplementation in anaemia or iron deprivation in the absence of it.

P-706

First year experience of a Geriatric Oncology Unit

Abstract Area: Gero-oncology

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Introduction: Geriatric Oncology is essential to optimize care of older patients with cancer. However, the concept of geriatric oncology is not yet widely extended in Spanish hospitals. This study aims to describe frailty and other comprehensive geriatric assessment (CGA) results in a geriatric-oncology unit. A secondary objective was to describe treatment recommendations made by the geriatric consultant.
Methods: Observational study that includes patients referred to the Geriatric-Oncology Unit in a third-level Madrid hospital between October 2018 and December 2019. Variables included: sociodemographic, clinical, functional, cognitive, and nutritional status, frailty variables, geriatric syndromes, and geriatric oncology cancer-treatment recommendations.
Results: 57 patients with an average age of 83 (SD 3.59) were included. 50.2% were women. Most common tumors: gynecologic (31.5%), thoracic (27.1%), digestive (12%). CGA characteristics: Median Charlson Comorbidity Index 6 [Interquartile range (IQR) 4–8]. 14.4% lived alone, 38.6% with partner, 2% institutionalised. Barthel index ≥ 80 82.4%, cognitive impairment 17.5%. MNA ≤ 11 69.64%. Median SSPPB 9 (IQR 5–11). Handgrip ≤ 29 (men) ≤ 17 (women) 42.11%. Polypharmacy (≥ 5 medication) 70%. Depression 29.8%, falls 14%, pain 19%. 56.3% of patients were frail or pre-frail. Standard oncology treatment was recommended in 49% of patients, adapted treatment (less intensive treatment) in 41.8% and palliative care in 9.2%. 47.3% of patients followed a prehabilitation program before cancer treatment.
Conclusion: Frailty was detected in more than half of the patients remitted to the geriatric oncology clinic. Malnutrition and other geriatric syndromes were highly prevalent among these patients. Prehabilitation was recommended in half of the sample and adapted oncology treatment was recommended in 41% of patients.

P-707

The development of a new telemedicine-based geriatric oncology interdisciplinary clinic

Abstract Area: Gero-oncology

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Introduction: Frailty assessment rather than age, has become an important determinant of older adults' fitness for cancer treatment. Geriatric Assessments (GA) are difficult to perform in busy oncology clinics. Multidisciplinary GA models have demonstrated improved mortality and morbidity outcomes. However, the geographic fragmentation of clinical sites in urban hospitals is a deterrent. We developed a new telemedicine based interdisciplinary clinic model. Its goal is to provide GA of older adults newly diagnosed with cancer, to determine the optimal treatment plan.
Methods: The team consists of an Oncologist, Geriatrician, Nurse, Pharmacist, Nutritionist. The evaluation includes GA, performance measures and calculators to estimate life expectancy, chemotoxicity and surgical risk. The clinic is purely telemedicine or a hybrid format (the patient is at one of the clinical locations). Traditional visit components are unbundled; clinical assessments occur asynchronously. The Geriatrician compiles all clinical data and communicates with the Oncologist. Three Plan-Do-Study-Act cycles created the final format and workflow. To prevent bottlenecking, the scaling of the model follows a stepwise expansion into different oncology specialties.
Results: 40 patients were evaluated in the clinic from 7/2021 to 5/2022. Median age 83 years (67–99), 75% women. 20 patients (50%) continued with chemotherapy, but 9 had modified regimes. 9 (23%) went for Radiotherapy, 6 (16%) for immune therapy, 1 patient enrolled in Hospice care.
Key conclusions: Individualized patient care can be delivered through telemedicine based interdisciplinary clinics. Developing new models of care require new approaches, processes, metrics. The development process, barriers and modifications will be discussed.

P-708

The challenge of a retroperitoneal non-Hodgkin lymphoma in an elderly patient: is delayed diagnosis inevitable?

Abstract Area: Gero-oncology

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A 68-year-old man presented with fatigue and weight loss. He had a history of occupational exposure (fertilizer production) for 20 years, hypertension, and type 2 diabetes mellitus. The previous month, he developed unspecific abdominal pain, fatigue, hyporexia, generalized weakness, unintentional weight loss (6 kg), and lower limb edema. Acute kidney injury was suspected in a primary approach and hospital admission was decided. In his laboratory studies normochromic normocytic anemia (Hb 10.3 g/dl, MCV 88, HCM 29.5), mild thrombocytopenia (PL 114 × 103u/L, moderate hyponatremia (125), elevated LDH (548), acute kidney injury (1.7), elevated nitrogen (BUN 37, Urea 79), and an elevated CRP (5.5) were noted. On examination, he had lower limbs edema up to the knee, and scrotal edema, rest without alterations. Barthel index was 60. Chest X-ray showed bilateral pleural effusion; the scrotal US reported bilateral hydrocele, data suggestive of infiltration of the epididymides and the testicles. An abdominal contrast-enhanced CT revealed an extensive solid-looking retroperitoneal mass that causes mild bilateral hydronephrosis, mediastinal, retro, and extraperitoneal lymphadenopathies. After the mass biopsy, histopathological analysis revealed diffuse large B-cell Non-Hodgkin's lymphoma, immunohistochemical stains were positive for CD20; bone marrow biopsy without infiltration. The patient was planned for R-mini-CHOP chemotherapy regimen.
Conclusion: Non-Hodgkin's lymphoma diagnosis is usually late. Its presentation is variable and non-specific, and a high index of suspicion is needed. The toxicity of the chemotherapy regimen requires a careful review in the elderly population. Most cases respond to an adequate chemotherapy regimen and have prolonged survival with adequate treatment [1,2,3].
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P-709

Prognostic accuracy of frailty in older patients with multiple myeloma on hospitalization time: two scores compared

Abstract Area: Gero-oncology

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Introduction: Multiple myeloma (MM) is an older people disease, affecting extremely heterogeneus population [1–5]. Rockwood Frailty Index (Rockwood FI) is a 40-item index based on the Rockwood frailty stratification model [6,7]. IMWG score is used as a gold standard by hematologists, predicting the risk of mortality and chemotoxicity in older people with MM [8]. The purpose of our study is to compare the prognostic accuracy of the two scores on hospitalization time from the first geriatric evaluation.
Methods: Retrospective analysis of 35 patients over 65 with MM, visited at the geriatric clinic of the IRCCS San Martino Hospital in Genoa from December 2017 to May 2021 was performed. All patients underwent the Multidimensional Geriatric Assessment (MGA). Patients were stratified by frailty with Rockwood FI and IMWG score.
Results: Patients were on average 76 years (± 6.96). Mean Rockwood FI was 0.18 (± 0.13) and mean IMGW score 1.57 (± 1.50). 21 patients (60%) had one or more hospitalizations. Multivariate analysis identified following clinical variables associated with hospitalization: malnutrition ($p = 0.04$), multimorbidity (comorbidities: $p = 0.007$), pathological physical performance ($p = 0.004$), polypharmacy ($p = 0.011$); Rockwood FI ($p = 0.001$) and IMWG score ($p = 0.013$). Comparing the two scores, Rockwood FI showed better prognostic accuracy than IMWG score in terms of hospitalization time (Harrel's Index 0.721 ± 0.050).
Conclusions: The 40-item Rockwood FI stratification model proved valid in predicting hospitalizations of elderly patients with MM. It performed better than IMGW score for the chosen outcome.
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P-710

98 years old and 21 000 platelets

Abstract Area: Gero-oncology

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A 98 year-old man was hospitalized in acute geriatric unit for an accidental discovery of thrombocytopenia (21 000 G/L) without other hematological anomaly. His main comorbidities were: atrial fibrillation treated by apixaban, kidney cancer treated 9 years ago by ablathermy and embolization in 2019 for a recurrence (patient refused operation by twice). Ecchymosis and spontaneous hematomas were noted—Kellaf's bleeding score was 7. Myelogram revealed a lot of megakaryocytes in favour of thrombocytopenia purpura. Coombs test and plasma protein electrophoresis were normals. Plasma serologies HIV, HBV, HVC, Helicobacter pylori were negative. Anti-nucleus antibodies were positive at 1/80, anti DNA négative, a-ANCA positive (anti MPO and PR3 negative). Anti-platelet antibodies were positive only for anti GIaIIa. Viral PCR on bon marrow were negative (adenovirus, parvovirus B19, CMV). Thoracotomy-abdominal CT scan was realized: no splenomegaly, two upper polar formations of the left kidney were found; one with tissue content and enhancement in favour of a clear cell carcinoma, one in favour of an adjacent sequelae cystosteonecrosis nodule—no adenopathy. Paranaeoplastic thrombocytopenia purpura was diagnosed. Oral corticosteroid therapy was started and the patient's file was presented in multidisciplinary commission meeting. A surgery was proposed, retained by the patient Rockwood 4. Before surgery platelets were at 56,000 G/L, at day 1 of post operation they were at 91,000 G/L. The patient was transferred to a geriatric rehabilitation department. At day 21, platelets were at 180,000 G/L with resumption of oral anticoagulation.

P-711

Hypoglycaemia resolved by nephrectomy…

Abstract Area: Gero-oncology

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Introduction: Hypoglycemia can be the manifestation of an insulinoma or insulin injection, but also of malignancies. This case report describes the uncommon clinical presentation of a mesenchymal tumor.
Case presentation: A 91-year-old man was hospitalized for recurrent nocturnal dizziness and fainting episodes. Patient lives at home and was totally autonomous. During hospitalization his blood sugar level was often lower than 60 mg/dL, and dropped to 22 mg/dL at 4 a.m. Blood level of C-peptide and insulin growth factor (IGF-1) were low and insulin was undosable. The abdominal CT scan and MRI showed a $13 \times 14 \times 9$ cm necrotic mass on the left kidney. No distant metastasis was found on PET-CT. In spite of old age, a left nephrectomy was carried out without complication. Patient had immediately complete resolution of hypoglycaemic events. Pathology

report a large mass of 20 cm (4.24 kg) who was a glomus tumor of unknown potential.
Discussion: Glomus tumors are mesenchymal neoplasms which often are considered benign and solitary lesions. They are rare and occasionally develop in any part of the body. They most often occur the upper extremities, most frequently subungual areas. However less than thirty cases of primary are renal glomus tumors. No medication is really efficient on tumor-related hypoglycemia, and complete tumor excision is the best treatment.
Conclusion: This case illustrates the importance of a good benefit-risk ratio assessment, between surgical risk and quality of life.

P-712

Recapitulating quality of life in elderly cancer patients and their care-givers: understanding the unmet needs

Abstract Area: Gero-oncology

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Background: The incidence of cancer among older people is increasing. This increase is attributed to the remarkable growth of the elderly population and the common pathophysiology of cancer and ageing. Assessment of quality of life (QoL) in the elderly cancer population is increasingly accepted as an important patient-reported outcome to complete the clinician's evaluation of disease and the determination of the clinical benefit and the burden of cancer treatment, along with toxicity, survival and mortality rates. Family caregivers of elderly cancer patients have a key role as elderly patients are increasingly dependent on their family for physical, financial, emotional and psychosocial support. This physical, emotional or functional dependence could have a negative impact on the QOL of caregivers. The role of family and caregivers is usually under-estimated and unrecompensed. The objective of this study was to evaluate the quality of life of elderly cancer patients and taking into account the considerable impact on caregivers, the QOL of caregivers of elderly cancer patients has also been assessed.
Methods: A prospective study of histologically confirmed patients of gastrointestinal cancers with age above 65 years and their caregivers was conducted from October 2019 to June 2020. Quality of life of elderly cancer patients was taken with European Organization for Research and Treatment of Cancer general questionnaire (EORTC QOL-30) and EORTC QLQ ELD14. Quality of life of caregivers was taken with the help of Caregiver Quality of Life Index—Cancer (CQOLC). The patient and caregiver characteristics as well as QOL were assessed using descriptive statistics.
Results: A total of 100 patients were recruited. Mean age was 70.66 (range 65–80 years). Sixty two percent were males and 38% were females. Seventy eight percent of the patients were living with their family and 22% were living without their family. Functional scale like Cognitive function of elderly patients showed the highest scores (83.33 ± 26.87), while physical function (54.04 ± 25.63) and financial difficulties ((28.21 ± 21.06) were the lowest ones. The highest symptom score was observed for pain (32.47 ± 33.92) and insomnia (25.51 ± 17.03). Majority of caregivers patients were between age group 30–60 years and 30% were females. Around 40% of caregivers were illiterate, 10% were unemployed and 10% had the insurance support. The maximum possible score for CQOLC is 140. In the current study, the highest obtained score was 110, and the lowest obtained score was 40. Seventy five percent of the caregivers had moderate to severe hampering of their QOL. Sixty nine percent of the caregivers had severe impact on daily life as a result of caregiving, 40% had financial problem, 10% had guilt, 15% had frustration and 35% had to change their priorities while taking care of the cancer patients.
Conclusion: Elderly cancer patients are physically and financially more dependent on caregivers. Both older patients and their caregivers are the vulnerable group. Majority of the caregivers had moderate to severe decline in QOL. There is unmet need to understand and alleviate the multidimensional distress faced by elderly cancer patients and their caregivers. Keywords: cancer; caregiver; elderly; quality of life.

P-713

Giant hematoma as cause of death after a pathologic fracture of the distal femur, a case report

Abstract Area: Gero-oncology

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Introduction: Pathological fractures of the distal femur caused by bone metastases are not as frequent as those of the proximal femur, but they are very difficult to treat adequately. There are several immediate complications, including traumatic shock, neurological and vascular lesions. Medical history: Hypertension. Dyslipidemia. Atrial fibrillation. Chronic renal failure due to bilateral polycystic kidney disease. Left radical nephrectomy in the pathological anatomy reports clear cell renal carcinoma. Followed by Oncology for Stage IV renal carcinoma with lung and bone metastases. Hypothyroidism. COVID-19. Comprehensive Geriatric assessment: Walks independently with a walker. Barthel index (BI) 65/100. No cognitive impairment. Social: divorced, lives alone, has one son who take care of him. Assessment at admission: (BI) 20/100, Bed-chair life. Evolution: Patient of 88 years old patient was admitted for rehabilitation treatment after admission for acute appendicitis. At the beginning of rehabilitation he had severe pain in the left femur, so an X-ray was requested, revealed new metastasis in the distal femur. Three sessions of radiotherapy were performed. The patient presented exacerbation of pain, after couple hours he presented deformity of the extremity with large hematoma, a new X-ray was performed and a displaced oblique fracture of the distal femur was diagnosed, it was evaluated by traumatology and conservative treatment was decided, due to the medical history. Afterwards we talked to the family and decided to start palliative treatment and after 3 days he died, with Conclusion: it is important to know the complications of pathological fractures and initiating appropriate treatment is essential.

P-714

Frail-VIG Index as a predictor of hospital admissions in older patients assessed in the oncogeriatrics outpatient consultation

Abstract Area: Gero-oncology

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Introduction: The use of frailty tools in oncogeriatrics is increasing. Our aim was to investigate whether the Frail-VIG index (F-VIG) can predict number of hospitalisations among oncogeriatric patients.
Methods: Retrospective observational study of patients $\geq$ 70 years evaluated in the oncogeriatrics outpatient consultation during 2019–2020. Aspects of the comprehensive geriatric assessment and tumor site were collected. Frailty was classified according to F-VIG: < 0.20 non-frail, 0.20–0.35 mildly frail, > 0.36 very frail. Number of Hospital Admissions (HA) and Emergency Admissions with Early Discharge (EAED) during a two-year follow-up period were determined. The capacity of the F-VIG to predict the frequency of HA and EAED was investigated using negative binomial regression adjusted by age and results were expressed as incidence rate ratio (IRR).
Results: 274 patients (58.03% women, mean age 82.20 ± 5.44). Tumor groups were: colorectal (32.11%), breast (15.32%), biliopancreatic (13.86%), genitourinary (13.50%), gastroesophageal (10.58%), gynecologic (10.21%) and others (4.42%). 40.51% were classified as non-frail, 40.87% mildly frail and 18.71% very frail. 83.6% had ≥ 1 HA and 83.2% ≥ 1 EAED. Taking the non-frail group as reference, the IRR of EAED for mildly frail patients and very frail patients were 1.57 (CI 95% 1.11–2.21; p value $= 0.010$) and 1.73 (CI 95% 1.13–2.66; p value $= 0.012$), respectively. The IRR of HA for mildly frail and very frail patients were 1.57 (CI 95% 1.05–2.34; p value $= 0.028$) and 1.24 (CI 95% 0.73–2.09; p value $= 0.431$), respectively.
Conclusions: F-VIG can predict number of EAED in all frailty groups and HA in mild frailty patients with cancer. Interventions delivered in the outpatient oncogeriatrics consultation might help preventing hospitalisations in this population.

P-715

Dermatomyositis in an elderly man: beware of cancer!

Abstract Area: Gero-oncology

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Introduction: Dermatomyositis is an autoimmune disease associating typical skin lesions with proximal muscle deficit. The association between dermatomyositis and malignancy is well-established. Dermatomyositis can occur before, at the same time or after cancer diagnosis. We report a case of paraneoplastic dermatomyositis revealing lung neoplasm in an elderly man.
Observation: A 69-year-old patient with diabetes and hypertension presented a progressive skin rash associated with myalgia and muscle weakness. Physical Examination showed purple rash on sun exposed skin and eyelids, Gottron papules on metacarpophalangeal joints, a manicure's sign and a proximal, symmetrical and bilateral muscle deficit. The muscle enzymes were elevated (CPK = 495 IU/l LDH = 277 IU/l) MRI of the lower limbs showed myositis of the quadriceps and hamstrings. The electromyogram (EMG) showed a myogenic pattern in all 4 limbs. The thoracic-abdominal-pelvic scan showed a spiculated sub pleural tissue mass 52 mm in diameter with homolateral hilar adenomegaly and homolateral mediastinal nodes consistent with a diagnosis of primary lung cancer classified as T3N2M0. The patient was given oral corticosteroids with improvement of clinical symptoms.
Conclusion: The association of dermatomyositis and cancer is not rare. Given that DM can be a circumstance for the discovery of neoplasia, any patient presenting with DM, even in the absence of clinical signs, should not delay investigations at the cost of missing a cancer. In our case DM occurred in a male patient, which encourages us to be more determined in looking for the cancer.

P-716

Role of ultrasonography and appropriateness of elderly neoplastic patient's management

Abstract Area: Gero-oncology

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Introduction: The aim of the study is to illustrate the role of Ultrasonography (US) in the management of elderly patients with neoplastic diseases. We wanted to analyze if the US allows to increase the appropriateness of diagnostic and therapeutic program and the appropriateness of hospitalization of elderly patients with known or suspected cancer.
Material and methods: US was performed in two groups of 300 elderly patients (75–95 years, 170 women, 130 men). In the group of 150 patients with signs and symptoms for suspected cancer the US was performed in Emergency Room (ER), in the group of 150 patients with known cancer the US was performed in Geriatrics department,within 24 h after admission. The two groups of 300 patients were compared with 300 elderly patients with suspected or known cancer in which US was not carried out.
Results: The US allowed in 90% of elderly patients with suspected cancer to prescribe early appropriate diagnostic program and reduced length of hospitalization and avoided inappropriated admission. The US in 95% of elderly patients with known cancer allowed to identify patients in which prescribe palliative therapy or therapeutic specific program. In the group of patients in which US was not performed or performed later, the average length of hospitalization was higher of 40% and the appropriateness of admission was lower and in 30% of cases the most appropriated department for hospitalization was selected after 5 days of hospitalization in Geriatrics department.
Conclusions: The Ultrasonography performed in Emergency Room or within 24 h in geriatrics department allows to select the most appropriate department in which the elderly patient with neoplastic disease must be admitted. In addition US performed early reduces length of stay and reduces costs and increases patients safety. The

appropriateness of therapeutic and diagnostic program is increased both in patients with known cancer and in elderly patients with suspected cancer.

P-717

Clinical characteristics and independent risk factors in colorectal carcinoma of the elderly

Abstract Area: Gero-oncology

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Introduction: Colorectal cancer (CRC) is one of the most frequent malignant tumors worldwide, with the median age of newly diagnosed patients about 70 years. With the continuously aging population in European countries, the numbers of newly diagnosed elderly patients are steadily increasing. The objective of this study is to evaluate clinical characteristics and risk factors of CRC in the elderly.
Methods: We analyzed patients whom underwent colonoscopy in our department's endoscopy unit in a three-month period of early 2022. Data was collected from endoscopy reports, pathohistological findings, and medical histories. Patients were analyzed according to the presence of symptoms (anemia, blood in stool), frequent comorbidities (heart failure, hypertension, type 2 diabetes and aspirin intake).
Results: Out of 126 preformed colonoscopies, CRC cancer was found in 15 patients (11.9%), with greater incidence in male patients (66.7%, OR 0.474, CI 0.152–1.475). Mean age of the cohort was 74.72 years (58–94). Most frequent localization of CRC was the rectum (60%). Blood in stool was more frequent in patients without CRC ($p = 0.002$, OR 0.126, CI 0.027–0.585). Anemia was associated with CRC od right-sided colon. Diabetes was associated with greater incidence of CRC (OR 3.397, CI 1.121–10.298). Neither of the observed variables had a predictive value for CRC.
Conclusions: CRC has a high incidence in elderly, affecting predominantly male patients. Rectum was the most common site of CRC. We have found association of diabetes with the occurrence of CRC. Neither of the observed variables had a predictive value for CRC.
Key words: colorectal carcinoma, elderly, risk factors, colonoscopy

P-718

Quantifying and qualifying the issue of under-representation of older patients in cancer trials: the QUALI-SAGE mixed cohort study

Abstract Area: Gero-oncology

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Introduction: Adults over 70 years old represent more than 30% of new cancer cases, but less than 10% of cancer clinical trials (CT) participants. This leads to a deficit in evidence to guide clinical practice for this population. We aim to assess experiences of clinical trial's participation and factors associated with non-invitation and refusal to participate.
Methods: QualiSAGE is a mixed methods cohort study. Included patients were aged 70 years and older, eligible for at least of one CT in 5 centers of the greater Paris area, in France (2017–2020). Eligible patients were followed through the inclusion process into a clinical trial.
Results: Overall, 265 patients were included (mean age, 77 ± 5.6; female, 69.4%; main cancer sites: breast (43.4%), lung (20.8%) and prostate (28%); metastasis, 57.4%). Main factors associated with non-invitation were: elementary education (adjusted(a) OR = 4.79; 1.39–16.6), not being in couple (aOR = 5.42; 1.65–17.9), not having children (aOR = 4.12; 1.14–14.9) and home care support (aOR = 6.47; 1.86–22.5). Main factors associated with refusal were: not having social activities (aOR = 4.17; 1.33–13), higher education (aOR = 3.56; 1.17–10.8), not being in couple (aOR = 4.93; 1.73–14.1) and localized cancer (aOR = 3.64; 1.26–10.5). Interviewees (n = 25) experienced participating as a form of "opportunity for commitment" for one's self, for others and for science, highlighting patients' social ties to healthcare workers and kin.
Conclusion: Invitation and inclusion of adults 70 years or over with cancer are more often associated with social rather than clinical factors. Factors explaining non-inclusion are different at the different steps of inclusion process. Understanding the complex issue of under-representation requires interdisciplinary dialog between medical and social sciences.

P-719

Prognosis value of neuro-cognitive disorders in older patients with cancers: the ELCAPA prospective cohort study

Abstract Area: Gero-oncology

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Introduction: Cancers in people aged 65 and over accounted for 62.4% of new cancer cases but older cancer patients remain under-represented in clinical trials. Prognostic assessment is more complicated in older patients due to their heterogeneity linked to frailty criteria. These frailty factors are screened thorough geriatric assessment (GA) in patients with cancer over 70. Neuro-cognitive disorders (NCD) are an independent prognostic factor in patients over 65 years, but their prognostic value is more uncertain in older patients with cancer.
Objective: The main objective was to assess the prognostic value of cognitive impairment in older cancer patients.
Methods: We performed a dynamic longitudinal multicenter observational cohort study (the ELCAPA cohort) of patients older than 70 years old referred for a GA before cancer treatment. We defined baseline neurocognitive disorder (NCD) in 4 classes: no NCD, mild

NCD moderate, major NCD based on Mini-Mental State Examination (MMSE) or memory complaints and Instrumental Activities of Daily Living (IADL). We used multivariate survival analysis with age in time scale and overall mortality within 12 months of follow-up.
Results: Between 2007 and 2017 we studied 2784 solid cancer patients with a median age of 82 years [78;86]. 36% had no NCD, 34% mild NCD, 17% moderate NCD and 13% major NCD. We identified the following independent prognostic factors at 12 months: NCD (major NCD adjusted (a)HR 1.54 1.19–1.98 $p < 0.001$), type of cancer, metastatic status, inpatient, poor general health assessed by asthenia and WHO performance status, malnutrition and palliative treatment or exclusive supportive care intent. Without adjustment for treatment, the strength of association of major NCD cognitive status was little changed (severe NCD HR 1.78 1.39–2.29 $p < 0.001$).
Conclusion: This study suggests an independent and direct prognostic value of major NCDs, independently of other geriatric factors, cancer type and treatment strategy in older patients with solid cancer.

P-720

Multidimensional oncological frailty scale (mofs): a new quick-to-use tool for detecting frailty in older patients with cancer. development and validation pilot study

Abstract Area: Gero-oncology

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Background: Frailty detection with comprehensive geriatric assessment (CGA) is of pivotal importance in older patients with cancer to avoid over or under chemotherapy treatment and to detect those at increased risk for poor outcomes. Several tools have been developed to capture the complexity of frailty, but none were explicitly conceived for older adults with cancer. This study aimed to develop and validate a multidimensional, easy-to-use diagnostic tool for early-risk stratification in patients with cancer, now called the Multidimensional Oncological Frailty Scale (MOFS).
Methods: In this single-center prospective study, we consecutively enrolled 163 older patients (age $\geq$ 65 years) with breast cancer, screened with a G8 score ($\leq$ 14) during the outpatient pre-operative evaluation at our breast centre, performing clinical/anamnestic evaluation, CGA, and calculating the Multi Prognostic Index (MPI). We evaluated 45 ovarian, and colorectal cancer patients admitted to our OncoGeriatric Clinic for the validation cohort. Using stepwise linear regression analysis, we evaluated the relationship between G8 and CGA items, and we finally realized a screening tool based on the combination of the significant variables.
Results: The mean age of study population was 80 ± 5.8 years. A composite model of the Clinical Frailty Scale, G8, and Handgrip Strength test showed a strong correlation with MPI ($R = 0.742$, $p = 0.003$). The MOFS accuracy was optimal in both the development cohort and validation cohort (area under the curve = 0.82 and 0.86, respectively, $p < 0.001$) in assessing frailty (defined as MPI III).
Conclusion: MOFS is a new accurate, quick-to-use frailty screening tool for oncological geriatric patients.

P-721

Neuropsychiatric Side-effects of checkpoint inhibitors in older persons

Abstract Area: Gero-oncology

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Introduction: Checkpoint inhibitors (CI), including nivolumab, ipilimumab and pembrolizumab are increasingly used in the treatment of multiple solid tumors. They are known to cause inflammatory toxicity including hypophisitis and encephalitis, amongst other forms of sterile inflammation. Older persons seem more vulnerable to develop toxicity when treated with checkpoint-inhibitors and possibly develop neuropsychiatric symptoms or maybe cognitive decline as an effect of neuroinflammation. This study aims to unravel what is known about the relation between use of CI and neuropsychiatric symptoms in older persons.
Method: A database (Pubmed) was searched for relevant studies from 2012 to 2022 regarding neuro-inflammatory and neuropsychiatric side effects, including depression, psychosis and cognitive impairment of checkpoint-inhibitors. Mouse-studies were excluded as well as studies on thyroiditis causing depression. Studies were selected based on abstract and/or full text.
Results: 113 papers returned from the initial search, of the majority mainly described the occurrence of encephalitis, which in some cases, caused delirium. We found 3 studies on long-term results of checkpoint-inhibitor treatment that included assessment of cognitive functioning and/or psychosocial functioning. These studies described reduced cognitive functioning after encephalitis due to ipilimumab.
Key conclusions: Although checkpoint-inhibitors are known to cause encephalitis, only very little is known about effects on cognitive function and neuropsychiatric symptoms in elderly. The mechanism of action of these drugs combined with known increased toxicity in elderly might be worth investigating since this could also shed light on the effect of neuroinflammation on cognitive functioning.

P-722

Frail-VIG index as a prognostic tool for older adults with cancer

Abstract Area: Gero-oncology

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Introduction: Frail-VIG index (F-VIG) has shown good capacity to predict mortality among hospitalized older patients. The objective of this study is to evaluate its utility as a mortality predictive tool in Oncogeriatrics.
Methods: Retrospective study of patients evaluated at the Oncogeriatric Unit between 2019 and 2020. Sociodemographic data, functional, mental and nutritional status, comorbidity and geriatric syndromes were collected. Tumor site and metastatic status were gathered. Frailty was assessed by F-VIG (F-VIG < 0.2: non frailty, F-VIG 0.2–0.35: mild frailty, F-VIG 0.36–0.50: moderate frailty,

F-VIG > 0.5 severe frailty). Information on vital status on march 2022 was gathered. Statistical survival analysis was performed using the Cox proportional hazards model adjusted by age.
Results: 274 patients were included (58.03% women, mean age 82.20 ± 5.44). Median Barthel index was 85.35 ± 20.61; 10.5% presented dementia. Tumour groups were: colorectal (32.11%), breast (15.32%), biliopancreatic (13.86%), genitourinary (13.50%), gastroesophageal (10.58%), gynaecologic (10.21%) and others (4.42%). Metastasis were present in 29,93%. 40.51% were classified as non frail, 40.87% mildly frail, 14.23% moderately frail and 4.37% severely frail. By march 2022, 48.9% of the patients had died. When compared with the non frail group, statistically significant association between frailty level and mortality was found (mild frailty (HR = 1.82, CI 95% [1.22–2.72], p = 0.004), moderate frailty (HR = 2.39, CI 95% [1.46–3.91], p = 0.001), severe frailty (HR = 2.61, CI 95% [1.27–5.38], p = 0.009)).
Key conclusions: F-VIG could be a prognostic tool for mortaliy among Oncogeriatric patients that can be helpful in the therapeutic decision-making process of this population group.

P-723

Is there a survival difference between older adult and younger adult patients with locally advanced gastric cancer with the same lymph node ratio?

Abstract Area: Gero-oncology

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Objective: The aim of this study was to clarify the prognostic value of the pathological lymph node ratio for older adult and younger adult gastric cancer patients and to evaluate whether there is a difference in the survival of patients with the same lymph node ratio (LNR).
Materials and methods: A total of 222 patients diagnosed with locally advanced gastric cancer who underwent upfront gastrectomy without neoadjuvant chemotherapy and had negative surgical margins were included. The patients were divided into two groups according to age. Potential prognostic factors affecting survival were analyzed. LNR was defined as the ratio of number of positive lymph nodes to the total number of lymph nodes harvested during surgery. LNR Stage 0 included LNR = 0, LNR Stage 1 (LNR1) included LNR = 0 < LNR ≤ 0.1, Stage 2 (LNR2) included LNR = 0.1 < LNR ≤ 0.6, Stage 3 (LNR3) included LNR = 0.6 < LNR ≤ 1. Subsequently, the effect of lymphadenectomy and LNR on survival in both groups was evaluated.
Results: Thirty patients with perioperative mortality were excluded and 192 patients were analyzed. Significant differences were detected in terms of hemoglobin and albumin levels between older adult patients and younger adult patients (p < 0.05). Among the parameters that may have a prognostic effect, increased age (above 65 years), Borrmann type 4, increased tumor size (≥ 5 cm), histologically poorly differentiated type, increased grade, vascular, lymphatic, and perineural invasion were found to be significantly associated with survival. Overall survival (OS) was significantly worse in older adult patients (22 months vs. 67 months, p < 0.001). Even there were no significant differences in terms of dissected and metastatic lymph nodes and LNR between older adult and younger adult patients, the survival rates in older adult patients were significantly lower from those of younger adult in the subgroup LNR Stage 2 (12.1% vs. 47.9%, p = 0.004) and LNR Stage 3 classification (9.1% vs. 34.1%, p = 0.039). LNR was found to be significant for OS with a cut-off point of 0.18.
Conclusion: A survival difference was found between the older adult and younger adult patients with the same LNR. LNR was found to be an independent factor for survival especially in older adult patients. Survival was found to be further decreased in older adult patients compared to younger adult patients with increasing LNR.

P-724

Challenges in treating the frail elderly with lung cancer in the biomarker era

Abstract Area: Gero-oncology

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An 82-year-old male presented because of a fall. He had a smoking history (60 packs cigarettes/year), history of persistent wet cough, and an unintentional loss of weight (20 kg) in the last year and benign prostatic hyperplasia. Three months before, he developed blood-streaked sputum, fatigue and functional impairment. Chest X-ray finding revealed a mass in the lower lobe of the right lung and admission was required for the approach. Physical examination revealed dullness and reduced air entry on the right hemithorax. Karnofsky was 70 and ECOG was 2. Blood cell count and biochemistry tests were normal. A contrast-enhanced chest CT showed a mass in the lower lobe of the right lung, pericardial and right-sided pleural effusion. CT-guided biopsy confirmed a stage IIIB squamous cell carcinoma (T4N2M0), with PD-L1 expression of 60% and no targetable mutations. The patient was not a fit candidate for chemoradiation according to the CARG tool. Palliative immunotherapy with nivolumab-ipilimumab achieved a partial response after 10 weeks and a marked improvement in symptom control.
Conclusion: Poor functional status and frailty in the elderly have been associated to higher incidence of chemotherapy-related serious adverse effects. In this population, immunotherapy may be considered the first line treatment.

P-725

Geriatric risk profile in prostate cancer

Abstract Area: Gero-oncology

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Background: Prostate cancer (PC) is the most prevalent cancer in men and affects older men. Comprehensive Geriatric Assessment (CGA) is the best tool for determining the health status. Identifying the geriatric risk profile in elderly patients with PC is still a challenge.

Objective: Identify geriatric risk profiles in patients with PC.
Methods: Prospective, noninterventional study of consecutive patients, aged ≥ 65 years, with PC. We assessed patients with CGA, PSA, Gleason score, and tumor stage. The geriatric risk profile defined by the presence of ≥ 2 of the 7 criteria: living alone; Katz's Activities of Daily Living (ADL) score > 6; Lawton's Instrumental Activities of Daily Living (IADL) score < 5, Mini-Mental State Examination (MMSE) score < 24; Geriatric Depression Scale (GDS) score ≥ 5; Mini Nutritional Assessment Short-Form (MNA-SF) score < 24; and presence of ≥ 1 comorbidity on Charlson Comorbidity Index (CCI).
Results: 65 patients (N = 65), median age: 74 years (65–93), localized PC: 47.69%, advanced PC: 52.31%, PSA level: 19 ng/mL (2.5–698), living alone: 21.54%, ADL score > 6: 18.46%, IADL score < 5: 29.23%, MMSE score < 24: 13.85%, GDS score ≥ 5: 12.31%, MNA-SF scores < 24: 10.77%, CCI score = 1: 35.38%, CCI score ≥ 2: 27.69%, and geriatric risk profile present in 27.69%.
Conclusion: The CGA allows the health team to appreciate chances, assess risks, and define an appropriate treatment strategy to offer to the elderly patient with PC. There are new, emerging standards of care for PC, both in the localized and advanced disease, that require shared decision making and multimodal therapies that can be facilitated by multidisciplinary care teams.

P-726

Healthcare encounters with older patients with cancer and limited dominant language proficiency

Abstract Area: Gero-oncology

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Introduction: In Denmark, inequality in health has been addressed with a healthcare reform that implements the "Patient First"—a vision of ensuring "proximity, coherence, quality, and patient rights". International studies, however, point towards an inequality that is often connected with limited dominant language proficiency. For example, when it comes to serious illness like cancer, language barriers can have major health consequences, but they can challenge the vision of "Patient First" in more than one way, and the older the patient, the bigger the challenges appear to be.
Aim: The aim of this Ph.D. project is to provide knowledge that can improve communication with patients from ethnic minority backgrounds with limited dominant language proficiency, including their relatives.Methods: Study 1) Participant observations will be used to investigate the communication between patients and professionals in the Department of Oncology at Odense University Hospital and Vejle Hospital, Denmark. Study 2) Diary narratives and qualitative interviews will be used to gain insight into the patients' life stories and experiences of the encounter. Study 3) Focus group interviews will be used to examine the professionals' experiences.
Results: The results are expected to provide both a patient, family, and professional perspective on the consequences of language barriers which can be used to develop guidelines and recommendations. Preliminary results from Study 1 will be presented.
Key conclusions: Based on its qualitative design and interdisciplinary approach, the project will provide knowledge about language-based inequality in health with positive implications for both clinical practice, health education, and health.

P-727

Descriptive study of the characteristics of elderly adults hospitalized for elective surgery in advanced colorectal cancer at Hospital De La Ribera

Abstract Area: Gero-oncology

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Colorectal cancer has a high incidence. Metastatic disease affects 35–45% of patients and surgery is an option.
Objective: To describe the characteristics of patients older than 70 years with metastatic colorectal cancer with an elective surgical treatment.
Methodology: A retrospective descriptive observational study of 34 patients treated between 2011–2019 at the Hospital de La Ribera. Data were analyzed with IBM SPSS version 26.
Results: 38.2% were women. The mean age was 77.85. 50% had frailty. 79.4% had Charlson Index > 3. 88.2% had a cerebrovascular accident, 23.5% were diabetics, 17.6% had chronic heart failure, 5.9% had chronic kidney disease and 2.9% had dementia. 35.29% were obese. 61.8% had moderate-severe degree of malnutrition. 52.9% was located in sigmoid, 20.6% in cecum, 11.8% in rectum, 8.8% in transverse colon and 5.9% in ascending colon. 52.9% were T3, and 35.3% were T4. 44.1% were N1, and 32.4% were N2. The mean hospital stay was 14.26. 12 patients required ICU admission. 5.9% of patients presented dehiscence and 23.5% paralytic ileus. 8.8% had postoperative delirium, 5.9% had cardiac complication, 5.9% had urinary tract infection. 1 patient had a surgical wound infection. 11.8% presented postoperative anemia; 58.8% were transfused. 35.3% of the patients were included in the ERAS protocol. 35.3% were previously assessed by geriatrics. 5 patients died after 1 year.
Conclusions: It is essential to adapt the treatment to the characteristics of older patients and it is essential to continue developing multidisciplinary protocols where a geriatrician also participates to prevent and treat earlier the possible complications.

P-728

Cutaneous squamous cell carcinoma of the hand-when the "banana peel" is not enough: a case report

Abstract Area: Gero-oncology

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Introduction: Cutaneous Squamous Cell Carcinoma (CSCC) is a neoplasm resulting from the malignant proliferation of epidermal keratinocytes. It represents about 20% of non-melanoma skin cancers (NMSC) and is the most common skin malignancy of the hand, about 11% of all CSCC. Despite its relatively high prevalence is poorly documented and few recent publications are available. Recently there has been a significant raise in incidence in most countries.
Methods: In this case report, we present a 81-year-old patient with CSCS of the hand who was treated with surgical resection.
Results: 81-year-old patient, who in March 2021 presented with a lesion on the fourth finger of the left hand, which she undervalued and tried to treat with banana peel. Upon observation, she presented a crusted papule with 20 mm in diameter and hard consistency. After referral to Dermatology she underwent surgical exeresis in July 2021. By February 2022, a new surgical intervention was proposed as the histological result confirmed an invasive CSCC, well-differentiated, but with a surgical margin at the edge of the lesion, which the patient refused. A follow-up consultation was scheduled for May, 2022.
Key conclusions: CSC is, among the NMSC, the most aggressive. Main risk factors include the exposure to ultraviolet light and patient characteristics such as age, skin type and ethnicity. The family doctor has a key role in screening and early referral, as well as in promoting preventive behaviors.

P-729

Geriatric assessment and intervention in older vulnerable patients undergoing surgery for colorectal cancer: a randomized controlled trial (GEPOC trial)

Abstract Area: Gero-oncology

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Background: Colorectal cancer (CRC) incidence increases with age. Older persons are a heterogeneous group ranging from fit to frail. Frail older patients with CRC are at increased risk of negative outcomes and functional decline after cancer surgery compared to younger and fit older patients [1, 2]. Physical independence after surgery is rarely studied in clinical trials although older patients value it as high as survival. Comprehensive geriatric assessment (CGA) evaluates an older persons' medical, psychosocial, and functional capabilities to develop an overall plan for treatment and follow-up. The aim was to investigate the effect of interventions from CGA and exercise on physical performance in older frail patients undergoing surgery for CRC.
Methods: This single-center randomized controlled trial included older patients ($\geq$ 65 years) undergoing resection for localized CRC. Frail patients ($\leq$ 14/17 points using the G8 screening tool) were randomized 1:1 to geriatric intervention (n = 29) or standard of care (n = 29). Interventions included preoperative CGA, perioperative geriatric in-ward review and postoperative follow-up. Patients in the intervention group participated in an exercise program (2x/week) in 12 weeks after surgery. Primary endpoint was change in 30-s chair stand test (30CST). Change in 30CST was calculated as difference between groups from baseline to trial end using Wilcoxon rank sum test.
Results: Difference in mean change in 30CST between groups from baseline to end of study was 7.06 repetitions in favor of the intervention group ($P < 0.001$).
Key conclusion: Results from this trial suggest that geriatric intervention including exercise may counteract physical decline in older frail patients with CRC undergoing resection.
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P-730

Characterization of patients referred to the geriatric oncology consultation

Abstract Area: Gero-oncology

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Introduction: The geriatric assessment in older adults with cancer could help with the oncologic treatment decisions, improving physical performance, reducing toxicity and adverse outcomes.
Methods: This is a descriptive research of the patients assessed in the geriatric oncology consultation at the University Hospital of Guadalajara (Spain) from February 2019 to May 2022. We describe the type of tumors, treatments received, the geriatric assessment and the type of patient according to the SIOG1 and Frailty Scale.
Results: 159 patients were analysed, 52.8% women and the average of age is 84 years old. The speciality that refers the most patients is oncology (41.5%), gynecology (15.7%), urology (11.9%)and anesthesia (10.7%). The most frequent reasons for referral are to make decisions before receiving chemotherapy (32.7%) or surgery (25.8%), or due to treatment complications (17%). In the first consultation, 41% are already metastasized. The majority did not present cognitive impairment (71.7%) or mild cognitive impairment (15.1%) according to the Pfeiffer scale. Approximately half of the patients don't present a limitation (25.3%) or present a mild limitation (26%) according to the SPPB, 48.1% are independent and 31.2% present a mild dependence according to the Barthel Index. Grip strength is abnormal in most men (60.8%), but not in women (normal in 56.3%) and gait speed is abnormal in 65.6% of women. 70% is vulnerable, frail or have a terminally ill according to the Frailty scale. And according to the SIOG1, 18.2% are classified as recoverable frail, 50.3% as frail susceptible to receiving adapted treatment and 26.4% as terminally ill susceptible to palliative treatment. 67.4 of the patients referred to the consultation received some type of treatment (Surgery 34.2%, Chemotherapy 31.9%, Radiotherapy 19.8%, Immunotherapy 9.1%) 0.83% have polypharmacy, 62% risk of malnutrition, 40% pain, 42% depressive syndrome, 45% high comorbidity and 31% fall syndrome.
Key conclusions: Oncologists are the ones who refer the most patients. The moment in which more interconsultations are made is prior to the treatment decision. According to the SIOG1 classification, patients are well managed because they are frail.

P-731

ONCOPAD—QualiPRE: cultural and ethical barriers to cancer treatment in nursing homes and educational strategies

Abstract Area: Gero-oncology

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Introduction: Prevalence of cancer in nursing homes (NH) increases. ONCOPAD is a 4-steps program dedicated to the identification and intervention on educational needs, cultural and ethical barriers associated with cancer treatment in NH. In a scoping review (step 1) we identified 4 subcategories entitled "continuum of care", limiting cancer care in the oldest old, "care in NH", highlighting the conception of care versus cure and treatments de-escalation, "palliative care", gathering the difficulties of parameds to develop skills in symptoms detection and treatment adaptations; lastly, "educational tools" were preferably specific and grounded in real-life. The second step aimed to identify real-life barriers in order to tailor an educational intervention.
Methods: Were expected 12 face-to-face semi-directive interviews according to a predefined grid, exploring professionals' representations on dependent older patients with cancer.
Results: From 09/2021 to 06/2022, 12 interviews were performed by a single expert in social science and analyzed according to an heuristic mapping. Were identified 3 analytic categories: "social representations", "internal and external communication and cooperation", and "care vs cure" cultural concept. Two additional categories were defined to report contextual difficulties: a high professional turn-over and the very low response rate of the professionals, either feeling unconcerned, uncomfortable with a "taboo" topic or over-solicited.
Key conclusions: For subsequent interventional steps, the main information of this analysis is that educational strategies should focus on short and practical sessions and must be associated with organizational improvement towards a better communication both internal and external with cancer specialists.

P-732

Is there benefit to older adults being considered for cancer surgery attending an oncogeriatric clinic?

Abstract Area: Gero-oncology

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Introduction: Using the Frailty Phenotype, we showed that 69% of older adults attending the high risk anaesthetic clinic (HRA) scored 1 or more. Only 30% of those patients had seen a geriatrician. We analysed whether older patients with cancer, identified as pre-frail or frail at the HRA, would benefit from attending an oncogeriatric clinic.
Methods: Older patients with cancer, deemed as pre frail or frail, using the frailty phenotype, who attended the HRA were referred to the oncogeriatric clinic. We retrospectively analysed interventions on each patient and whether it changed treatment for the patients referred over a 10 month period.
Results: 10 patients were referred between May 2021 and March 2022. Average age was 74 years old. Patients had a mix of urological, gynaecological, upper gastrointestinal and colorectal cancers. The average number of interventions per patient was 5.6. Of the clinic interventions there were 17 medication additions, 10 medication dose changes, 13 medications stopped, 16 further investigations requested, 8 referrals to other teams, 6 advice for future scenarios and 6 referrals to the Living Well With Cancer In Older Age Group at Maggies Cancer Centre. 80% of the patients had medications altered due to potential risk of harm. 20% of patients, who were deemed unfit for surgery were deemed fit enough to proceed after attendance. 20% had new comorbidities diagnosed.
Key conclusions: Although a small number of patients seen. We showed benefits to patients attending the clinic including some being able to progress to surgery and harm reduction from polypharmacy.

P-733

Analysing the impact of a charity led prehabilitation course for older adults living with cancer

Abstract Area: Gero-oncology

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Introduction: There is increasing evidence for prehabilitation in the cancer setting. Due to the COVID Pandemic, older adults have deconditioned. Due to workforce challenges locally, we have faced increasing challenges accessing physiotherapy. We analysed whether a specific, charity led, prehabilitation course for older adults: Living Well with Cancer in Older Age, would be of benefit.
Methods: We set up the Living Well with Cancer in Older Age Course in the Glasgow Maggie's Centre. A charity supporting people living with cancer. The group was led by the Maggie's centre lead, a Maggie's fitness specialist and an NHS clinical nurse specialist, specialising in supporting older adults with cancer. The 4 week course consisted of an exercise programme, nutritional and wellbeing advice and signposting to additional support. We analysed sit to stand and step up pre and post course to assess improvement in function and used client questionnaires to assess satisfaction.
Results: Due to social distancing 6 patients attended the first course. There was an increase in sit to stand by 47% and step up by 61%. Clients self-reported improvements in fitness, healthy eating, knowledge of available support and levels of stress. All felt that it helped them live well with cancer and would recommend it. 1 patient was deemed fit for surgery post course. Funding has been secured to run the course regularly and consideration being made to roll it out nationally.
Key conclusions: A charity run—prehabilitation course—can result in improved fitness and is well received by clients.

P-734

The lack of geriatric assessment in older urologic cancer patients

Abstract Area: Gero-oncology

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Introduction: Frailty is an important prognostic marker for older cancer patients. Known international data show approximately 80% of older cancer patients are frailty or prefrailty, which can change therapeutic plans. In the clinical practice, oncologists use ECOG (Eastern Cooperative Oncology Group) to assess functional status, without using validated screening tools for older adults with cancer such as G8. The aim of the study is to show the lack of Geriatric Assessment (GA) in the clinical practice in older urologic cancer patients.
Material and methods: Retrospective observational study of a cohort of > 70 years old patients diagnosed of urothelial, prostate or renal cancer, assessed in Hospital del Mar during 2021. Patients received GA depending on the decision of the multidisciplinary committee of urologic cancers. These patients were screened first by G8 tool and afterwards they received GA.
Results: 87 patients were analysed, 53 (60%) received GA (84.9% men; mean age 83.32 ± 4.38); Barthel index: 35.8% 100, 50.9% 61–99, 5.7% 41–60, 7.5% 21–40; Mean Lawton Index 4.6; Pfeiffer < 2 (no cognitive impairment) 86.3%. 47 patients (89%) showed pathologic G8 screening (G8 $\leq$ 14). 43 patients (81%) were classified as frail/prefrail, all of them had the G8 $\leq$ 14 but only 15 (35%) showed ECOG 2–4.
Conclusions: As seen in the literature, $> 80\%$ of older cancer patients are frail/prefrail, but only the 60% received GA. Physicians are more conservative in rating frailty than a systematic GA. ECOG is not a specific tool to determine frailty. It is necessary to implement tools like the G8 frailty screening tool in the clinical practice to identify frail patients.

P-735

Do enhanced assistive technologies lead to better quality of life in nursing homes? The case of an improved remote monitoring system with interactive communication function

Abstract Area: Gerotechnology

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Introduction: Do assistive technologies (AT) enhance QoL of older people and care professionals in long-term care facilities? We have previously reported on the impact of using a monitoring system with an infrared camera and communication robots (Obayashi et al. 2020). Further improvements were made to the detection accuracy of the camera, and functionalities for verbal interaction were added. This paper reports on these efforts in nursing homes, and their impact on the ground.
Methods: The study was conducted with 34 older people and 20 care professionals in nursing homes. An infrared sensor and a biosensor were installed on the ceiling of each resident's room. When the camera detects movement by the resident, it notifies the care staff via the mobile terminal. Its detection accuracy was improved against sunlight and physical obstacles. A variety of qualitative and quantitative data (e.g. sleeping patterns and social participation of older people, system usability and staff task analysis) were collected before and after installation. Communication functions were added to the system.
Results: False detection rates of the monitoring camera decreased significantly. Using the improved system for the duration of 34 days, 602 alerts were recorded in total and 430 staff visits to rooms during night shifts were spared. The task analysis revealed that time available for direct caregiving increased (e.g. direct communication: from 2 to 55 min), while indirect care activities decreased. After the introduction of communicative functions, system usability decreased, primarily due to inaudibility. However, the qualitative data support the idea of an interactive system.
Key conclusions: Faced with the challenge of meeting increasing demand for person-centered care under limited resources, there will be a greater need for better integration of improved AT. The study indicates AT's potential for enhancing the quality of care for all. This study was in part supported by the Japan Agency for Medical Research and Development (AMED).
Reference
Obayashi K, Kodate N, Masuyama S. (2020) Can connected technologies improve sleep quality and safety of older adults and caregivers? An evaluation study of sleep monitors and communicative robots at a residential care home in Japan. Technology in Society 62 (2020). https://doi.org/10.1016/j.techsoc.2020.101318

P-736

Home telemonitoring in smart rurality: results from the HIS2R INTER-REG feasibility study

Abstract Area: Gerotechnology

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Introduction: Health in Smart Rurality Inter-Reg project is aimed to assess feasibility of telemonitoring in a rural area across the Belgo-French border among patients affected by heart failure or chronic obstructive pulmonary disease. Objectives were to better understand strengths or barriers in implementing telemonitoring for the detection of potential adverse events, in improving quality of life, communication and coordination of care.
Methods: Using a prospective 6-months observational design, interconnected pads were provided to community-dwelling adults aged over 60 years. The device monitored daily body weight, temperature, cardiac rate, blood pressure and oxygen saturation. Using a decision-algorithm with predefined warning thresholds, data were reviewed by a case-manager who also provided therapeutic education during their contact.
Results: Out of 87 eligible and screened patients, 21 (24%) were included in the study. At the end of follow-up, 19 patients (90%) were re-assessed. The rate of hospitalization and mortality was high (32% and 10%, respectively). A total of 644 alerts were recorded (mean of 32 alerts/patients) with a high rate of technically-related alerts (TRA) (26%). Out of the 475 non-TRA, 79% and 1% respectively, have led to an intervention by the case-manager or the physician. Therapeutic adjustment was proposed for 12 patients during that period.
Key conclusions: Telemonitoring appears to be a promising solution for the follow-up of patients away from a medical resources. The contribution of a case-manager provides an added-value in managing alerts, therapeutic education and coaching. Many questions remain open like improving technical aspects and long-term compliance in a real-world setting.

P-737

Text mining in nursing notes for text characteristics associated with in-hospital falls in older adults: a case–control pilot study

Abstract Area: Gerotechnology

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Introduction: Falls are common in hospitalized patients, especially in older adults. Currently, risk assessment tools lack specificity and sensitivity to be clinically useful. Recently it was discovered free text in nursing notes contains valuable information on fall risk factors. We used text mining techniques to search for any text characteristics (not only related to known risk factors) associated with falls.
Methods: In this retrospective case–control pilot study, hospitalized patients aged $\geq$ 70 years who experienced a fall were included using incident reports. Controls were matched for sex, age and length of stay. Data were collected from free text in nursing notes 72 h prior to the fall and for similar hours in controls. Number of words, frequencies of single words and word combinations were calculated and compared between both groups.
Results: 19 fallers and 19 non-fallers were included, with a total of 362 nursing notes. More words were used in nursing notes in fallers in total (10,523 vs 7510, $p < 0.01$) and per nursing note (median 47 vs 34.5, $p < 0.01$). More unique words were used in fallers (2465 vs 1887, $p < 0.01$). 21 words were associated with falling, including words describing fall prevention and delirium. 8 words and 6 combinations of words were associated with not falling.
Conclusions: Text mining in nursing notes can help to find words used more frequently in patients who experienced a fall and is thus a promising method to identify older adults at high risk for a fall.

P-738

Wearable system recording body movement of an older adult

Abstract Area: Gerotechnology

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Introduction: Locomotion is a significant everyday activity that demands an efficient skeletal-muscle system for its proper performance. Condition of mentioned human motion system changes with age, as well as locomotion movement patterns. That is why examining the elderly's locomotion is necessary to understand it and, based on gathered knowledge, propose a proper form of rehabilitation in the case of dysfunctions. For this purpose, we prepared the wearable system monitoring kinematic parameters during locomotion.
Objectives: For this study, a wearable system allowing to record body movement of the elderly was prepared and tested. The main goal was to evaluate its functioning in registering kinematic parameters of the human body during locomotion. The final aim was to use obtained parameters to create body movement computer animations.
Methods: The proposed prototype used inertial measurement unit (IMU) sensors measuring kinematic parameters, such as linear acceleration and angular velocity. Based on them, we calculated the spatial orientation of the examined body. Furthermore, experimental kinematic data were recorded during the exercises and either collected and saved or transferred to a computer in real-time. Finally, we created the animation with the usage of Blender software.
Results: The wearable system obtained data about movement and spatial orientation with demanded accuracy. Collected data was either recorded directly from IMU sensor indications or indirectly through programmed system calculations. In addition, there was a possibility to create movement animation in real-time or based on previously registered kinematic parameters.
Conclusion: The presented wearable system is a device for examining and reconstructing human body movement patterns based on kinematic parameters. Because of IMU sensors, analysis can be obtained in a three-dimensional area. Data collected using the system can help understand the movement patterns of the elderly. Furthermore, computer animation of movement can analyze the elderly's locomotion and develop rehabilitation applications, which patients in their homes could use.

P-739

Factors affecting the favorable perception of telehealth by geriatric patients

Abstract Area: Gerotechnology

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Objective: The aim is to evaluate the view of geriatric patients on telehealth applications and to assess the factors related to positive attitudes towards telehealth.

Methods: We conducted a survey designed to get information about the perception on telehealth. The survey consisted of 10 items about concerns and anticipations of telehealth and responses rated according to a 5-point Likert scale. The total score was divided by 10, the higher the score the worse the perceptions of telehealth. The telehealth perception was compared to the use of technological smart household appliances, use of information technology devices, age, gender, Charlson comorbidity index, total years of internet use, total years of mobile phone use, total years of computer ownership, education level and social media use.

Results: In total 112 patients responded to the survey. The mean age was 75 ± 8 (65–95). Of the participants 57 (50.95%) were women, 44 (39.3%) had high education levels (more than 12 years of education), 34.7% of the participants had low-income levels, and the rest had middle and high-income levels. In the reliability analysis of the survey, Cronbach's α was 0.949. Internal consistency was found to be high. Among the characteristics compared between genders, only the years of internet use were found to be significantly lower in women (Table 1). When participants were divided into 3 groups less than 5 years, 5–12 years, and more than 12 years of education, total years of internet use and computer ownership were increased as the level of education increased (Table 2). However, no correlation was found between survey scores and education level. A negative moderate correlation between the telehealth perception survey scores and the use of technological smart household appliances was found (Spearman r: − 0.490 p = 0.001). A weak but significant negative correlation was found between the telehealth perception survey scores and the use of information technology devices (r: − 0,230 p = 0,01, Table 3) While no significant relationship was found between education level and perception of telehealth, low-income level, and advanced age were found to be associated with poor telehealth perception.

Conclusion: In this survey-based study on perceptions of telehealth among geriatric patients, we found significant associations between positive perception and a high level of technological device use. Telehealth could have a positive impact on health outcomes, could help communicate between patients and doctors, provide remote medical care, and could exhibit time and cost savings. In order to increase the use of telehealth and to develop a more favorable perception of telehealth, providing access to the use of technology as well as education are necessary. Table 1. Characteristics According to Genders Female n = 57 Male n = 55 pTotal years of internet use (mean ± SD) 7 ± 8.2 10.3 ± 8.9, 040 Total years of computer ownership (mean ± SD) 6.6 ± 9.2 8.6 ± 10.3, 466 Total years of mobile phone use (mean ± SD) 16.7 ± 6 18.2 ± 6.3, 103 Use of technological smart household appliances median (IQR) 0.31 (0.21) 0.31 (0.21), 963 Use of information technology devices (median (IQR) 0.28 (0.43) 0.42 (0.29), 226 Telehealth perception survey score median (IQR) 2.3 (1.4) 2.3 (1.4) 0.4 Have a personal e-mail address (%) 45.6% 50.9% 0.57 Social media users (%) 42.1% 45.5% 0.7 Table 2. Comparisons According to Education Level < 5 years of education (n = 27) 5–12 years of education (n = 41) > 12 years of education (n = 44) pUse of technological smart household appliances mean ± SD 0.29 ± 0.10, 29 ± 0.12 0.41 ± 0.17* 0.002 Use of information technology devices (mean ± SD) 0.25 ± 0.18 0.33 ± 0.16 0.51 ± 0.2** < 0.001 Telehealth perception survey score (mean ± SD) 2.2 ± 0.93 2.5 ± 0.96 2.17 ± 0.92 0.08 Charlson Comorbidity Index (median (IQR) 1(1) 1(1) 1(1) 0.25 Age (mean ± SD) 76.9 ± 8.7 74.6 ± 8.3 74.3 ± 7.3 0.45 Total years of internet use mean ± SD 2 ± 3.2*** 7.5 ± 7*** 13.8 ± 9.2*** < 0.001 Total years of computer ownership (mean ± SD) 0.19 ± 0.9*** 5.8 ± 7.9*** 13.8 ± 10.5*** < 0.001 Total years of mobile phone use (mean ± SD) 13.8 ± 6.8 17.1 ± 4.9 20.1 ± 5.8¥ < 0.001*P < 0.001 between group 3 and 1, group 3 and 2. **p < 0.001 between group 3 and 1, group 3 and 2. ***p < 0.001 between group 1 and 2, group 1 and 3, group 2 and 3.¥ p = 0.001 between group 3 and 1, group3 and 2. Table 3. Correlations with Telehealth Perceptions Survey Score. Spearman R pUse of technological smart household appliances—0.490 0.001Use of information technology devices—0.230 0.01 Total years of internet use−0.357 < 0.001Total years of computer ownership −0.305 0.001 Income level—0.276 0.003 Age 0.314 0.001.

P-740

Monitoring falls risk in the community using an implantable cardiac monitor with embedded accelerometer

Abstract Area: Gerotechnology

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Introduction: Among older adults, falls are the most common cause of injury, hospitalisation, functional decline and are associated with increased morbidity and mortality. The holy grail for clinicians would be to predict increased likelihood of falls occurring and intervene before the event. Understanding underlying dynamic biophysiological changes may therefore inform novel predictor models and falls prevention. This study examines activity and cardiac data acquired from an implanted Medtronic Reveal LINQ™ Insertable Cardiac Monitor (ICM) with an embedded tri-axial accelerometer. MethodsThirty participants with at least one unexplained fall in the previous two years were prospectively recruited. All met criteria for ICM insertion following comprehensive assessment. Participants were followed for one year and attended every three-months for cardiac and gait assessment. Information pertaining to activity levels, posture changes and cardiac parameters were collected daily from the device. Results Mean age of participants was 68.0 years (± 9.3). 19/30 (63.3%) were female. 22/30 (73.3%) had at least one cardiovascular condition. There was seasonal variation in activity levels. Twelve participants had falls and cardiovascular, gait and activity variables were examined at the time of a fall to demonstrate biophysiological trends.

Conclusions: Causes of falls are usually multifactorial. A holistic approach is necessary to manage and minimise risk factors. The use of an ICM with an embedded tri-axial accelerometer allows clinicians to formulate an algorithm to determine if a person is at an increased risk of falling based on biophysiological changes. This may create an opportunity for falls to be predicted and prevented.

P-741

Usability of a tablet-based app for rehabilitation patients (70 +) for sustainable improvement of nutrition and physical activity behaviour supervised by nutritionist and physiotherapist: a pilot study

Abstract Area: Gerotechnology

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Introduction: For older adults (≥ 70 years), maintaining new nutrition and physical activity behaviours after rehabilitation to minimize the risk for negative health consequences is often challenging. With the participation of the target group, we developed a nutrition and mobility e-coach (NuMob-e). The contents are individually adaptable by the study team, depending on the stage of behavioural change in the transtheoretical model (TTM). This study evaluated the usability of the NuMob-e-coach in combination with nutritional and physiotherapeutic support, as well as the change in nutritional and physical activity behaviour.
Methodology: Nutritional and physical activity behaviour of rehabilitation patients (≥ 70 years) was compared with age-specific recommendations. To identify their TTM stage they were also asked how long their behaviour has already been practised or whether they had a willingness to change. Initially, they received a tablet with contents of the NuMob-e-coach which were adapted according to the TTM stage at five-time points (T0-T4). Participants used NuMob-e during and after rehabilitation for a total of nine weeks. At the end of the study, the usability (System Usability Scale) was surveyed.
Results: Currently, data from 21 participants (52% female, 79.4 ± 5 years) are available. SUS is 81.2 ± 16 points and corresponds to an "A" on the grading scale (A-F). After nine weeks, 69% (vs. T0: 29%) of participants achieved the nutritional and 63% (vs. T0: 42%) the physical activity recommendations. Final results will be presented at EUGMS 2022.
Conclusion: First results indicate good usability of the NuMob-e-coach in combination with guidance by experts.

P-742

An electronic registry for Older Adults Long-Term Health Trajectories during Covid-19 pandemic: the Gerocovid and Gerovax approach

Abstract Area: Gerotechnology

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Background: On March 2020, Bluecompanion developed a web-based electronic registry in partnership with the Italian Society of Gerontology and Geriatrics (SIGG), to capture long-term clinical trajectories of older persons suffering or at-risk of COVID-19 across geriatrics practices and residential facilities. "Gerocovid Observational" followed 3593 participants in 86 Italian and 3 Norwegian investigational sites.
Objectives: To adapt Gerocovid e-registry, a multidisciplinary geriatric investigational tool, to the different phases of Covid-19 pandemic.
Methods: Bluecompanion's e-Trajectories, is based on a CleanWeb engine (Telemedicine-Technologies, France). Servers are located in the EU, and operations compliant with the European General Data Protection Regulation (GDPR), ISO 9001 certification and FDA CFR 21 part 11. Individual data are anonymized before entry. On-line methodological training and extended technical support was provided. RESULTS:In March 2021 the e-registry was adapted as the eCRF of Gerovax, an Italian Medicines Agency (AIFA) sponsored observational clinical trial led by the Istituto Superiore di Sanità (ISS). "GeroVax" enrolled 3280 vaccinated residents in 73 Italian LTCF, observed for 12 months after the first dose vaccination. Data collection covered the lapse from December 2020 to June 2022. The standardized clinical data capture allowed to test several statistical hypotheses to clarify the influence of initial clinical characteristics over the short and long-term health and vaccination outcomes.
Conclusions: E-Trajctories, a geriatric multidisciplinary web-based e-registry enabled high-quality longitudinal clinical data follow-up in approximately 6000 older persons suffering from multiple comorbidities, living in the community or in LTCF, and to analyse complex health trajectories after COVID-19 vaccination.

P-743

The discrepancy between the rating of the individual health devices and the tablet interface of a technology-rich health system for home use. The ACESO project

Abstract Area: Gerotechnology

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Introduction: Technology-rich personalised health systems are being used in the care for older patients. However the reception of such techniques may limit their use.
Methods: In the Kraków (Poland) centre of the ACESO project, we profiled participants ≥ 60 years of age. After the equipment have been used on at least one occasion, we administered structured and semi-structured questionnaires concerning the ease of use of the components that included sphygmomanometer, thermometer, intelligent toothbrush and the use of a tablet-based interface. Additionally

we tested the perceived improvement of salivation with the use of Salipen® salivation stimulating device.
Results: We recruited 20 participants. The majority of them stated that the use of the devises such as automated sphygmomanometer and thermometer were easy, intuitive and useful (90–95% of responses). The tablet-based interface was intuitive or very intuitive and easy or very easy to use in 50% of responders. The intelligent toothbrush was intuitive to 90% and useful to 95% responders. Twenty-fife of the responders judged the interface as very unintuitive and very uneasy to use. Of 9 persons who tested the Salipen® device, 7 experienced at least some improvement in salivation, and 2 experienced no change.
Key conclusions: The perception of the technology-rich personalised health systems for home use may affect their use. The feedback sessions are needed to ensure the proper design from both the point of view of functionality and the ease of use of such systems and devices.

P-744

Potential barriers to the diffusion of technologies in community-dwelling older people: data from the PRESTIGE study

Abstract Area: Gerotechnology

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Introduction: The use of technologies has great potential to improve the care and assistance of elderly subjects, but many elderly people lack digital literacy and have difficulty using technologies. The aim of this study was to identify the factors associated with low technological use in a large population of community-dwelling older people.
Methods: Study sample: over-65 years subjects, who attended the University of the Third Age in Genoa, Italy. "Low-tech" condition was defined as using up to 2 technologies out of a list of 6 (mobile phone, credit card, personal computer, internet, online shopping, smart TV). We assessed: education level (ISCED), economic difficulties, cognitive function (TYM-test), Social engagement (Lubben Scale), Positive and Negative Affects (PANAS), frailty degree (Selfy-MPI Short Form).
Results: A total of 1354 subjects (mean age = 77.3 ± 7.6 years, range = 56–107 years; females = 55.8%) were enrolled. The "low-tech" subjects (533, 39.4%) were older (79.9 ± 7 vs 73.9 ± 7, $p < 0.001$), more often women (63.8%, $p < 0.001$), with a lower education, greater economic difficulties, a worse social network, worse affectivity, and a higher level of frailty. The logistic binary regression analysis confirmed a significant independent association between the "low-tech" condition and female gender (OR:1.57; CI:1.21–2.03, $p = 0.001$), age (OR:1.09; CI:1.07–1.11, $p < 0.001$), low education (OR:3.22; CI:1.93–5.38, $p < 0.001$), Tym-test (OR:0.93; CI:0.91–0.96, $p < 0.001$), and Selfy-MPI-SF (OR:1.14; CI:1.03–1.27, $p = 0.015$).
Key conclusions: Older people are at risk of digital exclusion, which potentially exacerbates health inequalities. Digital health system designers should take into account the age-related functional and cognitive decline, paying attention to the social vulnerability and multidimensional frailty of many elderly subjects in order to narrow their digital divide and foster their "ageing-in-place".

P-745

A survey of use of information and communication technology (ICT) among older people in institutionalized care

Abstract Area: Gerotechnology

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Introduction: Scientific progress has led not only to the increase in life expectancy, but also to the development of information and communication technology (ICT). These new technologies have seen an exponential use during the COVID-19 pandemic, but not at the same rate in all age ranges. Different problems may cause this grey digital divide, but to our knowledge, there is no evidence of the specific reasons of this divide in the residential environment.
Methods: We have carried out a survey on the use of ICT in a residence of the North of Spain with more than 400 residents in order to know the prevalence of the use of these technologies, the reasons for use or refusal to use them, and the possible factors related to them. First, the screening was performed by the supervisors of each floor and afterwards, an individual interview was carried out by one of the physicians involved in the current study, evaluating demographic variables and the Mini-Mental State Examination. For those who do not use technologies, a randomisation was performed to conduct individual interviews with a small group of people with preserved cognitive functions.
Results and key conclusions: We will show the results of the present study and hope to provide further evidence of the use of ICT in a residential environment so we could facilitate its use for the older population.

P-746

An approach to the knowledge about Silver Economy and Gerontechnology of the members of the Spanish Society of Geriatrics and Gerontology

Abstract Area: Gerotechnology

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Introduction: Since the second half of the twentieth century, the world's population has undergone a remarkable and unprecedented demographic change. The Silver Economy has the potential to stimulate the European Economy as stated by the European Commission in 2018. In that matter, Information and Communications Technology (ICT) and Gerontechnology are the elements that stand out. It is important to work on all the mechanisms at our disposal so that our

society can make the most out of it and welcome older people as drivers of this development.
Aim and methods: The aim of the study is to analyse the knowledge and skills on Silver Economy and Gerontechnology of the members of the Spanish Society of Geriatrics and Gerontology. An online purpose-built survey formed by 22 multiple choice closed-ended questions was designed. Then, a descriptive analysis was carried out to summarise the results. ResultsA sample of 132 people answered the survey. 49.6% and 59.4% did not know what the Silver Economy and Gerontechnology consist of, respectively. 91% believed that the market is not prepared to meet the needs of an ageing society and 86.5% consider that ICT can help a lot or quite a lot to improve the quality of life of older persons.
Key conclusions: The little knowledge about the two evaluated topics contrasts with the belief of their utility and capability to improve the quality of life of older people. These results should encourage scientific societies and experts to create specific programs to fill the gap of knowledge.

P-747

A novel and personalized support in older community dwelling adults: Smart Big Data Platform to Offer Evidence-based Personalised Support for Healthy and Independent Living at Home (SMART BEAR) protocol

Abstract Area: Gerotechnology

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Introduction: While life expectancy increased in Europe, healthy life expectancy remained stable, at almost the retirement age. The majority of older people still live in their private homes. Dependency leads to major personal, societal and financial burdens. Advocating for a successful aging relies on multi-targeted prevention plans, with personalized strategies and patient empowerment.
Methods: The SMARTBEAR project introduces a platform that integrates usage data from heterogeneous sensors, assistive medical and mobile devices to enable the continuous data collection from the everyday life, which in turn are analysed to obtain the evidence needed by clinicians to offer personalised interventions promoting healthy and independent living. This project will be carried out through five large-scale pilots involving 5,000 participants (from 67 to 80 yo) in 6 EU countries (Greece, Italy, France, Spain, Portugal, and Romania). Participants will be included if they have at least 2 of the following conditions: cardiovascular diseases, hearing loss, balance disorders, mild depression, mild cognitive impairment and frailty. Upon consenting to participate, a set of devices will be allocated to each participant based on their 2 medical conditions.
Results: During 12 months, a range of variables will be collected, related to demographics, medical history, subjective symptoms, environmental measurements and medical devices' usage data. The analysis of these data, using the Missing Not At Random methods, and driven by high level big data analytics and decision models, will generate the evidence to support the healthy and independent living. A small scale of participants (N = 61) in Madeira (Portugal) have already demonstrated the study concept and feasibility.
Conclusion: To our best knowledge, SMART BEAR is the first large scale project aiming to change the narrative from treatment to prevention. Analysis of the collected data shall enable the detailed profiling of each participant and the identification and explanation of particular patterns and factors that correlate with better health and higher quality of life.

P-748

Internet game addiction and related factors in community-dwelling older adults: a cross-sectional survey study

Abstract Area: Gerotechnology

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Objective: Studies on internet game addiction in the elderly are very limited and there is a lack of evidence on internet gaming disorder in this group. The aim of this study is to investigate the factors related to internet game addiction in older adults.
Methods: Patients admitted to the geriatrics outpatient clinic with normal cognitive functions and without depression were interviewed and divided into two groups internet game-addicted and not-addicted. A questionnaire including demographic characteristics, income levels, education levels, marital status, loneliness, general health perception, mental health perception, medical comorbidities, time spent daily on the internet, social media usage, smoking, and alcohol habits was applied. We evaluated factors involved in the internet game addiction disorder.
Results: In total 106 patients were included. There were 24 (22.6%) game-addicted patients and 82 (77.4%) not-addicted patients. The mean age was 74.5 ± 7,7. Among participants, 50.9% (54) were women, 25.5% (27) had type 2 diabetes, 52.8% (56) had hypertension. In univariate analysis participants with game-addiction were significantly found to be younger (70.5 ± 6.2 vs.75.7 ± 7.7 $p = 0.03$), high-educated (> 12 years of education) (70.8% vs. 31.7%, $p = 0.001$), had higher income levels (50% vs. 18.3% $p = 0.002$). The proportion of individuals spending more than 2 h/day on the internet was significantly higher in the game-addicted group (79.2% vs. 18.3% $p < 0.001$) Individuals with addiction had higher social media usage (83.3% vs. 32.9% $p < 0.001$) and were watching online series on digital platforms such as Netflix at higher

rates ((33.8% vs. 6.1% $p < 0.001$). As an indicator of impulsive behavior disorder and susceptibility to addiction, smoking and alcohol use were found to be higher in those with game addiction (70.8% vs 42.7% $p = 0.01$ and 41.7% vs. 7.3% $p < 0.001$ respectively).
Conclusion: In older adults with normal cognitive functions and without depression, the significant predictors of internet game addiction were younger age, male gender, higher income levels, higher education levels, and social media usage. There was a positive relationship between smoking and alcohol habits and game addiction. Since internet game addiction is associated with a high socioeconomic level, it may not have as harmful effects as expected. Internet gaming can even be beneficial for older adults if other co-existing impulse control disorders (such as smoking and alcohol) can be controlled.

P-749

Lung ultrasound vs. chest x-ray in the elderly patient with heart failure

Abstract Area: Gerotechnology

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Introduction: Study to compare patients with heart failure (CHF) who were diagnosed exclusively by clinical examination with those who were diagnosed by ultrasound or ultrasound and radiography.
Methods: Descriptive study of patients admitted to Acute Care Unit with a clinical diagnosis of CHF. Sociodemographic variables, cognitive and functional impairment by Red Cross scale (RCS), Barthel Index (BI), obesity and COPD diagnosis were analyzed. Chest X-ray findings and lung ultrasound (Kerley's B line) performed by a geriatrician (with 70 teaching hours, 20 h practical) were compared. SPSS Statistics V26.
Results: 55 patients, 51% women, 87 years (± 12). CRF 2.25 (± 1.9), BI 59.2 (± 38.7), CRM 1.6 (± 1.7); 54.5% were from home. 27% COPD and 16% obesity. When comparing the patients who were diagnosed with CHF exclusively by clinical findings with those who had ultrasound and/or radiographic findings, no statistically significant differences were found in sex, age or baseline situation. Differences were found according to origin: patients from residences, more findings were found on X-ray and ultrasound (68%) than in those from home ($p = 0.037$). Statistically significant differences were also found among patients with COPD, where CXR and ultrasound findings were found in 73% of cases ($p = 0.013$). ConclusionsIn patients coming from residence, CHF was diagnosed by both ultrasound and radiography more frequently than those coming from home. In COPD 73.3% had findings in both tests. The results could indicate a tendency towards greater positivity in pathological tests in patients who are perhaps more pluripathological (institutionalized) or with greater pulmonary involvement (COPD).

P-750

Robots in care for older adults: how does a real-world interaction influence the opinions of older people?

Abstract Area: Gerotechnology

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Introduction: The use of humanoid social robots in certain areas of care for community-dwelling older people is one of the possible solutions to address the problem of the increasing shortage of qualified caregivers. We investigated whether an opportunity to interact with the technological solution to be used influenced the scores given by the respondents in various domains of needs and requirements for social robots to be deployed in care for older individuals.
Methods: Opinions of older people (65 + ; $n = 113$; no severe cognitive impairment), living in six care institutions, about a robot in care for older adults were collected twice using the Users' Needs, Requirements and Abilities Questionnaire (UNRAQ): after being presented with a photo of the robot and again, following a 90–150 min interaction with the TIAGo robot.
Results: Mean total scores for both assistive and social functions were higher after the interaction ($p < 0.05$). A positive correlation was observed between opinion changes in social and assistive functions ($r = 0.4842$; $p = 0.0000$).
Conclusions: In pre-implementation studies and assessments, it is vital to foresee the possibility to interact with the robot to give its future users a clear idea of the technology and facilitate the necessary customisations of the machine.

P-751

Social Robots as a friendly interface for Older Patients participating to Clinical Trials

Abstract Area: Gerotechnology

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Background: We previously evaluated Nao, a small humanoid robot, to administer autoevaluation questionnaires to older adults. The robot starts a conversation, asks questions, waits for answer, interprets the content, and file results. Acceptability was good, with listening comprehension limitations e.g., for local dialects or "low" robotic voice loudness.
Objectives: To test Pepper, a 120-cm humanoid robot (SoftBank Robotics) as a friendly interface for Patient's Reported Outcomes, remotely integrated to a web-based data platform.
Methods: Roessing R&D and Bluecompanion implemented "Scotty", a technology transfer project funded by DIH-HERO (grant n.825003 Horizon2020). The robotic "persona" was a Nurse Aid.

Decreasing HCPs workload in the rehabilitation ward was among expected benefits, aside mitigating patients' perceived isolation during COVID-19 pandemic.
Results: We operationalised the project from March 2021 to May 2022. The "Scotty" character was shaped according to users' requirements. Scotty follows a daily agenda, decided by the HCPs, collects clinical data via vocal interaction with patients, showing graphic examples or getting additional parameters via the tablet. Data are automatically forwarded to the customised e-CRF. Scotty can show preselected physical exercises, reminding patients about physical exercises. A chatbot-led "casual" conversations establishes an initial, friendly interaction.
Conclusions: The implementation of a connected social robot as "HCP-Aid" in a rehabilitation center constitutes an innovative approach. In term of usability, HCPs complained about additional robot-related tasks e.g. the need to accompany Scotty at the patient's bed. Scotty can be a friendly interface to a clinical data platform and can be easily adapted to specialised geriatric infrastructures.

P-752

Burden and family support among family caregivers of older adults living with chronic diseases

Abstract Area: Long-term care

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Introduction: The burden of family caregivers deriving from daily care of older adults with chronic diseases comprises any factor that disrupts their lives and affects their health, work, finances, social life and leisure. The aim of the study was to investigate the relationship between burden and family support in family caregivers of older adults with chronic diseases.
Methods: A cross sectional study was carried out involving 150 family caregivers of older adults with chronic diseases. A questionnaire of socio-demographic and other data was used as well as the Zarit Burden Interview (ZBI) and the Family Support Scale (FSS).
Results: The sample consisted of 150 caregivers, with a mean age of 57 years old and with the majority being women (70.7%), married (48.7%), having a child-parent relationship (43.3%). They recorded high caregiver burden rates (mild to moderate 38.7% and moderate to severe 33.7%). Women reported an increased sense of family support compared to male caregivers (75 ± 19 vs. 29 ± 7, $p = 0.001$). Finally, scores of the ZBI scale were found to be negatively correlated with the scores of FSS scale ($r = -0{,}288$, $p = 0{,}008$) which indicates that carers who received higher levels of family support, were experiencing lower levels of burden. Key conclusions: The negative correlation found between the burden of caregivers and the family support they receive indicates that health professionals ought to take all necessary educative and counselling measures so that caregivers will be able to carry out the difficult and burdensome task of care, receiving their family's support.

P-753

Factors associated with informal caregiver's ability to continue care: A subgroup analysis

Abstract Area: Long-term care

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Introduction: Maintaining informal caregiver's ability to continue care can prevent early institutionalization and decrease healthcare costs, contributing to sustainable healthcare. Most studies focus on determinants of caregiver burden. The purpose of this study is to identify factors associated with informal caregiver's ability to continue care, across several degrees of cognitive decline and risk of burden.
Methods: This is a cross-sectional study that collected nationwide data on frail older people and their informal caregivers living in the community, in Belgium. Instruments used were the InterRAI Home Care, the Zarit Burden Interview (ZBI-12), and an ad hoc economic questionnaire. Multivariable analyses were performed.
Results: A majority of 8309 primary caregivers were able to continue care (68.2%). Primary caregivers of people with mild cognitive impairment also perceived burden (mean ZBI = 12.1). Borderline or mild cognitive impairment were also risk factors (ORs: 0.72, 0.52), showing an inverse relation. Protective factors like social participation of older people, strong family support and availability of a secondary caregiver showed the highest association in subgroups with mild cognitive impairment (ORs: 2.20, 2.08, 1.64) and in subgroups with low level of risk of burden (ORs: 1.91, 2.77, 1.64).
Key conclusions: Even informal caregivers caring for people with mild cognitive impairment perceived burden. Protective factors related to social support and social participation made a greater contribution in subgroups with lower level of cognitive impairment and of risk of burden. Identified factors can provide insights for developing early interventions to help maintain at-risk informal caregiver's ability to continue care.
Key words: Determinants; Ageing; Continuity of informal care.

P-754

Using the VIPS practice model in primary healthcare

Abstract Area: Long-term care

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Introduction: The VIPS practice model (VPM) is a method commonly used for the implementation and use of person-centred care in primary healthcare in Norway.
Methods: Municipality health care leaders and nursing home physicians were eligible for inclusion if their workplace had used the VPM regularly for a minimum of 12 months. Individual interviews were conducted via telephone and analysed with qualitative content analysis.
Results: Twenty respondents were included: 10 leaders and three physicians from nursing homes, six leaders from domestic care or daytime activity centres and one manager of health and care services in the municipality. Two categories emerged; 1: Change in staff's professional reasoning with two sub-categories: (a) an enhanced professional level in discussions, (b) a change in focus from task to

person; and 2: Changes in the clinical work, with three sub-categories: (a) effective interventions, (b) a person-centred work environment and (c) changes in cooperation between stakeholders.
Key conclusions: Regular use of the VPM appeared to change the work culture for the benefit of both service users and staff. Frontline staff felt more supported by colleagues, and they were more focused on the needs of the service users. Improved cooperation between frontline staff, nurses, physicians and next of kin led to care interventions tailored to the needs of the person with dementia, loyalty to care plans and fewer complaints from next of kin. Physicians described more accurate and coordinated information from the staff, and less use of psychotropic medication. The study is published in Dementia 2022.

P-755

CRP Point-of-care Testing To Reduce Antibiotic Prescribing For Lower Respiratory Tract Infections In Nursing Home Residents

Abstract Area: Long-term care

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Introduction: Differentiating serious from less serious lower respiratory tract infections (LRTI) is complicated in nursing home (NH) residents, for example due to atypical clinical presentation and limited on-site availability of diagnostic resources. This results in antibiotic overprescribing and, in turn, contributes to the development of antimicrobial resistance. The aim of this study was to evaluate whether C-reactive protein (CRP) point-of-care testing (POCT) leads to a safe reduction in antibiotic prescribing for NH residents with suspected LRTI.
Methods: A cluster randomized controlled trial (cRCT) was conducted in 11 Dutch NHs. Intervention group NHs had access to CRP POCT, control group NHs provided care as usual. The primary outcome measure was antibiotic prescribing at initial consultation, secondary outcomes measures included recovery, hospitalization and mortality. A process evaluation was conducted alongside the RCT based on a variety of data sources, including questionnaires and focus groups.
Results: A total of 241 participants were included in the cRCT. Antibiotics were prescribed at initial consultation in 53.4% of intervention group and 82.3% of control group patients. Intervention group patients had 4.93 higher odds (95%CI: 1.91–12.73) of not being prescribed antibiotics at initial consultation compared with control group patients. Between-group differences in secondary outcomes were non-significant. The process evaluation revealed barriers and facilitators related to the use and implementation of CRP POCT in the NH setting.
Key conclusions: CRP POCT safely reduced antibiotic prescribing for LRTI, compared with usual care. Process evaluation findings were translated into practical key recommendations for CRP POCT implementation in the NH setting.

P-756

Older adults' psychological well-being promotion in home healthcare

Abstract Area: Long-term care

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Introduction: Psychological well-being is perceived as a protective "shield" of individuals throughout their life trajectory. Achieving and promoting psychological well-being remains a challenge for health professionals caring for the older adult. This review of the literature aims to describe patient-centered interventions that healthcare professionals have been implementing in home healthcare services, in order to promote psychological well-being among the older beneficiaries.
Methods: Recent literature was reviewed in PubMed, Scopus and Google scholar databases, using the keywords: psychological well-being, home healthcare, older adults, nursing interventions.
Results: The review of the literature revealed a variety of interventions. Educational interventions, such as the recognition and enjoyment of positive experiences, therapeutic art activities, interventions to promote physical activity and actions that increase freedom of choice and participation in decision-making in the context of care, are offered to older beneficiaries in the home and community environment. A multidimensional positive interaction is recognized between these kinds of interventions and psychological well-being of community dwelling older people. Positive outcomes such as positive effect on memory, improvement of physical function, increase of social relations and social participation, lower levels of depression and anxiety, less sleep problems and mainly improvement of satisfaction and enjoyment of life are reported.
Key conclusions: Continuous improvement of home healthcare services requires that the involved team members constantly expand and re-adjust their perceptions and beliefs about the type and dynamics of their interventions as well as evaluate and weigh their role in enhancing psychological well-being, in the context of the close two-way professional-beneficiary relationship.

P-757

A case of Myxoedema Coma

Abstract Area: Long-term care

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Introduction: Myxoedema coma is the rare end result of severe hypothyroidism and usually it goes unnoticed until the haemostasis mechanisms are disrupted. We present a case in an 84 year old women with severe hypothyroidism which was precipitated from amiodarone and an infective exacerbation of congestive heart failure (CHF).

Case presentation: The patient was a resident at a high dependency long term facility in Malta. She was a known case of type 2 diabetes mellitus, atrial fibrillation, hypertension and chronic kidney disease. Due to a past ischaemic cerebrovascular accident she was fully dependent, bed bound and had a percutaneous gastrostomy (RIG) tube for feeding. The patient was noted to be lethargic with a core temperature of 34.3 degree Celsius and audible inspiratory crepitations could be heard from the bedside. Due to bradycardia (40–50 bpm) amiodarone was stopped and thyroid function tests were taken. The first impression was of an infective exacerbation of CHF and she was treated accordingly (including rewarming strategies). Her hypothermia was refractory and eventually blood results showed a thyroid stimulating hormone of > 150 micIU/mL (NR: 0.3–3 micIU/Ml) and free thyroxine of 3.98 (NR: 11.9–20.3 pmol/L). Since the patient remained relatively stable and was clinically very frail a low dose of levothyroxine (25 mcg) was started via the RIG tube. This was increased incrementally until her thyroid function normalized. Complications included decompensatory infective CHF and bacteraemia which were treated accordingly.
Key conclusions: This case highlights the risks of myxoedema crisis and how easy such diagnosis can be missed.

P-758

An electronic health record integrated decision tool and supportive interventions to improve antibiotic prescribing for urinary tract infections in nursing homes: a cluster randomized controlled trial

Abstract Area: Long-term care

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Introduction: Antibiotics for urinary tract infection (UTI) are often inappropriately prescribed for nursing home (NH) residents. The objective of this study was to investigate whether an electronic health record -integrated decision tool, combined with supportive interventions, results in more appropriate antibiotic prescribing for UTI, without negative consequences.
Methods: A cluster randomized controlled trial was performed in 16 NHs; the intervention group (N = 10) received the decision tool and supportive interventions, the control group (N = 6) provided care as usual. The primary outcome was appropriate antibiotic prescriptions for suspected UTI. Secondary outcomes were complications, UTI-related hospitalization and mortality; and pre-post study changes in antibiotic prescribing at the NH level. Parallel to this trial, a process evaluation was conducted using semi-structured interviews with and questionnaires among health care professionals.
Results: In total, 295 suspected UTIs were included. The between-group difference in appropriate antibiotic prescribing was 13% (intervention group: 62%, control group: 49%; adjusted odds ratio (OR) 1.43, 95% CI 0.57–3.62). Complications, hospitalization, and mortality were rare. The pre-post study difference in antibiotic prescriptions per 1000 care days was − 0.95 in the intervention group and −0.05 in the control group (P = 0.02). The process evaluation identified a variety of barriers and facilitators for implementation.
Conclusion: Although appropriate antibiotic prescribing improved in the intervention group, sufficient evidence for our intervention was not provided. However, given the large reduction in total antibiotic prescribing in the intervention group, our intervention could potentially be effective. Process evaluation findings can be used to optimize the intervention and facilitate implementation.

P-759

Exploring resident experiences of person-centred care at mealtimes in long-term residential care: a rapid ethnography

Abstract Area: Long-term care

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Introduction: Poor nutrition is a common ongoing problem in long-term residential care, often resulting in reduced quality of life. It has been concluded that the content of the meal, dining environment, service style and general atmosphere all add to the mealtime experience, suggesting that person-centred mealtimes are optimal. However, knowledge about which elements of person-centred care can be achieved in a mealtime setting in a given context is currently lacking. We aimed to understand the mealtime experience in long-term residential care by exploring (missed) opportunities for person-centred care in different settings.
Methods: As part of the TRANS-SENIOR research network, rapid ethnographic case studies (including interviews, observations and informal conversations) were conducted in a long-term residential care home in the UK, Switzerland and the Netherlands between October 2020 and October 2021.
Results: The following themes occurred where either successfully achieved or missed opportunities for person-centred moments were observed: (1) considering the Broader Context (2) listening to and implementing resident choice (3) enabling residents to help/care for themselves and others (4) knowing the person in the past and present (5) providing individualised care in a communal setting. Resident experiences of mealtimes included possibilities for participatory choice, interaction, independence and dignity, but these are often missed due to organisational or policy constraints.
Key conclusions: There are opportunities for person-centred moments during the mealtime experience, some of which are taken and some missed. This largely depended on the setting observed and the level of resident involvement in mealtimes, from preparation to the actual activity.

P-760

Bridging the gap between science and care: the role of the Scientific Linking Pin in research and practice partnership models

Abstract Area: Long-term care

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Background: The Living Lab in Ageing and Long-Term Care (Maastricht, Netherlands) and NICHE-Leeds (Leeds, UK) are partnerships where academia and long-term care (LTC) providers work together to improve the quality of life, care and work in LTC. A key component of the partnership model is the Scientific Linking Pin (SLP): a senior researcher from the academic institute working one day per week for an LTC organisation in the partnership. The SLP is considered a key role, influencing the success of the model. However, as the nature of the SLP role has not yet been captured in the evidence domain, this is the objective of this study.
Methods: In 2021 semi-structured interviews were carried out with both current and former SLPs at Maastricht University or the University of Leeds. Data were analysed using thematic analysis.
Results: The majority of the 15 participating SLPs perceived their role positively: getting a closer connection with LTC practice, leading to enriched research and teaching activities and professional growth. SLPs described goals of their role, including relationship building with LTC staff, identifying research priorities in the LTC organisations, co-developing research projects, translating and disseminating evidence and building links across the partnership. Barriers experienced in the role included building trust and engagement, rapidly changing priorities in the LTC organisations and managing mutual expectations.
Conclusion: As the partnership model is being replicated around the world, our insights into the SLP role will help science and practice communities working on developing and embedding research in LTC.

P-761

Interprofessional collaboration in long-term care: a qualitative study

Abstract Area: Long-term care

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Introduction: Multidisciplinary knowledge and appropriate interprofessional collaboration (IPC) in long-term care (LTC) are necessary to be able to provide good care for the increasing older population with their complex care needs due to multimorbidity. However, IPC can be challenging. Using standard patient outcomes measures during team meetings may facilitate IPC while also improving the quality of care.
Objectives: 1) To examine experienced facilitators of and barriers to IPC in LTC, and 2) To investigate the use of patient outcome measures during team meetings. Methods Qualitative study using focus groups and interviews with 1) physicians and therapists, 2) nurses and healthcare aides, 3) managers, 4) patients, and 5) family caregivers in LTC. The focus groups and interviews were audio-recorded and transcribed verbatim. Data were coded and analyzed using thematical analysis. The data collection is still ongoing.
Results: The preliminary results show that the experienced facilitators of and barriers to IPC in LTC could be grouped in the themes: team performance (e.g., unfamiliarity with others' expertise, not knowing team members), sharing information (e.g., poor communication, not listening), and organizational conditions (e.g., insufficient time to meet others, a high turnover of staff). Besides, using patient outcome measures during team meetings in LTC is not the standard. Conclusion With this study, we will provide a better comprehension of IPC in LTC. The identified facilitators and barriers provide can be used to enhance IPC and thereby increase the quality of care for older people.

P-762

Systematic development of implementation strategies tailored for transitional care innovations (TCIs): a practical guide

Abstract Area: Long-term care

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Introduction: Numerous TCIs were implemented aiming to optimize care continuity for older persons when transferring between care settings. Although the implementation of TCIs is influenced by contextual factors, the use of implementation strategies remains lacking. To improve the implementation of TCIs, this study developed a guide of tailored strategies.
Methods: As part of the TRANS-SENIOR research network, a four steps approach informed by Implementation Mapping was applied to develop implementation strategies. Building on findings of previous studies, existing TCIs and factors influencing their implementation were identified. A combination of four taxonomies of change methods and relevant evidence on their effectiveness were used to select the implementation strategies belonging with each of the relevant factors. Subsequently, consultations with scientific experts and healthcare professionals were performed for further refinements of these strategies.
Results: 20 TCIs were identified and 12 influencing factors (mapped to the Consolidated Framework for Implementation Research) were determined as priority to address with implementation strategies. The majority of the selected strategies were at the organizational/environmental level such as structural redesign, advocacy & lobbying, obtaining formal commitments, changing staffing models, conducting local consensus discussions, and local opinion leaders. Fewer strategies were at the level of individual professionals, for example: active learning, belief selection, and shifting perspective. Within the guide, each strategy was operationalized into practical applications.
Key conclusions: This novel guide of implementation strategies provides a practical way to enhance the implementation of TCIs. Such work is critical to advance the use of implementation science methods in transitional care.

P-763

The cognition and implementation willingness of nurses in discharge planning linking long-term care (LTC)

Abstract Area: Long-term care

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Introduction: "Discharge planning linking long-term care (LTC) 2.0" was executed in Taiwan 2017. Patients can receive discharge

planning earlier and are transferred to LTC during hospitalized. Therefore, the cognition and willingness of nurses in acute units will affect the quality of LTC. This study was exploring the cognition and implementation willingness of nurses in discharge planning linking LTC 2.0.

Methods: The "Nurses Cognition and Implementation Willingness Scale for Discharge Planning" includes four sections: basic characteristics, cognition, implementation willingness, and willingness to receive LTC2.0 education. A total of 126 questionnaires were collected at a hospital in central of Taiwan 2019. Results:This study showed that nurses have a relatively lower score with cognition (mean: 3.98) of the "Nurses Cognition and Implementation Willingness Scale for Discharge Planning". However willing to receive LTC education (mean: 4.02) and implementation willingness (mean: 4.08) are higher with scores.

Conclusions: To strengthen the bridge between discharge planning and LTC 2.0 in the hospital, LTC education and training should be a compulsory program for nurses in acute units. This study provided the reference for discharge planning linking LTC 2.0 based on the cognition, implementation needs, and willingness of nurses in acute unit's states.

Keyword: Discharge planning, Long-term care,Implementation Willingness

P-764

A study focusing on lower limb ulceration in patient's older than 65 years residing in long term care facilities

Abstract Area: Long-term care

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As the population continues to age, the occurence and management of lower limb ulceration remains prevelant as it causes significant morbidity and mortality along with increased healthcare costs. We aimed to carry out this study as a result of the lack of guidelines in the diagnosis and management for this condition. Our selection criteria consisted of patients aged older than 65 years residing in a long term care facility who had active or healed ulceration over the past 6 months. The data collected took into consideration patient and wound demographics along with existing co-morbidities during the stipulated time period. Our results showed a positive correlation between the presence of multiple ulcers and increasing patient age, clinical frailty and dementia syndrome; all of which were statistically significant. We also observed a negative correlation betweenthe presence of multiple ulcers and the barthel score—in keeping with an increased level of dependance therefore a lower barthel score. This result was also statistically significant. Despite the patient's and their wounds being treated and managed appropriately in this healthcare setting, the documentation of wound-care and specialist reviews proved difficult to locate in the patient's documentation. With these results we plan to introduce a booklet which allows the multi-disciplinary team involved in these patient's care to locate vital patient information which would facilitate wound care assessment and follow-up.

P-765

Adding life to years: association between the will to live and survival among nursing home residents in Switzerland

Abstract Area: Long-term care

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Introduction: To better understand geriatric palliative challenges, it is essential to consider both objective indicators, such as survival, as well as patients' subjective experiences. This is especially true for nursing home residents, who experience a progressive loss of autonomy. In this setting, the will to live (WTL) is a strong marker of older residents' subjective experience; however, we do not know whether the WTL is related to survival. This study aimed to explore the association between the WTL and survival among nursing home residents.

Methods: We assessed the WTL among residents of five nursing homes in Switzerland using a single-item numerical rating scale ranging from 0 to 10. One year later, we contacted the nursing homes to obtain survival information. The survival of residents with a low to moderate WTL (scores of 0 to 7) was compared with that of residents with a strong WTL (scores of 8 to 10) using a Kaplan–Meier estimator, which was followed by Cox regressions.

Results: Among 103 participants (mean age 87.3 years, 78.0% women), 68.0% had a strong WTL, and 26.2% had died within the year. Residents with a strong WTL exhibited higher survival rates (76.8% vs. 69.7%). Despite a clear trend, the finding was not statistically significant ($HR = 0.68$, $p = 0.32$). Regression analyses ruled out confounding factors.

Key conclusions: These are the first data exploring the link between the WTL and survival. A lack of statistical power necessitates further exploration. WTL's intensity may influence residents' resilience or life-sustaining treatment decisions.

P-766

Self-support care and social relation in long-term care

Abstract Area: Long-term care

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Introduction: Elderly is growing and results to live in the long-term care (LTC) and then losing of self-support care due to the routine of the facilities in Taiwan, also resulted to losing of those people with social relation, therefore, the self-support care for those people to experience social relation is an essential.

Methods: This study was recruited samples of a LTC in the central of Taiwan. There was a following research on the self-support care

group with 20 samples collected and routine care group with 20 samples. A structured questionnaire as the Social Relation Dimension, as data collection included demographic information and the dimensions of social relation. Data analysis used SPSS 22.0 for Window 2000 to report the finding. ResultsThe Social Relation Dimension for Taiwanese is a Chinese version of the containing 3 items. The result of t-test analysis found that social relation showed a significant difference between groups ($p < 0.05$), the result recommended that there was a higher scores of social relation dimension on the self-support care group (10.10 ± 2.22) comparing with the routine care group (7.35 ± 2.53).
Key conclusion: This study showed that the self-support care group was higher than the routine care group on the social relation dimension for Taiwanese elderly living in the LTC. The results can also provide the reference for LTC, to encourage those people to participate in self-support care in LTC, and therefore also improving their social relation.

P-767

Transitional care within an integrated care project in Belgium: experiences and perceptions of stakeholders

Abstract Area: Long-term care

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Introduction: In 2015, a plan for integrated care was launched by the Belgium government that resulted in the implementation of 12 integrated care pilot project across Belgium. The pilot project Zorgzaam Leuven consists of a multidisciplinary local consortium aiming to bring long-term change towards integrated care for the region of Leuven, Belgium. This study aims to explore experiences and perceptions of stakeholders involved in four transitional care actions that are part of Zorgzaam Leuven.
Methods: Four actions with a focus on improving transitional care were selected and stakeholders involved in those actions were identified using the snow-ball method. Semi-structured interviews were conducted and inductive thematic analysis was performed.
Results: Fourteen interviews were conducted. Professionals appreciated to be involved in the decision making early onwards either by proposing own initiatives or by providing their input in shaping actions. Moreover, improved team spirit and community feeling with other HCPs was described that reduced barriers of communication and thus benefitted both patients and professionals. The actions provided supportive tools and various learning opportunities that participants acknowledged. Technical shortcomings (e.g. integrated patient records) and key challenges (e.g. financial and political support) were identified that impeded long-term planning of actions.
Key conclusion: The pilot project Zorgzaam Leuven triggered professional motivation and supported the development of collaborative multidisciplinary care networks at the local level, which are crucial to successfully improve transitional care for vulnerable patients.

P-768

Transitional care decision-making: experiences of senior citizens and informal caregivers

Abstract Area: Long-term care

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Background: Senior citizens, with multifaceted care needs, often require treatment and care across settings. However, transitional care is often poorly managed and senior citizens and their informal caregivers experience a low level of involvement in Transitional Care Decision-Making.
Objective: To explore senior citizens' and informal caregivers' experiences with, views on, and needs for empowerment in transitional care decision-making in the context of Flanders, Belgium.
Methods: A qualitative descriptive study, using semi-structured interviews with persons involved in recent care transitions was conducted in both homecare settings and nursing homes. Participants—A total of 14 senior citizens and 15 informal caregivers participated in this study.Preliminary results—Participants' involvement in transitional care decision-making varied from full autonomy to relying on others. Feelings of powerlessness, the burden of responsibility, and trust in healthcare providers were central themes from the interview data. In addition, a need for more family and professional support and a need for more information stood out from the data. Several external factors influenced the participants' experiences, being the acuteness of the transfer, the transition destination, having a preview of the transition experience, participants' personalities, and the COVID-19 pandemic.
Conclusions: Senior citizens' and informal caregivers' preferences for involvement in Transitional Care Decision-Making vary and are affected by both intrinsic and extrinsic factors. They often struggle with the decision-making process, and needs for support and clear information are vital. We recommend focusing on holistic strategies for the empowerment of senior citizens and informal caregivers in Transitional Care Decision-Making.

P-769

Development of scale on nursing service to discharge from hospital

Abstract Area: Long-term care

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Introduction: The needs of elderly discharge from hospital, nursing service is including education and resources to provide quality of care (QOC). It is an important to care about the nursing service and elderly discharge from hospital in Taiwan. Especially, the nursing service stills a need related to further understand how important association with elderly discharge form hospital. The purpose of this research is to develop a suitable scale to "Nursing Service to Discharge from

Hospital".MethodsThe development of scale with education and resources strategies of the "Nursing Service to Discharge from Hospital" that phased in the clinical action, and then reviews it after implementation. Reflect and revise, and hope that the "Nursing Service to Discharge from Hospital" will suitable for elderly. The research designs to recruit five experts, including professional backgrounds with the medicine, nursing, social worker, psychologist and rehabilitator. To discussion and mark the scores to assess "Nursing Service to Discharge from Hospital" and the expert validity is presented as content validity index (CVI), and is expect to set at above 0.85. The measurement scale is structured questionnaire, including basic data and the scale to education and resources promotion, to collect and analyze of the nursing service to discharge from hospital with participants. It is hoped that the findings from this study can be used as the basis for providing QOC.
Results: The scale is designed and developed for the discharge from hospital promotion program at the current stage. This study assumes that the program is to help with understanding how nursing service association with elderly discharge from hospital, and the research is still processing as well.
Key conclusion: The research results will provide reference with development scale of nursing service to elderly discharge from hospital and to understand using the scale to assess with the discharge from hospital promotion program and then therefore to improve of QOC.

P-770

Patient and clinician experiences of a geriatric medicine telemedicine outpatient service; a qualitative survey

Abstract Area: Long-term care

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Introduction: Implementation of Telemedicine clinics became necessary during the COVID19 pandemic. Many hospital clinicians were previously unfamiliar with this, however the system is likely to endure. The aim of this study was to 1) better understand how we use our Geriatric Medicine Telemedicine service (GMTS) and 2) understand patient and clinician perceptions.
Methods: Outpatient data was collected over a 2.5 month period, using the Trust's Reporting Business Intelligence Tool. Clinician and patient surveys were designed to evaluate experiences and opinions of the GMTS. Surveys were sent electronically to all clinicians conducting outpatient appointments. Telemedicine patients from a 2 week period were identified retrospectively and completed surveys by telephone.
Results: There were 789 outpatient attendances between 1/8/21 and 13/10/21. 220 were Telemedicine; 190 follow-up and 30 new. All patients providing feedback ($n = 18$) attended audio-only appointments. 100% were satisfied with their care, however 39% would have preferred a face-to-face appointment. Common themes emerged: the benefit of avoiding transport/parking issues, preference for face-to-face review should new problems arise. Clinicians surveyed ($n = 15$) performed audio-only appointments. 3 additionally used video technology. 87% felt Telemedicine was inappropriate for new patients, but 66% felt it was appropriate for follow-up. Challenges identified included making an initial assessment, cognitive/hearing impairment, gaining collateral history. The positive effect on patient experience was acknowledged.
Conclusions: Telemedicine has become routine in outpatient Geriatric Medicine. Its remote nature provides advantages for our patient demographic; however, Telemedicine is likely only beneficial for a specific subset. Further work is needed to ensure patients are selected appropriately.

P-771

Research about the quality of life related with health and the overload perceived by the carer of the geriatric patient

Abstract Area: Long-term care

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Introduction: In Spain, the main difficulty in terms of care for the elderly is the care of those who are more dependent old people. This care mostly taken care of by relatives who can suffer overload and can have an impact on the patient's life.
Methods: Quantitative research, descriptive, transversal of analitic cut. Population in the research: dependent patients, > 75 years old who have been admitted to a hospital. Excluded GDS patients > 4, institutionalized and with 24 h care. SAMPLE50 patients-carers: demographic variables are collected also health condition, Barthel, quality of life (euroQol-SD) and carer overload (Zarit). Data analisis: descriptive statistics of variables relative to the patient and carer. The relationship between the quality of life, the functional condition of the patient and the overload of the carer has been evaluated through the coefficient of correlation of person stratifying for the sociodemographic variable. Alpha error of 0.05 for the confidence intervals.
Results: The middle age of patients 83.9, 52.63% woman and 47.38% man: Charlson 3.18, Barthel 59.2. Mean life quality of patients of 0.473 and a perception of quality of life related to health of 55.5 (10,0,100) carers: 57% coexist, women 60.5% with medium age 59.3, care time 58 months. Overload 17.2 (7.00, 33.00).
Conclusions: A negative correlation exists between the overload of the carer and life's patient quality, so a worst quality of life is associated with a bigger overload of the carer, but it cannot be assumed that one is a consequence of the other.

P-772

Prevalence of frailty, sarcopenia and risk of falling in Portuguese Nursing Homes

Abstract Area: Long-term care

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Introduction: Frailty, sarcopenia and the risk of falling, syndromes in which muscle deficit is a common determinant, are among the main concerns in the care of the geriatric population. Although the

relevance of these syndromes is widely recognized, their prevalence in nursing homes has not yet been properly established. The low frequency of screening, lack of a consensual diagnostic tool as well as the rapid ageing of the population constitute difficulties in determining the prevalence.
Methods: Musculoskeletal, functional and clinical data were collected from 126 portuguese nursing home residents aged $\geq$ 61 years (87 $\pm$ 7 years). Frailty, sarcopenia and risk of falling were evaluated according to Fried's criteria, the EWGSWOP2019 algorithm including the assessment of muscle mass by bio impedance, and with Short Performance Physical Battery (SPPB), respectively. Physical functioning was also assessed using the Barthel scale.
Results: The prevalence of frailty and pre-frailty was 64% and 35%, respectively, totaling 99%. Decreased handgrip strength was evidenced by 89% of the participants, despite the lower prevalence of low muscle mass (35%). The risk of falling was increased in 93% of participants and poor physical performance was found in 91% of participants. Mean prescribed medication and anticholinergic burden scale were 8.7 $\pm$ 3.5 and 2.53 $\pm$ 1.88, respectively.
Conclusions: Except for muscle mass, the prevalence of frailty/pre-frailty, dynapenia and risk of falling were observed in $\sim$ 90% or more of the participants. These observations call for urgent strategies to reverse these geriatric syndromes and promote daily functional competence.

P-773

Importance of financial and organizational aspects affecting care transitions in long-term care systems: a qualitative study

Abstract Area: Long-term care

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Introduction: Care transitions are vulnerable exchange points for older adults. Currently, a high proportion of care transitions is fragmented and/or suboptimal. Providers work in silos and financing often focuses on care in specific settings only. Thus, addressing organizational and financial aspects is essential for good quality care transitions. The aim of this study was to identify and explore the differences in organizational and financial aspects that affect the care transition of older adults in long-term care systems in Germany, the Netherlands, and Poland.
Methods: Twenty-two respondents from three countries—Germany, the Netherlands, and Poland took part in semi-structured expert interviews, followed by a questionnaire. Among respondents were providers from long-term care (7), hospitals (6), primary care (5), and payers/insurers (4). This study was performed as part of the European TRANS-SENIOR project.
Results: We observed noticeable disparities between the countries regarding organization and financing of care transition in long-term care systems (e.g. long-term care infrastructure). Nonetheless, nearly all country experts agree that good communication and transfer of information are essential components for optimized care transition. When it comes to financial aspects, country experts seem to agree that the role of the reimbursement mechanism is more important than rewards and penalties.
Key conclusion: Despite the differences in terms of organization and financing of care transitions in Germany, the Netherlands, and Poland—we observed that the importance of some organizational and financial aspects seems to be similar in those countries. Addressing some of the organizational and financial aspects may affect the quality of care transition and the direction.

P-774

Anticholinergic burden and risk of falls among nursing home residents

Abstract Area: Long-term care

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Falls in the elderly are associated with increased morbidity and mortality. Falls result from the interaction between multiple factors, many of them modifiable, like polypharmacy. Medications with anticholinergic effects are related to cognitive decline and increased risk of falls. This work aims to assess and promote awareness about the effect of polypharmacy on the occurrence of falls, especially medication with anticholinergic effects.
Methods: A retrospective observational study in three nursing homes, including residents admitted for more than six months. Variables: sex, age, number of falls, Tinetti scale, Anticholinergic Burden Score (ACB), and the number of medications. Statistical analysis was performed with SPSS. Results: 147 residents, 76.9% women. Mean age 86.01 ($\pm$ 7.68 SD) years. The average number of medications was 9.03 ($\pm$ 3.30 SD). ACB with median 3 (SD $\pm$ 2.06). 54 residents had at least one fall in the last six months. In the group of residents with at least one fall, there was a higher number of medications (9.4 vs 8.8, $p = 0.294$) and a higher ACB (4.04 vs 2.57, $p < 0.05$). We also found that most users had a Moderate/High Tinetti (96.3% in users who had fallen, 83.9% in those who did not, $p = 0.03$).
Conclusions: Preventing falls presents a challenge. Polypharmacy, and more specifically medication with anticholinergic effects, should be a focus of attention. In the analyzed sample, the ACB was statistically higher ($p < 0.05$) in the group that had fallen in the last six months. In addition, the use of scales such as the Tinetti scale should be used to identify those at greater risk of falling.

P-775

The oblivion of apathy in nursing home's daily practice; a qualitative study

Abstract Area: Long-term care

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Background: In patients with severe dementia, apathy has a high prevalence and persistence. Earlier research has shown associations with mortality, poorer wellbeing and caregiver stress. Treatment

options are limited. This study aims to get insights in perspectives and attitudes of (para)medical nursing home staff on apathy in nursing home residents with dementia.
Method: We did a qualitative interview study with (para)medical nursing home staff, with direct content analysis as theoretical framework. In the first interviews, themes were based on recognition, burden, etiology and treatment. Additional interviews were done with focus on the daily institutional care practice of apathy until data saturation was reached (n = 16).
Result(Para): Medical nursing home staff estimated the burden of a resident with dementia and apathy as low or not interpretable. 'In case of apathy, the problem is mainly in the person himself and not in the environment, and you often have requests for help from the environment'. 'What is the treatment goal for apathetic behavior? What problem do you want to treat? That I don't know exactly'. With limited (non-) pharmacological treatment options, the threshold to recognize and treat a resident with apathy is inconclusive.
Conclusion: Since the burden of a nursing home resident with apathy is under discussion, thresholds to treat apathy are inconclusive and the necessity for recognition low. For nursing home staff, this process fades the residents with dementia and apathy into oblivion. To break this circle, research about the burden of apathy in nursing home residents with dementia is needed first.

P-776

Identifying pressure injury risk factors in long-term care facilities

Abstract Area: Long-term care

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Background: Pressure injuries (PIs) typically occur in individuals with limited mobility and lead to increased morbidity, hospitalization rates, and mortality, and decreased quality of life.. This study seeks to identify long-term care (LTC) facility-level characteristics associated with increased incidence of pressure injuries.
Methods: Data on 13,754 LTCs in 49 US states from LTC Focus data was analyzed. The impact of facility-level characteristics on PI incidence and facility-level PI risk were estimated by regression models. Facility characteristics included patient demographics and indicators of patient medical conditions. ResultsThe PI incidence model showed that increases in bowel incontinent residents ($\beta = 0.002$), African American residents ($\beta = 0.047$), rehospitalizations ($\beta = 0.825$), and for-profit status ($\beta = 0.040$), were significantly associated with increased pressure injury incidence ($p < 0.05$). The facility-level PI risk model showed that increases in bowel incontinent residents (OR: 1.016), and African American residents (OR: 1.131) were significantly associated with being a "high risk" facility, (facilities in the highest quartile of PI incidence) while increases in bladder incontinent residents (OR: 0.238), and Hispanic (OR: 0.852) and White residents (OR: 0.723) decreased the likelihood of being a high-risk facility ($p < 0.05$).
Conclusions: This study identifies facility-level risk factors that allow clinicians to identify potential disparities in care and facilities that may benefit from increased pressure injury interventions, such those with high percentages of residents who are bowel incontinent. Future research should examine the impact of pressure injury prevention and treatment activities, including nutrition interventions, in reducing pressure injury incidence and healing times in LTC facilities.

P-777

Recognising and responding to acute deterioration in care homes: a scoping review

Abstract Area: Long-term care

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Background: Older people in care homes have complex healthcare needs, multiple co-morbidities, sarcopenia, frailty and an ageing immune system. Consequently, care home residents are at high risk of experiencing acute deterioration (AD)—a sudden decompensation of an individual's physiological and/or mental status caused by acute illness, or exacerbation of a long-term condition. It is potentially avoidable and treatable if recognised and responded to early.
Objectives: To identify published primary research and grey literature including policies, guidelines, and protocols regarding how care home workers (CHW) recognise and respond to acute deterioration (AD) in residents.
Methods: A scoping review was completed from January 2019–March 2021 following Joanna Briggs Institute (JBI) scoping review methodology. Literature searches were conducted in the following databases: CINAHL (EBSCOhost), EMCARE (Ovid), MEDLINE (OVID) and HMIC (Ovid). Reference lists of included studies were also reviewed for inclusion. Results: 382 studies were retrieved, of which four studies met the inclusion criteria. All included studies used qualitative methods and were conducted in Australia. Classification and articulation of AD was vague. Responses to AD were relatively consistent and included variations in practice that were influenced by factors including access to external healthcare providers, staffing allocation and care home protocols.
Conclusion: How care home workers recognise and respond to acute deterioration is complex. The review highlights some of the challenges associated with managing AD in care homes and, how internal organisational structures, culture and access to resources influence the management of AD in residents.

P-778

Altered awareness in patients with Korsakoff syndrome living in long-term care facilities; a network analysis

Abstract Area: Long-term care

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Introduction: Korsakoff syndrome (KS) is a neuropsychiatric disorder characterized by cognitive impairments such as global amnesia and executive dysfunctioning. Challenging behavior such as agitation and apathy are highly prevalent in KS. The presence of cognitive impairments and problem behavior often constitutes a reason for institutionalization in specialized long-term care facilities (LTCF), where multidisciplinary care is offered. Recently, it was demonstrated that altered awareness, which can be defined as a reasonable or

realistic perception of one's situation, functioning or performance [1] is highly common in KS patients living in Dutch LTCFs [2]. We believe that altered awareness might be associated with problem behavior and reduced functioning, and in turn poses challenges for good care provision.
Methods: We assessed how altered awareness relates to cognitive, neuropsychiatric, social and physical functioning by applying a network analyses. We used an existing dataset from a retrospective, cross-sectional study of KS patients (N = 169) living in Dutch nursing homes [2].
Results: Altered awareness was a central node in the network. It was directly associated with impaired cognition and reduced social participation, yet also with increased quality of life. Apathy was also a central node and was directly related to altered awareness, while other neuropsychiatric symptoms were indirectly related. Higher apathy scores related directly to impaired cognition, reduced social participation and more physical dependence.
Conclusions: This study sheds new light on the central role that altered awareness plays in the functioning and behavior of patients with KS living in specialized LTCFs.
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P-779

Variability in perceived burden and health trajectories among older caregivers: a population-based study in Sweden

Abstract Area: Long-term care

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Introduction: The extent to which caregivers incur the negative effects of informal caregiving is affected not only by the characteristics of the caregiver-care receiver dyad but also by the context of care. We aimed to identify subgroups of older informal caregivers most susceptible to these consequences.
Methods: We identified older informal caregivers (n = 620, 18.9% at baseline, mean age 69.9 years) in the Swedish longitudinal study on Aging and Care in Kungsholmen (SNAC-K). Limitations to life and perceived burden were self-reported during nurse-led interviews. Health status was assessed using the comprehensive clinical and functional Health Assessment Tool (HAT) score, ranging from 0 to 10. Ordered logistic regression models and linear mixed models were used to estimate the associations between caregiving-related exposures and self-reported or objective health outcomes, respectively.
Results: Having a dual role (providing and receiving care simultaneously), caring for a spouse, living in the same household as the care receiver, and greater intensity of caregiving were significantly associated with more limitations and burden. In addition, having a dual role ($\beta = -0.12$, 95% CI -0.23; -0.02) and caring for a spouse ($\beta = -0.07$, 95% CI -0.14; -0.01) were associated with a faster HAT score decline. Being female and having a poor social network were associated with a marked exacerbation of the health decline linked to caregiving.
Conclusions: Both the heterogeneity among caregivers and the contextual factors influencing the process of caregiving should be accounted for in future studies investigating the potential health impact of informal caregiving.

P-781

Awareness of functional deficits in people with Huntington's disease living in specialized nursing homes

Abstract Area: Long-term care

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Introduction: Deficits in awareness have been observed in people with Huntington's disease (HD). How this relates to the quality of life (QoL) and neuropsychiatric symptoms (NPS) in people with HD living in specialized nursing homes (NHs) is currently unknown. Therefore, we studied awareness of functional deficits in people with HD living in specialized NHs and how this relates to QoL and NPS.
Methods: This cross-sectional study included people with HD living in specialized NHs. The Patient Competency Rating Scale (PCRS) was used to assess the level of awareness of functional deficits. Both patient and formal caregiver gave their rating in order to calculate a discrepancy score. NPS were measured by using the Neuropsychiatric Inventory (NPI) and Depression Intensity Scale Circles (DISCs). The Manchester Short Assessment of Qol was used for measuring QoL.
Results: The PCRS was completed by 48% (84/174) of the residents. Awareness was mildly impaired in 61.9% (n = 52), moderately impaired in 26.2% (n = 22) and severely impaired in 11.9% (n = 10) of the residents. The awareness was associated with QoL ($p < 0.001$) and depression (DISCs) ($p = 0.011$). A higher QoL and less depression occurred more frequently in people with severe impaired awareness. There was no association between awareness and NPI ($p = 0.684$). The missing residents were more often cognitively impaired ($p < 0.001$) and had more functional deficits ($p < 0.001$) compared to the study group.
Key conclusions: Impaired awareness of functional deficits is common among people with HD living in specialized NHs and is associated with depression and QoL, but not with NPS.

P-782

Lean methodology for the review of multidisciplinary and person-centered treatment in nursing home patients

Abstract Area: Long-term care

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Introduction: A person-centred prescription (PCP) approach, based on comprehensive geriatric assessment and review of patient objectives to design a tailored, individualized multidisciplinary intervention, has shown reduction in polypharmacy and potentially inappropriate medication in different healthcare settings. We aim to identify barriers and facilitators of PCP approach implementation to review pharmacological treatments of nursing home (NH) residents.
Methods: First, according to Medical Research Council guidelines, a logic model of the intervention was built. Then, two focus group meetings, including different stakeholders: geriatric unit (GU: family physician, geriatrician, nurse, clinical pharmacist); NH staff and managers; community pharmacist; were performed. Lean methodology was applied through a continuous improvement process cycle (Identify, Understand, Analyse, Improve). Inputs, outputs, resources, activities, and information flows were considered in the analyses.
Results: During the two face-to-face focus-group meetings held (March–April 2022), 20 professionals were involved (GU [n = 6], nursing homes [n = 8], community pharmacy [n = 6]). The barriers to provide medication and pharmaceutical care to patients living in NH were gathered in three main areas: 1) Coordination and communication; 2) Administrative barriers; 3) Issues related to NH facilities. The process map was drawn considering 3 key process points: admission, stay and discharge from NH. Interaction "hot spots" between levels of care were also identified. Finally, a Swin-Lane diagram was framed to understand the admission process.
Key conclusions: Providing medication and pharmaceutical care to people living in NH is a heterogeneous and complex process. Improvements in communication channels and access to information systems for all professionals involved were identified as key challenges.

P-783

Applying a Multidisciplinary Intervention for Drug Adequacy in Nursing Homes (AMIDA Project)

Abstract Area: Long-term care

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Introduction: A person-centred prescription (PCP) approach, based on a comprehensive geriatric assessment (CGA) and a multidisciplinary intervention, has shown improvements in older adults' medication adequacy. We aim to assess the impact of a PCP multidisciplinary intervention on reducing polypharmacy in nursing home (NH) residents.
Methods: A non-randomized pre/post pragmatic clinical trial, including people living in 22 NH was performed. A multidisciplinary team performed systematically the CGA on NH residents. To design an individualized prescription plan a 3-steps standardized methodology including review of patient objectives, diagnoses, and drugs was incorporated into the weekly multidisciplinary meetings. Pre/post intervention prescription patterns were assessed (number of drugs, percentage of polymedicated and hyperpolymedicated patients). A paired sample t-test and and McNemar test were performed. The analysis was also stratified by frailty degree.
Results: Patients included (N = 55, mean age 87.8 (SD 6.26), 96.4% women) had a moderate dependency for activities for daily living (Median Barthel 60.2 [SD 27.6]), and high percentages of frailty (mild-frailty 43.6%, moderate-frailty 40.0%). At baseline median number of drugs was 9.7 (SD 3.1), which increased exponentially with the frailty degree (non-frail: 4.0 drugs/patient; severe-frail: 11.2 drugs/patient). After the intervention, the mean decreased of number of drugs per patient was − 2.69 (CI95% − 3.3 to − 2.1), polymedicated patients decreased 9.0% and hyperpolymedicated 50.9%. Results were also observed in light and moderate-frail participants. Key conclusionsIn our sample, implementation of a multidisciplinary intervention based on PCP has been effective in reducing polypharmacy in NH residents. The benefit seems to be consisted across different frailty degrees.

P-784

Geriatric mobile team for nursing home residents: needs and expectations from medical and nursing staff

Abstract Area: Long-term care

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Introduction: Nursing home (NH) residents have complex healthcare needs due to their multimorbidity and frailty. Continuity of care is often impeded because of lack of interprofessional /interorganizational collaborations and of specialist skills of NH staff. Geriatric mobile teams in NH (GMT) can counteract part of these difficulties. We aimed to identify needs and expectations of care providers for interventions of the GMT in the network of a tertiary care hospital in Belgium.
Methods: This is the first part of a multimethod study which follows the updated MRC framework of complex interventions [1]. We started with a qualitative study with semistructured interviews with general practitioners (GP, n = 5), head nurses of NH (n = 3), directors of NH (n = 4), geriatric liaison nurses (n = 3), and geriatricians (n = 2). The interview guide was informed by a systematic review [2]. Thematic analysis was performed on the collected data and allowed for emergent themes.
Results: Results were divided into five domains. 1) Shared goals: need for a goal-oriented approach, 2) Communication: need for direct

and regular contacts between NH team and GMT and a shared, negotiated care plan; 3) Mutual acquaintanceship and power: clarification between the roles of the different providers, especially of the GPs and the coordinating physicians; 4)Formalisation: procedures regarding call and timely reaction of the GMT; 5) Environmental factors: human and financial resources needed for GMT implementation.
Key conclusions: These results will inform the next steps of the multimethod study, which involves the elaboration, implementation and evaluation of a GMT in NH.

P-785

The merits of professional development in Dutch long-term care facilities for people with dementia and how to facilitate learning

Abstract Area: Long-term care

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Introduction: To improve quality of dementia care, Dutch long-term care (LTC) policy encourages development of care professionals by promoting formal training and learning on the workplace. Organisational learning climates support or hamper care professionals in their development. This study investigates the preconditions and outcomes of a facilitating (formal training) and a safe (workplace-learning from errors) learning climate in LTC facilities for people with dementia.
Methods: Secondary data were utilised of 819 multidisciplinary care professionals (58 LTC facilities) participating in the Living Arrangements for people with Dementia (LAD)-study (5th assessment: April 2019–February 2020). Variables preconditions: development potential, social support, emotional resources, self-steering, transformational leadership, case-load, team size. Variables outcomes: levels of person-centred care delivery, job satisfaction, emotional exhaustion, personal skills, uniformity in vision on care, absence rate. Hierarchical linear model (HLM) analyses were performed.
Results: Regarding preconditions, higher perceived development potential, supervisors with better knowledge of dementia care, and smaller team size were significantly ($p < 0.05$) associated to a facilitating learning climate. Higher levels of social support from supervisors and colleagues, emotional resources, and self-steering were associated to a safe learning climate. Regarding outcomes, a facilitating learning climate was positively associated with higher levels of person-centred care, job satisfaction, personal skills and lower levels of emotional exhaustion of care professionals. A safe learning climate was associated to higher levels of person-centred care, job satisfaction, uniform vision on care, and lower levels of emotional exhaustion.
Key conclusions: Investing in good learning climates, leads to better functioning/well-being in care professionals in dementia LTC.

P-786

Acute cholecystitis as an intercurrent complication during stay in a medium-term care unit

Abstract Area: Long-term care

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Introduction: Cholelithiasis accounts for 90–95% of all causes of acute cholecystitis (AC). The prevalence of cholelithiasis increases with age. The elderly are at high risk to present an episode of AC, and up to 6% of elderly patients will experience severe AC. On the other hand, elderly patients with high comorbidity, dependence and malnutrition are usually admitted to a medium-stay unit (MSU), which increases the risk of suffering intercurrent infections.
Methods: We included 9 patients who were admitted to the medium-term care unit of the Hospital San Juan de Dios during the years 2020/21. Demographic, clinical and functional data were collected.
Results: 55.6% were men, with mean age 79.7 years and mean Barthel Index was 30/100. The usual reason for admission was rehabilitation. The comorbidities were dyslipidemia (55.6%) and diabetes (44%). Sixty-six percent were severely malnourished with a food and water intake of less than 50%. All had unknown lithiasis. AC was diagnosed in most cases in the first five weeks. The diagnosis was suspected (examination and laboratory tests) and was confirmed by ultrasound. Only one case had surgical indication and the rest were treated with antibiotics. Three patients died. In these patients the infection was diagnosed and treated during the first week and all of them presented a syndrome of decline.
Conclusion: AC is one of the differential diagnoses to take into account in an infectious or abdominal pain condition.

P-787

Spontaneous hematomas can be caused by the use of low molecular weight heparin?

Abstract Area: Long-term care

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Introduction: Low molecular weight heparins (LMWH) have demonstrated their efficacy in the prevention and treatment of venous thromboembolic disease. Despite safety data from clinical trials, cases of spinal, retroperitoneal, muscular and cerebral hematomas have been described, especially when used at high doses.
Methods: Four patients admitted to Hospital San Juan de Dios from July 2019 to March 2021 were included. Sociodemographic variables, functional capacity (Barthel index), medical history, drugs and hematoma location were collected.

Results: 75% were women, mean age 89.2 years and dependent (IB: 28.75). The most important medical history were stroke, hypertension, diabetes and dementia. They did not present coagulation alterations or renal impairment. They had been prescribed LMWH with prophylactic doses because three of them underwent surgery for a femoral fracture and one had immobility syndrome. They were not taking drugs that favored bleeding, although two of them were taking serotonin reuptake inhibitors. The hematoma had appeared in three cases on the thigh and one on the abdominal wall. There was no traumatic history or relation with the surgery or with the area of administration of LMWH, but all of them had been receiving it for 30–60 days.
Conclusions: LMWH can favor the appearance of hematomas even at prophylactic doses.

P-788

Fructooligosaccharides (FOS): 30 g FOS to relief constipation without laxatives at long term care facility

Abstract Area: Long-term care

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[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Constipation is widely considered to be a common problem among the elderly, as evidenced by the high rate of laxative use in this group, Chronic use of laxatives in elderly has been associated with numerous complications, including diarrhea, fecal soiling, hypoalbuminemia, and high serum levels of magnesium and phosphorus.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology".All stakeholders were involved and interventions were carried out in three steps. First step was to establish a nutrition management protocol which outlined use of fructooligosaccharides (1st PDSA), Second step to stop all laxatives and refer to dietitian to assess and prescribe liquid fructooligosaccharides, They are received Liquid Fiber with FOS for one Month, first week start with 15 ml daily, on second week and the doses for some patients are increase to 15 ml Twice/day, third and fourth week the dose maintenance and continue same dose. Fluid intake also increases (2nd PDSA), Third step was to monitor bowel motion every shift by using the Bowel Movement using Bristol stool chart assessment stool (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed patients passing stool every day (frequency from 2 to 3 times/day, and type of stool between 3 and 4 as Bristol stool scale) without laxatives administration, also no more gases, fullness, distention and bloating present with patients.
Conclusion: Prevention of constipation in the long-term care facilities is really challenging due to the complexity of the medical conditions. However, this project has shown constipation treatment and prevention is possible if interventions are implemented by dietitian and also decreasing using of the laxatives which reduce the cost.

P-789

Fluid management (Enteral feed & IV fluid): improving fluid management using "FAM" protocol by involving multidisciplinary team members at enaya specialized care center

Abstract Area: Long-term care

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[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, all are high risk of dehydration. On artificial feeding, IV fluids may need to be given urgently and fluid intake through feeding tube will need to be appropriately amended as per the requirements. If managed improperly then it is associated with increased risk of mortality and morbidity.
Methods: A multidisciplinary team was formed to conduct a quality Improvement project to improve fluid management using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved, and interventions were carried out in three steps. First step was to establish a FAM (Fluid Assessment & Management) protocol which outlined use of a standard fluid deficit calculator and accordingly manage with appropriate fluid and quantity (1st PDSA), Second step was to educate physicians and early involvement of dieticians and monitoring by nurses (2nd PDSA) and Final step was directed towards family who were also involved in feeding (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing, Dieticians) showed compliance with use of a standard protocol from 0 to 35% within 1 month and subsequently increased to 100%,dieticians were involved in all cases started on IV fluid and establishing a guideline on management of fluids.
Conclusion: Multidisciplinary approach using standard tools in calculating fluid deficits and managing it with appropriate quantity of fluid replacement has led to better outcomes with no iatrogenic complications.

P-790

Improving person-centered dietetic care by involving patients/family in plan of care at long term care

Abstract Area: Long-term care

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities. A person-centered care is a practice of caring the residents and their families and It also involves partnership of healthcare professionals includes listening to, informing and involving the patients in their care; providing care that is respectful of and responsive to, individual patient preferences, needs and values, and ensuring that resident values guide all clinical decisions.

Methods: A multidisciplinary team was formed to conduct a quality Improvement project to improve fluid management using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in three steps. 1st was to Dietitians interviewed all patients using the appropriate languages and discussed plan of care with patient/Family (1st PDSA), 2nd step was to Patient/Family Engagement in Dietetics and Nutrition Care from admission to Discharge (2nd PDSA) and 3rd step was patient/Family satisfaction survey questionnaire was developed to evaluate the nutrition counselling and services provided by the Department of Nutrition and Dietetics (3rd PDSA).
Results: Following culture change strategy intervention showed there was a noticeable family/Caregiver satisfaction improved from 30 to 75% and subsequently increased to 96%, which was beyond the set target of 90%.
Conclusion: Build a positive communication between patients/family it is not easy. Patients strongly desire individualized nutrition care and greater involvement in care, Family and caregivers feel more involved in the care, hence increasing overall satisfaction.

P-791

Amino acid and pressure ulcer (PI): improve PI by use amino acid (L-arginina, glutamine and hmb) at long term care

Abstract Area: Long-term care

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Older adults are more likely to have chronic wounds and the effect on quality of life is particularly profound in this population. Nutrition plays an essential role in wound healing, wound care practices, and nutritional support needs to be considered a fundamental part of wound management.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in four steps. First step was to establish a nutrition management protocol which outlined use of an amino acid (Arginine glutamine and beta-hydroxy-beta-methylbutyrate (1st PDSA), Second step to refer all wound cases to dietitian to assess and prescribe amino acids (2nd PDSA), Third step was to pilot in units of the long-term care facility to analyze the effectiveness of this initiative (3rd PDSA), Fourth step to Calculate percentage of wound healing and reassess by dietitian (4th PDSA).
Results: Following WHO multimodal improvement strategy (build it, teach it, check it, sell it and live it) showed all wound healed 100% in long term by given the resident L-Arginina as supplement to accelerate healing and to reduce the cost.
Conclusion: Treat chronic wound in the long term care facility is really challenging due to the complexity of the medical conditions. However, this project has shown healed chronic wound is possible if interventions are implemented by Dietitian and multidisciplinary team members.

P-792

Dementia and nutrition care: developing an evidence: based model for nutritional care at long term care facility

Abstract Area: Long-term care

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Centre provides care for people who are Diagnosis with Dementia.. Currently there are 23 patients diagnose as Dementia (13 on oral Intake, 8 on NGT and 3 on PEG). Elderly suffering from dementia are at increased risk of malnutrition due to various nutritional problems, and the question arises which interventions are effective in maintaining adequate nutritional intake and nutritional status in the course of the disease.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology".All stakeholders were involved and interventions were carried out in three steps. First step was to establish Management of Weight Loss in the Elderly protocol (1st PDSA), Second step to Provide Provision of adequate food according to individual Dysphagia Levels and needs with respect to personal preferences (2nd PDSA), Third step was use of Oral Nutrition Supplement to improve nutritional status.
Results: Following WHO multimodal improvement strategy (build it,teach it,check it,sell it and live it) showed all patients gaining weight after Dietitian Intervention by increase calorie,Protein and add Oral Dietary Supplement, there is significant improvement of oral intake comparing 6 months ago to present. This resulted to progressive increase in BMI and improve albumin level.
Conclusion: Nutrition intervention is important in order to address the feeding concerns that are present in different stages of Dementia. This is to ensure that patient is adequately fed and to achieve a healthy weight. However, this project has shown prevent weight loss is possible if early interventions are implemented by Dietitian.

P-793

Bimuno: Administration of a prebiotic supplement to treat diarrhea without antidiarrheal medication at long term care units

Abstract Area: Long-term care

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Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Diarrhea is common in the elderly and can become a severe condition if not managed properly. Diarrhea is one of the leading causes of unintentional underfeeding in geriatric unit's patients while use of antibiotics leads to a significant change of the gut microbiome, antibiotic associated diarrhea, clostridium difficile infections and other causes connected with hospital stay. Scientific data shows that some prebiotics are useful in treatment of diarrhea.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in three

steps. First step was to establish a nutrition management protocol which outlined use of prebiotic (Bimuno) (1st PDSA), Second step to consult dietitian to assess and prescribe prebiotic (Bimuno), They were received prebiotic (Bimuno) for 2–4 week, first week start with 3 g Bimuno twice/day, on second week and the doses for some patients are increase to 3 g four times /day, third and fourth week the dose maintenance and continue same dose. Fluid intake also increases (2nd PDSA), Third step was to monitor bowel motion every shift by using the Bowel Movement using Bristol stool chart assessment stool (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed patients passing stool every day (frequency from 2 to 3 times/day, and type of stool between 3–4 as Bristol stool scale) without antidiarrheal medication administration, also no more gases, fullness, distention and bloating present with patients.
Conclusion: Treatment diarrhea in the long-term care facilities is really challenging due to the complexity of the medical conditions. However, this project has shown diarrhea treatment and management without antidiarrheal medication is possible if interventions are implemented by dietitian to prescribed prebiotic supplement and also decreasing using of the antidiarrheal medication which reduce the cost.

P-794

Outbreak of human metapneumovirus during a COVID-19 pandemic in a nursing home, a cocirculation ?

Abstract Area: Long-term care

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Introduction: We investigate a double circulation of HMPV and SARS-CoV-2 in a French nursing home in March–April 2021 and report a clinical and outcome analysis.
Methods: We conducted a retrospective cohort study, including all residents and healthcare workers (HCW) from 1st March 2021 to 17th April 2015, considering a 5–9-day incubation period for HMPV, and 5–12 days for SARS-COV-2. Identification of HMPV and SARS-CoV-2 were realized on naso-oropharyngeal swabs by RT-PCR. The distribution of cases was described on an epidemic curve, while possible transmission networks were emphasized in a donor-recipient model. ResultsSixty-six residents and 45 healthcare workers (HCWs) were present at the time of the outbreak. Concerning HMPV infections, 3 out of 4 residents were positive by RT PCR. One HCW was tested negative for HMPV. Regarding COVID-19 infection, 6 HCW and 1 resident tested positive. The other residents and HCW were negative for COVID-19. The attack rate of the HMPV outbreak among NH residents was 21.2% (14/66) leading to 1 hospitalization (7.1%) and 2 deaths (14.3%). In terms of clinical presentation, rhinorrhea was present in all cases and other symptoms were variable. The duration of the outbreak was 6 weeks. No HCW was affected. Some HCW were at the starting point of the COVID-19 circulation. Regarding HMPV, several pathways need to be further analysed.
Key conclusions: Cocirculation is a complex phenomenon that should be considered while managing an outbreak in frail population facilities such as nursing homes. Poor clinical outcomes may be due to co-infection.

P-795

Meloxicam as a treatment of geriatric golden age male patients with low back pain

Abstract Area: Long-term care

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Aim: Aim of this study was to evaluate the use of use of meloxicam in geriatric golden age patients (> 80 years old) male patients, with chronic low back pain.
Material and methods: 10 male geriatric golden age patients were participated in this study. For 14 days (2 weeks) they receive 75 mg meloxicam, two times a day. Range of age 80–96 years and mean age 86. We used specific performance pain tests in order to evaluate our results.
Results: 8 of them (80%) reported optimal results and good reaction to the treatment. 2 of them (20%) reported moderate results and mild reaction to the treatment.
Conclusions: We need more patients but this therapeutic path seems to be an optimal and safe treatment, specially for golden age elderly patients.

P-796

Urine dipstick tests: to investigate and improve the process of urine dipsticking

Abstract Area: Long-term care

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Introduction: Many unnecessary antibiotic prescriptions for urinary tract infections (UTI) are prescribed to nursing home (NH) residents with non-specific symptoms, such as confusion or agitation [1]. Previous research has shown that nurses and carers regularly decide to use a urine dipstick test with these residents [2]. However, according to the UTI guideline for elderly care physicians, the urine dipstick test should be used only when specific UTI symptoms are present in order to rule out a UTI. Therefore, in this study, we investigated the perspectives and motives of nurse and carers on applying the urine dipstick test and how the process could be improved.
Methods: This was a descriptive qualitative study. Two online focus group discussions were held with 14 nurses and carers working in 10 different NHs. The focus groups were videorecorded, transcribed verbatim, and analyzed thematically.
Results: We observed that the application of the urine dipstick test varied between the different NHs. Furthermore, there was a lack of knowledge of the current UTI guidelines among nurses and carers. Especially good and timely communication about the guideline was

emphasized. Furthermore, the urine dipstick test was also mentioned as 'tangible' and 'measurable' and it was indicated that if the urine dipstick test should be used less, a tangible alternative would be helpful.

Key conclusions: More training and better communication about the correct use and reason to apply the urine dipstick test is necessary.

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P-797

Orthostatic hypotension and non-motor symptoms: results from the PRIME-UK study

Abstract Area: Long-term care

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Background: Orthostatic hypotension (OH) is common in patients with Parkinsonism and is associated with adverse outcomes including falls. Few studies have investigated phenotypes in which we can predict OH occurring.

Methods: We undertook a retrospective analysis of electronic record data from patients taking part in the PRIME-UK cross-sectional study from a single movement disorder clinic. This included the SCOPA-AUT questionnaire. Associations between measures of postural drop and self-reported features of dysautonomia were evaluated using linear regression.

Results: Data was collected from 127 patients and readings, who had undergone postural blood pressure assessment within a year of completing the SCOPA-AUT questionnaire as part of PRIME-UK. Extent of systolic postural blood pressure (BP) drop at 1 min correlated mildly with overall SCOPA-AUT score (− 0.49; CI 0.037, − 0.94; $p < 0.034$). A strongly significant correlation was seen with the SCOPA-AUT gastrointestinal domain for systolic (− 2.1; CI − 1.1, − 3.2; $P = 0.0001$) and diastolic (− 0.96; CI − 0.33, − 1.6, $P = 0.003$) BP drop at 1 min, and more weakly for systolic BP change at 3 min (− 1.6, CI − 0.28, − 2.9; $P = 0.018$). A weak correlation between increasing postural systolic BP at 3 min and the thermoregulatory domain for SCOPA-AUT was seen (2.4; CI 0.17, 4.6, $P = 0.035$). No significant correlation was seen with cardiovascular SCOPA-AUT domains.

Conclusion: Gastrointestinal symptoms appear to be associated with postural drop, and not cardiovascular symptoms. This may suggest OH may be asymptomatic and that gastrointestinal symptoms could be linked to abnormalities of visceral blood flow. A possible phenotype with themoregulatory symptoms and increasing postural BP is suggested.

P-798

Effectiveness of a coordination team of the geriatrics service in social health centers in the integrated management of guadalajara

Abstract Area: Long-term care

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Introduction: In the province of Guadalajara there are 53 social health centers (CCSS) that add up to more than 4000 residential places. This patient profile benefits little from hospital admission, being more efficient, the treatment in the same center.

Method: In June 2020, the Geriatrics Service launched the Geriatrics Coordination Group with Social and Health Centers (GCOCS) made up of four teams: four geriatricians with four specialist nurses in Geriatrics.

Results: Since the beginning of the team, some 942 visits have been made to the CCSS, we have carried out 6590 face-to-face assessments and answered 9800 telephone calls, avoiding 1207 referrals to the Emergency Department and being able to cancel 3602 external consultations. In addition, we carried out 646 polypharmacy assessments for pharmacotherapeutic adequacy, withdrawing 1624 drugs. Comparing referrals to the emergency room from CCSS 18 months before the creation of the resource and during the 18 months of its analysis, these were reduced by 40%, despite the fact that referrals have increased by 21% in people over 75 years. We compare referrals from CCSS that required admission in these periods decreased by 17.5%.The estimated savings since the creation of the group is estimated at 2.5 million euros.

Conclusions: In a healthcare area with one of the highest rates of residential coverage in Spain, this new care resource has been cost-effective and valid from the clinical point of view. It has made it possible to reduce hospital overload in a stress situation at three levels: emergency, hospitalization and outpatient consultations.

P-799

Qualitative evaluation of a pilot program in French-speaking Switzerland for postgraduate training of physicians in long-term care facilities

Abstract Area: Long-term care

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Introduction: Ensuring that future physicians are adequately prepared to care for institutionalized older patients is challenging. We developed a specific post-graduate training program where physicians in training spend 20% of their time in a long-term care (LTC) facility, along with monthly geriatric and palliative care training sessions focusing on LTC-specific topics.

Aim: To assess the feasibility and acceptability of the LTC pilot training program from multiple stakeholders' perspectives.

Methods: This qualitative study used semi-structured before/after interviews conducted with physicians in training (n = 4). Supervising physicians (n = 5) and public health stakeholders (n = 3) participated in semi-structured focus groups. Directors of LTC facilities (n = 2) were interviewed. Content analysis was performed on the transcripts.
Results: All in-training physicians indicated that the program motivated them to work in LTC after their training. Areas for improvement they highlighted were the need for a smoother integration into the LTC facility and improved information about the conditions for becoming an LTC physician. LTC supervising physicians noted organizational challenges, but all supported the program as essential to ensuring adequate physician training and resources for future LTC demand. Public health stakeholders and LTC directors confirmed the need to enhance physicians' training in the LTC setting, with emphasis on geriatric and palliative care competencies.
Key conclusions: This preliminary analysis provides insights into challenges to address in order to further develop this pilot program. Attracting physicians in trainings and exposing them to LTC medicine is essential for promoting a sustainable, adequately trained workforce for LTC.

P-800

Structural and procedural predictors of hospitalization of nursing home residents

Abstract Area: Long-term care

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Context: Hospitalizations of nursing home (NH) residents are a major challenge for healthcare systems and a burden for residents. While a large body of data is available regarding residents' characteristics associated with hospitalizations, data on facilities' structural and procedural characteristics are scarce.
Objectives: To investigate the relationship between NH structural and procedural characteristics and their residents' hospitalization rates.
Methods: This study used the Swiss NHs Human Resources Project (SHURP 2018) database, a cross-sectional study of 118 NH in Switzerland that investigated national quality indicators and their relationship with NH characteristics. In the present study, we investigated in a subsample of 70 NHs the bivariable and multivariable association between structural (e.g., number of beds, nurse-to-resident ratio) and procedural (e.g., policy about advanced directives, about antibiotic treatments) characteristics with their hospitalization rates (per 1000 NH residents-days). Analyses were adjusted for several indicators of NH case-mix.
Results: Median hospitalization rate was 1.04 per 1000 NH residents-days. In multivariable analysis, hospitalization rate was inversely associated with facility care load and with institutional policy to discuss resident's wish regarding hospitalization (all $p < 0.05$), whereas no association was observed with any structural characteristics.
Key conclusions: These results challenge popular beliefs in showing that NH tend to avoid hospitalization for residents requiring a higher care level, a proxy for worse functional and cognitive status. These results highlight the importance of institutional policy to discuss residents' wishes about hospitalization and strongly suggest that such policy might contribute to avoiding some undesired and therefore inappropriate hospitalizations.

P-801

Dietary fat intake and quality in long-term care residents in two cohorts assessed 10 years apart

Abstract Area: Long-term care

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Introduction: The purpose of this study was to describe and compare detailed dietary fat intake, fat quality and associative factors between two measuring points ten years apart of residents living in long-term care facilities, and to reflect how fat composition and fat quality corresponds to current nutrition recommendations.
Methods: In 2007 long-term care residents (n = 374) of 25 assisted-living facilities and nursing homes and in 2017–18 long-term care residents (n = 486) of 17 respective facilities in Helsinki metropolitan area were recruited for this study. Information on the residents' heights, demographic information and use of calcium and vitamin D supplementation were retrieved from medical records. Residents' clinical assessment included Clinical Dementia Rating (CDR), the Mini Nutritional Assessment (MNA) and questionnaire related to nutrition care. Participants' energy and fat intake were determined from 1 to 2-day food diaries kept by the ward nurses, and fat quality indicators calculated.
Results: Age, gender distribution, MNA score, or body mass index did not differ between the two cohorts. Residents' cognitive status, subjective health and mobility were poorer in 2017 compared to 2007. Total fat and saturated fatty acid (SFA) intakes were higher and fat quality indicators lower in the 2017 cohort residents than in the 2007 cohort residents. Sugar intake, male gender, eating independently, eating larger amounts, and not having dry mouth predicted higher SFA intake in the 2017 cohort.
Key conclusions: The fat quality in long-term care residents in our study worsened despite official recommendations between the two measurement points.

P-802

Development and validation of quality-of-life measurement tools used in older peoples care homes: a scoping review

Abstract Area: Long-term care

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Background: Quality Of Life (QOL) is an important outcome for older people in care homes. The evidence on the development of QOL tools for used in care homes has not been collated. We set out to do this using a scoping review to better understand the relevance of these tools to care homes.
Methods: We searched five bibliographic (MEDLINE, EMBASE, PsychINFO, CINAHL, and) and two grey literature databases (OpenGrey and social care online). Studies included were those: focussed on people with and without dementia, aged 65 years, and living in care homes (in any country); providing information on development and/or validation of QOL tools; outlining health or social care related QoL measures, either generic or dementia specific; and reported in English. Reference lists of included papers were screened for additional studies. Two reviewers independently screened titles and abstracts. Six reviewers conducted full text screening. Data extraction tables will collate data under the headings: theoretical framework; stakeholder involvement; tool content; data collection methods; mode of administration; intended use of tool; measurement properties, acceptability; availability; feasibility of use; and strengths and weaknesses of tool. Where relevant categories are defined, count and proportion will be used to summarize data. Other findings will be reported narratively.
Results: 4457 papers underwent abstract and title screening after deduplication. 356 are undergoing full text screening. Conclusion The review is currently at full text screening and will be completed by July 2022, ready to be presented in full at EUGMS in September 2022.

P-803

Rehabilitative post-acute care: a benefit for patients with cognitive impairment

Abstract Area: Long-term care

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Introduction: Due to their complex health problems, including functional and cognitive impairments, older inpatients have multi-faceted care-needs after acute hospitalization. They often do not regain a sufficient level of self-care to be discharged home but at the same time are not able to partic-ipate in a common rehabilitation program. Lacking of geriatric rehabilitation in the Canton of Zurich, the Senior Health Centers (GFA) established four units for rehabilitative post-acute care (PAC) in nursing homes. The inter-professional approach of rehabilitative PAC aims to support functional recovery in older patients, even in patients suffering from dementia. The rehabilitative PAC is based on a comprehensive geriatric assessment. The individual patients' plan consists of goal-oriented physiotherapy and nursing care to gain independency in activities of daily living.
Methods: We performed a longitudinal prospective study with 190 patients admitted to PAC units from May 2019 to April 2020. The study aimed to examine the functional status during rehabilitative PAC and at 6 and 12 months after discharge if a patient was discharged home.
Results: 82 patients of the sample were cognitive impaired (MMSE $\leq$ 25). During PAC those patients' functional status improved considerably, hence 70% of them were able to be discharged home. After 6 months post-discharge from PAC 32 patients live at home, and 19 patients still after 12 months.
Conclusions: Even persons suffering from dementia benefit from a specialized rehabilitative post-acute care program in a nursing home. The program helps to postpone a definite admission to a nursing home for many of these persons.

P-804

GEriatric Telemanagement of HEALTH conditions in nursing home residents recently discharged from the hospital: the GET HEALTH study

Abstract Area: Long-term care

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Introduction: Nursing home (NH) residents have multimorbidity, disability and frailty. Hospitalization rates range from 9 to 59% [1]. Hospitalization can worsen health, increasing disability and mortality. Comprehensive geriatric assessment can reduce hospitalization events in NH residents [2] but there are few geriatricians to implement it in NH. This problem could be overcome using technology [3]. We hypothesize that a geriatric telemanagement governance (GTG) model may improve patient outcomes in NH residents recently discharged from hospital.
Methods: We will conduct a before-after study with historical control to compare clinical outcomes in NH residents discharged from hospitals after a GTG. The intervention will consist in videoconsultation where the geriatrician will discuss each patient with NH staff and the general practitioner. In the retrospective analysis we included NH residents aged $>$ 70 years admitted to NH after hospital discharge during 3 years preceding the COVID pandemic.
Results: In the retrospective analysis we already evaluated 45 residents. These are mainly women (71%), age 83.7 $\pm$ 10.3 years, with multimorbidity (6.3 $\pm$ 2.4) and polypharmacy (8.6 $\pm$ 3.3), affected by dementia (62%), hypertension (64%), heart disease (33%), chronic obstructive pulmonary disease (27%), diabetes (24%), chronic renal failure (20%). The main diagnoses of discharge were infectious diseases (29%), hip fracture (13%) and cancer (11%). After discharge, dysphagia (38% to 53%) and bedridden condition (40% to 70%) increased. In the following six months, 38% of the residents were hospitalized and 29% died.
Key conclusions: Preliminary data indicate that hospitalization worsens the outcomes of these subjects.
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P-805

Enabling research in care homes in Scotland

Abstract Area: Long-term care

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Introduction: The National Institute for Health and Care Research (NIHR) launched Enabling Research in Care Homes (ENRICH) in 2012 and Scotland has been aligned and allied to ENRICH's progress within the Scottish population of care homes. This progress has been hampered by lack of investment as ENRICH staff involved were doing this as an adjunct to their daily workload. In 2020, the Scottish Government, through the Chief Scientist Office, indicated they would consider a funding proposal for ENRICH in Scotland to assist to uplift the profile of research in care homes in Scotland, which was subsequently successful.
Methods: ENRICH Scotland sought to incorporate a Scotland-wide facilitator and staff in all the 11 boards in Scotland, formalise the academic forum, assimilated leadership from academia, geriatric medicine, nursing and experienced management.
Key results: This has led to an increase in research and research opportunities in care homes in Scotland; a forum for academics to discuss research; a patient and public involvement group dedicated to care home research; and the Care Inspectorate endorsing the research ready certificate, awarded to homes who sign up to ENRICH; Innovation has been embraced with the replication of a Care Home innovative Collaboration in two health boards initially.
Conclusions: Scotland is now foremost in inclusiveness of care homes, their residents, staff, families and supporters in involving them in research. This success is multifactorial but includes securing funding, having effective leadership and management, appointing key personnel, and above all, making it an enjoyable and exciting transition for all.

P-806

Residential long-term care, Covid-19 and architecture and design of the built environment

Abstract Area: Long-term care

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Introduction: The huge death rate in nursing homes during the COVID-19 pandemic raised serious questions as to whether the built environment of nursing homes was a factor in this very high mortality, as well as a factor in quality of life.
Method: We embarked on a wide-ranging study involving a review of Irish policy, stakeholder engagement, Irish case studies, literature review, and international case studies to understand the key issues that influence the planning, design, and operation of nursing home settings settings, and to identify how these shape care models and the physical environment.
Results: The project generated the following key themes: a) including the voices of residents, family and staff in co-creation of design and research; b) integrating nursing homes with the overall housing spectrum; c) linking nursing homes with ageing in place policy; d) further research on optimal design; e) understanding resident diversity; f) greater inclusion of Universal Design principles; g) designing for resilience; and h) Convergence between infection control and quality of life.
Discussion: Our Research Findings have been developed to identify major current issues related to the built environment and its role in creating a balance between quality of life and COVID-19 infection control in Irish and international nursing home settings. These findings are relevant for a wide range of stakeholders and will be disseminated across a number of channels to continue this conversation and help to continue the evolution of nursing home design.

P-807

A comparative overview of health and social care policy for older people in England and Scotland

Abstract Area: Long-term care

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Introduction: Responsibility for health and social care was devolved to Scotland in 1999, with evidence of diverging policy and organisation of care compared to England. This paper provides a comparative overview of major health and social care policies in England and Scotland, published between 2011 and 2021, relating to care of older people. MethodsWe searched United Kingdom (UK) and Scotland government websites for macro-level (national, overarching) policy documents, which related to the physical and mental health, social care, and wellbeing of older people (aged 65 +). Key data were extracted, and emergent themes were compared and summarised according to Donabedian's structure-process-outcome model.
Results: We reviewed 18 eligible policy documents in England and 21 in Scotland. Four main policy themes emerged. Two primarily related to the structure of care: integration of care and adult social care reform, and two related more to the service delivery/process aspects of care: prevention and supported self-management, and improving mental health care. Person-centred care, addressing health inequalities, and promoting the use of technology were cross-cutting themes relating to the delivery/processes of care and were common to most policies.
Conclusion: Despite differences in structure of care, including a faster pace of change, more competition, and financial incentivisation in England compared to Scotland, there are similarities in delivery/processes of care (such as person-centred care) and limited evidence of differences in performance and patient outcomes. Lack of national health and social datasets hinders evaluation of policy changes, including integration of care, and comparison of outcomes between both countries.

P-808

New care home admission following neck of femur fracture: a retrospective cohort study

Abstract Area: Long-term care

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Care home admission directly from hospital is common and yet there are no guidelines to support this specific transition, which policy recommends against. Fractured neck of femur fracture (NOF) is one of the leading causes of hospitalisation and functional decline for older people, and may result in the need for 24 h care.
Aims: This study aimed to (1) characterise patients newly discharged to care homes following NOF fracture, where previous residence was their own home, (2) to explore the events, individuals, teams and processes involved in the decisions to discharge to care home and record how these were documented.
Methods: A retrospective cohort study of electronic case notes of patients admitted to Edinburgh Royal Infirmary, Scotland, following NOF fracture and newly discharged to a care home between January 2019 and June 2021. Results 58 case notes were reviewed. 48 (83%) people were discharged directly to a new care home. (1) The patients were older, with a median age of 89, predominantly women (79%) and living alone (73%), with high levels of cognitive and functional impairment prior to admission. Admissions were long (median length of stay 47 days), with most (83%) having a diagnosis or evidence of delirium. (2) The levels of documentation, processes of assessment and people involved in discharge planningwere varied between cases.
Conclusions: The characteristics of people discharged directly to a care home following a NOF fracture, and the variable and generally poor documentation, is similar to people admitted to general wards [1]. There is a need for interdisciplinary standards to support the process related to deciding to move into 24 h care from an acute hospital.
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P-809

Direct admission or prior emergency department referral in institutionalized older people: retrospective analysis of effectiveness and safety

Abstract Area: Long-term care

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[1]No

Introduction: Institutionalized older people are pluripathological chronic patients with high hospital needs. For this reason, patient's referral circuits from socio-health centers to the hospitals have to be improved.
Objective: To analyze differences in mortality and mean length of stay between patients admitted directly from the nursing homes to an acute geriatric unit and those admitted through the emergency department (ED).
Methods: Retrospective observational study of institutionalized patients admitted to a geriatric ward from January to December 2021, inside the Geriatric Coordination Program in nursing homes.
Results: 307 admissions, 67% (206) directly and 33% (101) by ED. Mean age 88.48 ± 7.41. 72% (221) women, Charlson 2.88 ± 1.75, Barthel Index 36.05 ± 32.31, 65.5% with cognitive impairment. The most frecuent causes of admission were respiratory infection (28%) and cardiac failure (20.5%). 16.6% mortality with no significant differences between two groups: 14.6% (30) direct admission vs 20.8% (21) ED referral, $p = 0.17$. No significant differences in mean lenght of stay (9.61 ± 6.01 vs 10.01 ± 5.39 days, $p = 0.57$), while hospital stay increases including ED stay: 9.61 ± 6.04 vs 11.22 ± 5.36 days $p = 0.02$.
Conclusion: Direct hospital admission by the Geriatric Coordination Program in nursing homes is a safe and effective alternative to ED referral.

P-810

Implementing personalised care for people living with frailty at home

Abstract Area: Long-term care

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Introduction: Personalised care has been part of the international agenda for improving health care for older people for two decades [1]. It is a core component of Comprehensive Geriatric Assessment and leads to better outcomes for patients [2]. A gap was identified in a locality 'One Team' with sharing the personalised goals for patients.
Methods: Baseline data was gathered from the nursing, therapy and frailty team ($n = 16$), patients ($n = 2$), and managers ($n = 2$) about their understanding of person centred care. Quality improvement methodology was used to define what were the barriers with identifying patient goals and sharing the information. Data was gathered by auditing ten patient records of transfers between teams. COM-B behaviour change theory [3] was used to evaluate readiness for change within the teams.
Results: Staff described significant barriers to setting personalized care goals, and implementing them, which included time, to formulate, and the ability to easily share the goals set by other team members. While community teams varied in their understanding and gathering of person-centred goals, they all understood their value. A new template for sharing person centred goals was agreed and put in place to facilitate sharing goals so everyone involved in a person's care can work with the same goals.
Conclusion: Multidisciplinary team working using COM-B theory facilitates better communication and enables people living with frailty or long term conditions to receive the right care and agreed interventions in their place of choice [4].
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P-811

Multimorbidity, polypharmacy and adverse drugs reactions in chronic geriatric patients of a pathological clinic in Greece

Abstract Area: Multimorbidity

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Background: Aging, along with its associated physiological and pathological changes, puts individuals at greater risk for multimorbidity and drug-related complications. Today, polypharmacy, a common and important problem associated with the use of multiple drugs, often occurs due to multimorbidity of the elderly. In addition, elderly patients are more likely to experience adverse drug reactions (ADRs). The majority of ADRs in the elderly could be potentially preventable and usually related to prescribed drugs. However, there are several ADRs with major adverse consequences in elderly.
Objectives: To investigate the frequency of the presence and the type of multimorbidity and polypharmacy in chronic geriatric patients treated in a pathology clinic, as well as to record the adverse drug reactions that occur after prolonged hospitalization in the pathology clinic.
Methods: We enrolled 204 patients who were hospitalized in the private pathological clinic and admitted for treatment from 1/1/2020 to 30/9/2021.
Results: The majority of the sample was patients with multimorbidity (97.5%) and polypharmacy (69.1), while the side effects recorded were few (8.3%). The main diseases of the sample were diseases of the circulatory system (74.5%), mental or behavioral disorders (53.4%), diseases of the nervous system (53.4%), endocrine or metabolic diseases (40, 2%), diseases of the digestive system (35.3%), diseases of the respiratory system (25%), diseases of the blood or hematopoietic organs (18.1%). The main categories of drugs that treated the sample were anticoagulants, drugs for the treatment of ulcers and GERD, drugs for dementia, β-adrenergic receptor blockers, diuretics, antidepressants and psychotropic drugs. Polypharmacy and multimorbidity were not significantly associated with gender. Multimorbidity was not significantly associated with age. Polypharmacy was statistically significantly related to age, the number of drugs taken was even negatively related to age, that means that the oldest patients take less medicines. As age increases, the number of drugs taken decrease. Polypharmacy is also significantly torn by multimorbidity. Finally, the side effects are mainly due to CNS drugs.
Conclusions: Multimorbidity and polypharmacy ware preponderant among old and chronic patients. ADRs were limited as the prescribers and the pharmacy department are on alert, and take into account all the special characteristics of the geriatric hospitalized populationKeywords: multimorbidity, polypharmacy, adverse drugs reactions, comorbidity, chronic disease, elderly, long term healthcare.

P-812

Insertional Plantar Fasciopathy

Abstract Area: Multimorbidity

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Background and aims: Clinical evaluation of a patient with plantar fasciitis.
Method: Review of the care process.60 year old woman. She works as a hairdresser. For months she has had discomfort in her heel, when standing, which has been getting worse until it has become very limiting. The inconvenience is maximum in the first supports of the day, or after a period of rest and they decrease until they become bearable throughout the day. On examination, some loss of the concavity of the plantar arch with significant pain on palpation over the medial tuberosity of the calcaneus. Foot X-ray, no findings. Ultrasound: ultrasound signs of insertional plantar fasciopathy.
Result: After conservative treatment of insoles and anti-inflammatories, without improvement, traumatology was referred and after infiltration with corticosteroids, she presented improvement and good evolution.
Conclusions: Ultrasound is the test of choice both for the diagnosis of this pathology and to exclude other causes of plantar pain.

P-813

Rotator Cuff Tendinopathy

Abstract Area: Multimorbidity

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Background and aims: Clinical evaluation of a patient with painful shoulder.
Method: Review of the care process. 58-year-old woman. Symptom of years of evolution compatible with rotator cuff tendinopathy. For a few weeks the pain has been more intense, radiating to the front of the arm and with very poor analgesic control. Physical examination: Pain on palpation in the subacromial and anterior deltoid region. Preserved mobility with pain on abduction against resistance and pain on flexion and supination. Maneuver Jobe's positive. Positive Velocity Maneuvers and Yergason, Complementary test, ultrasound: Signs of chronic tendinopathy of the rotator cuff, with some small partial thickness tear in the supraspinatus tendon. Dislocation of the proximal tendon of the long head of the biceps with signs of tenosynovitis.
Result: Chronic tendinopathy of the entire cuff rotator, with special involvement of the supraspinatus tendon and dislocation of the biceps.
Conclusions: In this patient we found involvement of the supraspinatus tendon and dislocation of the biceps tendon, which implies an injury to the transverse humeral ligament, and given the location outside the bicipital groove, the continuous friction of the tendon on the lesser tuberosity can lead to to a complete rupture of the subscapularis tendon since the biceps tendon exerts a "saw" effect at its insertion. Thanks to the ultrasound, this patient could be correctly oriented and referred to traumatology for surgery, which in these cases is the only solution to avoid chronic tenosynovitis and greater future involvement of the entire rotator cuff.

P-814

Wrist pain: Quervain's tenosynovitis

Abstract Area: Multimorbidity

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Background and aims: Clinical evaluation of a patient with wrist pain.
Method: Review of the care process. A 62-year-old woman, she has been working as a domestic cleaner for 20 years. She reports intense pain in the distal third of the right forearm and wrist, with a sensation of local swelling. Not trauma. She does not indicate overexertion, but she does report that she cannot lift any weight with that limb due to pain. On physical examination, swelling in the radial border of the distal third of the forearm and wrist. Intense pain on palpation of the radial border and radial styloid in the swollen area, with crepitus. There is no pain over bony prominences. No signs of distal neurovascular compromise. Pain in the dorsiflexion and radial deviation of the wrist, and in the extension and abduction of the first finger. Supplementary tests:Simple wrist X-ray did not provide relevant information. Ultrasound: signs of tenosynovitis of the tendons of the first dorsal groove, with thickening of the retinaculum, significant amount of fluid in its synovial sheath and synovial proliferation. Likewise, a multifibrillar long abductor tendon is detected.
Result: de Quervain's tenosynovitis.
Conclusions: De Quervain's tenosynovitis is a syndrome due to overuse of the Abductor longus and Extensor hallucis brevis tendons. It most often affects people between the ages of 30 and 50 and is 10 times more common in women. It is treated with anti-inflammatories and immobilization with a splint. In cases resistant to conservative treatment: infiltration with corticosteroids-surgery.

P-815

Association between TSH and geriatric syndromes: results from the Moscow centenarians study

Abstract Area: Multimorbidity

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Aim of the study: To assess the interaction between TSH and the most common geriatric syndromes in the cohort of centenarians.
Materials and methods: It was a longitudinal study, including 82 centenarians (95 years and older), who live in Moscow. Complex geriatric assessment and blood tests were performed. Complex geriatric assessment included past medical history, FRAIL, IADL-C, MNA, GDS-15 and MOCA scores. In the focus of our attention was hormonal status, and TSH in particular. We analyzed the interactions between TSH, metabolic parameters and TSH levels. In one year after the investigations we contacted patients' relatives or social workers to find out about patients' status. The statistical analysis was performed using IBM SPSS Statistics Version 26. Statistically significant were differences with $p < 0.05$.
Results: Mean age of the patients was 98.3 ($\pm$ 1.9) years, while 87,8% of the cohort were women. Analyzing functional status we found out that 34.4% of the patients were frail, and the number of prefrail patients was 56.2%. Cognitive impairments of different severity were presented in 84.4% of the patients. In 59% of the patients HbA1c was below 6%, 33% had concentrations between 6 and 6.4% and only in 8% we found HbA1c higher than 6.5%. The median level of TSH was 2.26 mIU/l [1.8;3.6] with a tendency to high normal concentrations. TSH was negatively correlated CRP ($r = -0.4$, $p < 0.05$) and positively correlated with albumin levels ($r = 0.26$ $p = 0.038$). The interaction between the TSH and chronic pain severity measure by VAS was negative ($r = -0.03$, $p = 0.021$) and cognitive status assessed by MMSE showed a positive correlation with TSH levels ($r = 0.38$, $p = 0.011$).
Conclusion: In the cohort of centenarians higher levels of TSH seems to play a protective role in maintaining cognitive functions and nutritional status; lower TSH levels seem to be linked with the higher intensity of chronic pain.

P-816

Lower urinary tract and bowel symptoms in a representative cohort with parkinsonism: results from the PRIME-UK cross sectional study

Abstract Area: Multimorbidity

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Introduction: Bladder and bowel symptoms are important non-motor features in people with Parkinsonism resulting in worse quality of life, morbidity and potentially mortality due to increased falls. Measuring the true and often unrecognised burden of these symptoms is important as this will encourage the development of better treatments.
Methods: We used the Proactive Integrated Management and Experience cross sectional study (PRIME-UK XS) to estimate frequency of bladder and bowel symptoms in prevalent cases of parkinsonism at a District General Hospital. Great effort was given to include individuals normally excluded such as people in care homes and/or with cognitive problems. Subjects completed the ICIQ lower urinary tract (LUTS), SCOPA-AUT and neurogenic bowel dysfunction (NBD) scales. The "z" test statistic was used to test gender differences.
Results: 427 individuals (34% women) provided data on bladder and bowel symptoms with a mean age of 75.5 years. Urinary storage symptoms were commonly reported with 63.8% nocturia, 38.8% urinary urgency and 28.4% having episodes of incontinence. Voiding symptoms were less frequent. 56.3% reported constipation on SCOPA-AUT, and 54.3% infrequency of bowel opening on NBD. Women reported more urinary incontinence (42.8% versus 20.9%, difference 21.4%, 95% CI 12.1, 30.7%, $p < 0.0001$) but less straining to pass urine (5.5% versus 13.8, difference -8.4, 95% CI -2.9, -13.9 $p = 0.009$).
Conclusions: We demonstrate a high burden of bladder and bowel symptoms, particularly nocturia and constipation, in a more inclusive population of people with parkinsonism. Identifying these symptoms is important as they often go unnoticed and impact on quality of life.

P-817

Body composition and uric acid in long-living patients with coronary artery disease

Abstract Area: Multimorbidity

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Introduction: There are no available data on influence of uric acid on body composition of long-living patients with coronary artery disease (CAD), therefore, we evaluated relationships between uric acid and body composition parameters in such patients.
Methods: 136 hospitalized patients with CAD (females—70.9%, males—29.1%) aged 90–106 years were enrolled in this cross-sectional study. Body composition was assessed by dual-energy X-ray absorptiometry.
Results: 40.4% of patients had hyperuricemia, 59.6% had normal uric acid levels. The mean concentration of uric acid was 362.5 + 111.1 μmol/l, varying from 124 to 712 μmol/l. 70.3% of patients were overweight or obese. Mean body mass index was 27.6 (18.2–38.8) kg/m^2 . Women had more fat then men: total fat—39.8% vs 30.0% ($p < 0.0001$), lower extremities fat –42.4% vs 27.4% ($p < 0.0001$). The greatest bone mineral density (BMD) was recorded in lumbar spine (1005.6 + 190.6 mg/cm^3), the lowest BMD—in ribs (626.2 + 83.9 mg/cm^3). As expected, female patients had lower BMD in all parts of the body ($p < 0.0001$). Mean total lean mass in women was 38.4 kg, and in men—48.8 kg ($p < 0.000001$). The musculoskeletal index remained within the normal range in 77.2% and was below normal in 22.8%. Patients with hyperuricemia had more total fat (26.4 vs 20.1 kg, $p = 0.000006$), trunk fat (15.3 vs 11.5 kg, $p = 0.00002$), legs fat (7.98 vs 6.42 kg, $p = 0.0005$) and arms fat (2.32 vs 1.67 kg, $p = 0.00002$), as compared with patients with normal uric acid levels. Significant positive correlations were found between uric acid levels and fat mass: for total fat—$r = 0.37$, $p = 0.00001$, for trunk fat—$r = 0.41$, $p = 0.000001$, for legs fat—$r = 0.32$, $p = 0.03$, for arms fat—$r = 0.30$, $p = 0.0004$. In addition, significant correlations were registered between uric acid concentration and trunk fat/total fat ratio ($r = 0.26$, $p = 0.001$ for positive correlation) and legs fat/total fat ratio ($r = -0.24$, $p = 0.005$ for negative correlation). Also, positive correlations were found between uric acid levels and BMD: for total BMD—$r = 0.24$, $p = 0.004$, for arms BMD—$r = 0.28$, $p = 0.0008$, for legs BMD—$r = 0.23$, $p = 0.007$; for trunk BMD—$r = 0.31$, $p = 0.0003$, for ribs BMD—$r = 0.26$, $p = 0.001$, for pelvis BMD—$r = 0.28$, $p = 0.0009$ and for spine BMD—$r = 0.29$, $p = 0.0006$. Women with hyperuricemia had greater BMD in trunk bones (818 vs 779 mg/cm3, $p = 0.03$) and pelvis (907 vs 855 mg/cm3, $p = 0.02$) than women with normal uric acid, but no such differences were observed in men. In total group of patients there were no differences in lean mass between patients with increased and normal uric acid levels ($p = 0.6$–0.7). But woman with hyperuricemia had more total lean mass (38.5 vs 37.4 kg, $p = 0.04$), trunk lean mass (20.9 vs 19.7 kg, $p = 0.03$) and arms lean mass (3.8 vs 3.5 kg, $p = 0.02$) than women with normal uric acid. Significant positive correlations were found between uric acid levels and lean mass: for total lean mass—$r = 0.23$, $p = 0.007$, for trunk lean mass—$r = 0.21$, $p = 0.01$, for legs lean mass—$r = 0.22$, $p = 0.01$, for arms lean mass—$r = 0.22$, $p = 0.009$.
Conclusion: Study results demonstrated presence of relationships between uric acid and some parameters of body composition in patients with CAD aged 90 years or older. Future research is advisable to clarify the pathogenetic mechanisms of these relationships.

P-818

Bone mineral density and metabolism in very elderly patients with congestive heart failure

Abstract Area: Multimorbidity

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The study purpose was investigation of bone mineral density (BMD) and metabolism in very elderly patients with heart failure.
Materials and methods: The study enrolled 125 patients (38 men and 87 women, aged 75–98 years) hospitalized with coronary artery disease (CAD); most of them (74%) were over 85 years. Study group comprised 61 patients with clinically significant CHF (NYHA FC III-IV), control group—64 patients without clinically significant CHF symptoms. Main exclusion criteria were any other diseases that could cause osteoporosis as well as administration of medications reducing BMD. Patients' condition was evaluated with standard examination methods for CHF patients, the CHF clinical state assessment scale and Borg Dyspnea Scale. Also, 6-min walk distance was measured and quality of life was assessed (by Minnesota Living with Heart Failure Questionnaire). Lumbar spine and proximal femur BMD was measured by dual energy X-ray absorptiometry on the Lunar Prodigy Advance (GE) machine. Also, fracture risk was measured under FRAX model, Timed Up and Go test was conducted, and osteoporosis standard risk factors were analyzed. Osteocalcin concentration in the blood serum was measured by immunechemiluminescent method, and the beta-Cross Laps level (degradation products of collagen type I) by electrochemiluminescence.
Results: BMD in the CHF patients was lower (both in absolute values and by the T-score) versus the control group (age-matched patients with similar main disease—CAD). Largest differences were recorded in proximal femur: BMD in the CHF patients was 719.8 ± 188.2 mg/cm^{3}versus 797.7 ± 161.7 mg/cm^3($p = 0.02$) in the control group. Greater differences in BMD were detected in female patients ($p = 0.007$). Femoral neck BMD in the CHF patients was 649.4 ± 137.1 mg/cm^{3}versus 696.2 ± 121.8 mg/cm^3($p = 0.03$) in the control group. There were no significant differences found in lumbar vertebrae BMD between the groups ($p = 0.4$). Proximal femur BMD had normal values only in 5% of the CHF patients, whilst normal BMD values in the control group were in 31% of cases ($p = 0.003$). A similar trend was found for lumbar spine BMD, but these group differences did not achieve statistical significance ($p = 0.11$). CHF impact on BMD was also confirmed during multiple regression analysis. It found that ultimate significant factors determining proximal femur BMD were CHF ($\beta = -0.375$, $p = 0.005$) and female sex ($\beta = 0.698$, $p < 0.0001$). Reduced osteoblast function was observed in CHF patients: the mean osteocalcin level in the CHF patients was 1.2 ± 1.7 ng/ml versus 4.2 ± 4.1 ng/ml ($p = 0.03$) in the control group. In 60.6% of the CHF patients, osteocalcin concentration was below the lower limit of normal ($p = 0.02$ vs. control). Also, mean β-Cross Laps level in the CHF patients reached 0.73 ± 0.4 ng/ml versus 0.4 ± 0.1 ng/ml ($p = 0.003$) in the control group. β-Cross Laps level was increased in 21.7% of the CHF patients, but no one had high β-Cross Laps values in the control group ($p = 0.03$). There was negative correlation between β-Cross Laps concentration and BMD, especially in the proximal femur ($r = -0.4$, $p = 0.03$). Negative correlation was found between tumor necrosis factor-a (TNF-a) level with its serum concentration higher in the CHF patients ($p = 0.04$) and BMD, especially in the proximal femur ($r = -0.9$, $p = 0.03$). In patients with decreased leptin concentration (found only in the CHF patients), BMD values were lower than in

those with normal or increased serum leptin concentration ($p = 0.006$ for the proximal femur).
Conclusion: These study findings suggest that bone mineral density in very elderly CHF patients is noticeably lower versus the patient group similar in age and main diseases. This study has demonstrated significantly reduced osteoblast function in CHF patients and slight increase in bone resorption. Further studies of bone tissue condition in CHF patients with large patient sample and research into mechanisms of relationship between osteoporosis and heart failure are reasonable.

P-819

Relationships between osteoporosis and anemia in long-living patients with coronary artery disease

Abstract Area: Multimorbidity

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Introduction: Limited and controversial data are available on relationships between osteoporosis and anemia; therefore, we evaluated bone mineral density and its relationship with erythropoiesis in patients with coronary artery disease (CAD) over 90 years of age (long-livers).
Methods: This work was cross-sectional study performed in the War Veterans Hospital. The study enrolled 197 patients (138 women and 59 men) aged 90 to 106 years (mean age 92.4 ± 2.3 years) hospitalized with CAD. Bone mineral density (BMD) was analyzed by dual-energy X-ray absorptiometry.
Results: Patients with osteoporosis had lower hemoglobin and erythrocyte counts compared to patients with normal BMD: hemoglobin—117.3 and 125.9 g/l, respectively ($p = 0.003$), erythrocytes—3.8 × 1012/l and 4,1 × 1012/l ($p = 0.04$), MCV—88.7 and 93.5 fl ($p = 0.02$), MCH—30.6 and 31.0 pg ($p = 0.07$). Patients with anemia had lower total BMD (973 and 1036 mg/cm^3, $p = 0.001$), BMD of upper (772 and 845 mg/cm^3, $p = 0.001$) and lower (956 and 1059 mg/cm^3, $p = 0.0003$) extremities, BMD of trunk (805 and 851 mg/cm^3, $p = 0.004$), ribs (607 and 642 mg/cm^3, $p = 0.005$), pelvis (889 and 935 mg/cm^3, $p = 0.03$) and spine (973 and 1034 mg/cm^3, $p = 0.02$). Correlation analysis revealed significant direct relationships between hemoglobin level and all BMD parameters ($r = 0.3$; $p = 0.00003$). Significant correlations were also established between all BMD parameters and erythrocytes MCV ($r = 0.27$; $p = 0.0001$) as well as MCH ($r = 0.22$; $p = 0.002$). Significant direct relationships between blood iron concentration and all BMD parameters were found ($r = 0.28$; $p = 0.003$).
Conclusion: The study results indicate presence of relationships between bone mineral density and erythropoiesis in centenarians.

P-820

Relationships between body composition and hematological parameters in long-living patients with coronary artery disease

Abstract Area: Multimorbidity

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Aim: To study hematological indicators and analyze their relationships with various parameters of body composition in patients with coronary artery disease (CAD) over 90 years of age (long-livers).
Methods: This work was cross-sectional study performed in the War Veterans Hospital. The study enrolled 245 patients (166 women and 79 men) aged 90 to 106 years (mean age 92.9 ± 2.5 years) hospitalized with CAD. Hemoglobin level, erythrocyte count, mean erythrocyte volume (MCV) and mean cell hemoglobin (MCH), leukocyte and platelet count, erythrocyte sedimentation rate (ESR) were determined. The neutrophil-lymphocytic, neutrophil-monocytic and lymphocytic-monocytic indices were calculated. Body composition was analyzed by dual-energy X-ray absorptiometry.
Results: Anemia was registered in 112 (45.7%) patients, the mean hemoglobin level was 120.2 + 17.6 g/l, varying from 61 to 172 g/l. 200 (81.6%) patients had normal MCV, 23 (9.4%) had macrocytosis, 17 (6.9%)—microcytosis. 117 (47.7%) patients had normal MCH, 106 (43.3%) had hyperchromic erythrocytes, 22 (9.0%)—hypochromic. Leukocyte count was normal in 199 (81.2%) patients, 14 (5.7%) had non-significant leukocytosis, 32 (13.1%) had leukopenia. Platelet count was normal in 138 (56.3%) patients, 95 (38.8%) had thrombocytopenia, 11 (4.5%) had slight thrombocytosis. Patients with obesity have higher levels of hemoglobin (123.2 vs 116.4 g/l, $p = 0.01$), erythrocytes (4.0 vs 3.88 × 1012/l, $p = 0.01$), leukocytes (6.0 vs 5.48 × 109/l, $p = 0.03$), lymphocytes (1.7 vs 1.38 × 1012/l, $p = 0.008$) and monocytes (0.28 vs 0.238 × 1012/l, $p = 0.03$). Correlation analysis revealed significant direct relationships between hemoglobin level and total fat mass ($p = 0.006$), trunk fat ($p = 0.0007$) and trunk fat/total fat ratio ($p = 0.001$). Significant direct correlations were registered between hemoglobin level and total lean mass ($p = 0.006$), trunk lean mass ($p = 0.004$), arms ($p = 0.003$) and legs lean mass ($p = 0.04$). There was a trend towards positive correlation between hemoglobin levels and muscle strength as assessed by dynamometry ($p = 0.05$). Anemic patients had less total lean mass ($p = 0.03$), trunk lean mass ($p = 0.02$) and arms lean mass ($p = 0.02$). Significant direct correlations were found between the level of hemoglobin and all indicators of bone mineral density, both in general and in certain parts of the skeleton ($p = 0.002$–0.00003). Patients with osteoporosis had lower hemoglobin level and erythrocyte count compared to patients with normal BMD: hemoglobin—117 and 126 g/l, respectively ($p = 0.003$), erythrocytes—3.8 × 1012/l and 4,1 × 1012/l ($p = 0.04$). Significant direct correlations were registered between all indicators of bone mineral density and MCV ($p = 0.04$–0.0004), as well as MCH ($p = 0.02$–0.002). Similarly, direct significant correlations were found between the parameters of lean tissue and MCV ($p = 0.01$–0.008), as well as MCH ($p = 0.01$–0.002). The inverse correlation between platelet count and bone mineral density, especially in upper ($p = 0.02$) and lower extremities ($p = 0.03$), was observed. Significant direct correlations were found between platelet count and all indicators of fat tissue ($p = 0.02$–0.00008), with the exception of trunk fat ($p = 0.3$). The inverse correlation was registered between platelet count and lean tissue, both in general and in each part of the body ($p = 0.004$–0.0002).
Conclusion: The study results indicate presence of relationships between body composition and hematological parameters in long-living patients with CAD.

P-821

Exploring appetite loss in older age: insights from a qualitative study

Abstract Area: Multimorbidity

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Introduction: Poor appetite is common in older age and leads to adverse health consequences. However, there is limited understanding of appetite loss, and how it impacts on older adults, to inform intervention approaches.
Methods: Thirteen older adults aged 60–93 years (10 women) identified as having poor appetite (Simplified Nutritional Appetite Questionnaire scores < 14; range 8–11) took part in a semi-structured interview with one researcher (LD). Open-ended questions focused on their experiences of appetite loss and living with poor appetite. Reflective thematic analysis was utilised to generate themes.
Results: A range of biological, psychological and social factors were linked to appetite loss, that differed in their balance and impact on individual pathways to poor appetite. Biological factors included age-related changes (slowing down as part of ageing), health conditions and use of medications. Psychological factors included loss of interest in food, lack of motivation and low mood. Social factors included changes in lifestyle/routines and reduced social interaction. However, a lack of recognition or acceptance of having poor appetite was common. While individual coping strategies to encourage eating were described, effectiveness was variable. For some older adults, their appetite appeared less important, with greater emphasis on necessity and 'eating to survive'.
Key conclusions: A broad range of influences on appetite loss in older age were described by the participants and grounded within a biopsychosocial model. These need to be considered in prevention and treatment strategies. This work was carried out as part of the APPETITE project (JPI HDHL PREVNUT programme).

P-822

Chronic pruritus in the elderly—an approach in Primary Care

Abstract Area: Multimorbidity

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Introduction: Pruritus is a common complaint in the elderly, having a major impact on their quality of life. Differential diagnosis and clinical approach are challenging, which may lead to frustration and iatrogenics in this population.
Methods: The information about the patient's clinical data was obtained through consultation of clinical records.
Results: A 84-year woman presented with pruritus, a generalized skin eruption and insomnia since one month ago. She had history of high blood pressure, chronic pain, osteoarthritis and gastritis. She was medicated with dinitrate of isosorbide and rabeprazol and she initiated tapentadol, mirtazapine and lisinopril five weeks before. Examination revealed xerosis skin and itchy scaly erythematous papules located on forearms, thighs, legs and back. No epidemiological context was known. The diagnosis of scabies was assumed and she was treated with benzyl benzoate lotion and antihistamine. Two weeks later she returned reporting an increase of eruption dissemination and pruritus, having one bullous lesion located in her arm. It was prescribed an emollient and antihistamine, as well as made a referral to Dermatology through telemedicine. In the appointment she reported an improvement of her signs and symptoms. A skin biopsy was made which revealed eczema and immunofluorescence technique was negative. She discontinued lisinopril, tapentadol and maintained skin hydration with positive clinical progress.
Key conclusions: Chronic pruritus has multifactorial causes in older people, being xerosis, atopic dermatitis and medications the most common. We should always consider housing conditions. Hydration of the skin can be the first and safest approach in this population.

P-823

TSH and geriatric syndromes in the oldest old

Abstract Area: Multimorbidity

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Aim of the study: to assess the interaction between TSH and the most common geriatric syndromes in the cohort of centenarians.
Materials and methods: It was a longitudinal study, including 82 centenarians (95 years and older), who live in Moscow. Complex geriatric assessment and blood tests were performed. Complex geriatric assessment included past medical history, FRAIL, IADL-C, MNA, GDS-15 and MOCA scores. In the focus of our attention was hormonal status, and TSH in particular. We analyzed the interactions between TSH, metabolic parameters and TSH levels. In one year after the investigations we contacted patients' relatives or social workers to find out about patients' status. The statistical analysis was performed using IBM SPSS Statistics Version 26. Statistically significant were differences with $p < 0.05$.
Results: Mean age of the patients was 98.3 ($\pm$ 1.9) years, while 87.8% of the cohort were women. Analyzing functional status we found out that 34.4% of the patients were frail, and the number of prefrail patients was 56.2%. Cognitive impairments of different severity were presented in 84.4% of the patients. In 59% of the patients HbA1c was below 6%, 33% had concentrations between 6 and 6.4% and only in 8% we found HbA1c higher than 6.5%. The median level of TSH was 2.26 mIU/l [1.8; 3.6] with a tendency to high normal concentrations. TSH was negatively correlated CRP ($r = -0.4$, $p < 0.05$) and positively correlated correlated with albumin levels ($r = 0.26$ $p = 0.038$). The interaction between the TSH and chronic pain severity measure by VAS was negative ($r = -0.03$, $p = 0.021$) and cognitive status was assessed by MMSE showed a positive correlation with TSH levels ($r = 0{,}38$, $p = 0{,}011$).
Conclusion: In the cohort of centenarians higher levels of TSH seem to play a protective role in maintaining cognitive functions and nutritional status; lower TSH levels seem to be linked with the higher intensity of chronic pain.

P-824

Provision of Eye Care Services and Interventions in Care Homes—a narrative synthesis review

Abstract Area: Multimorbidity

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Introduction: The prevalence of eye disease and visual impairment in care home residents is disproportionately higher compared to the general population. Access to eye care services and treatment can be variable for this vulnerable population.
Objective: This narrative synthesis reviews the available evidence of services and interventions for delivering eye care to care home residents. The key review questions: 1. What is the existing evidence for eye care interventions or services (including service configuration) for care home residents? 2. Does the provision of these interventions or services improve outcomes?
Methods: Literature search of EMBASE/MEDLINE for original papers published since 1995. Two reviewers independently reviewed abstracts/papers. Data was extracted and evaluated using narrative synthesis.
Results: 13 original papers met the inclusion criteria. On-site optometrist-led services improved diagnosis and management of eye conditions, with one study showing 53% of residents benefited from direct ophthalmology intervention. Provision of interventions such as cataract surgery, refractive error correction and low vision rehabilitation improved visual acuity and vision-related quality of life but did not improve cognitive or physical function, depression or health-related quality of life. Key ConclusionCare home based eye assessments improve the management of eye conditions. Interventions improve visual acuity and vision-related quality of life. Further research and/or clinical service scoping is needed to better understand variation in service delivery across the globe, to identify access difficulties and examples of good practice as well as to identify and test cost-effective service models for this vulnerable group.

P-825

On the need for collaboration in treating frail heart failure patients: implementation of the heart-brain clinic

Abstract Area: Multimorbidity

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Introduction: Many patients with heart failure are frail and have high morbidity, challenging their treating physicians. Although goals of care are often tailored to heart failure type and severity, they are also highly dependent on factors which require a multi-domain assessment, including cognitive screening. Patients with heart failure often have cognitive impairment, lowering therapy adherence and increasing likelihood of complications and hospital admissions. Screening for frailty and cognitive i in heart failure outpatient clinics is not standard care, but may improve health care outcomes. However, little data is available regarding cardiologists' views on cognitive impairment in their patients.
Methods: We performed an open-link clinical questionnaire survey amongst cardiologists in the Netherlands. Cardiologists were asked about their knowledge and views on frailty and cognitive impairment in heart failure patients. ResultsThree out of four cardiologists (mean age 48) indicated that knowledge about frailty and cognitive impairment would change their clinical decision-making, and that systematic screening in the outpatient clinic would improve care. However, more than half indicated not having the time, knowledge or tools to assess cognitive function in their patients. Only three percent of cardiologists performed structured cognitive assessment.
Conclusions: Cardiologists are aware of the importance of cognitive function in their patients, but lack tools, time and knowledge to assess cognitive function. In line with the results of this survey, we implemented a multidisciplinary clinical care pathway, in which heart failure patients are screened for frailty and cognitive function, and geriatricians, cardiologists and general practitioners collaborate to provide appropriate supporting care.

P-826

Aloe Arborescens and liver

Abstract Area: Multimorbidity

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A 87 year-old man was admitted in acute geriatric unit for acute abdominal pain and fever. Prostate cancer diagnosed 9 months ago and treated by abiraterone acetate and degarelix was his main comorbidity. Aspartate aminotransferase (AST) were elevated × 99, alanine aminotransferase (ALT) × 71, associated to: ferritin (35 110 ng/ml), thrombocytopenia (77 000 G/L), anemia (haemoglobin 11.6 g/dl), C reactive protein (CRP) at 370 mg/l, fibrinogen at 8.8 g/L, triglycerides at 2.29 g/L. Abdominal CT scan revealed an ileum inflammation. Empiric antibiotic therapy was introduced (Piperacillin—Tazobactam) associated to Aciclovir's perfusion in the hypothesis of HSV hepatitis. PCR quantitative—serology were negative for HSV. Serologies were negative for: hepatitis A,B,C virus; cytomegalovirus and Epstein barr virus. A myelogram eliminated a macrophage activation syndrome. In requestioning patient and his family, we learned that he took in self-treatment associated to his hormonotherapy an artisanal mixture with brandy and Aloe Arborescens. From the beginning of his hospitalization, patient didn't take his hormonotherapy and his self-treatment neither. Hepatic enzyme decreased, as ferritin, and CRP. Anaemia and thrombocytopenia were improving. We solicited pharmacovigilance advice for potential drug interactions. There is no data in scientific literature for Aloe Arborescens but about Aloe Vera (same family) interactions are known with hormonotherapy for prostate cancer. Aloe Arborescens and Aloe Vera are powerful inhibitor of cytochrome PCYP2D6 which is implicated in abiraterone acetate metabolism. Self-treatment were

formally contraindicated without the advice of a pharmacist or physician.

P-827

Gender differences in elderly patients admitted to the hospital

Abstract Area: Multimorbidity

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Introduction: Previous studies have shown gender differences in comorbidity patterns and drug prescription
Methods: Observational, retrospective, longitudinal study of patients 65 or more years old admitted to an internal medicine ward of a central hospital in Portugal in 2019.
Results: In 2019 the internal medicine ward admitted 2309 patients 65 years old or older, of which 2133 were included in the statistical analysis. Mean patient age was 80.98 ± 7.78 years old. Women represented 54.7% of the sample size and men represented 45.3%. Gender was significantly associated with age ($p < 0.001$): there were more women in elder age groups. Even though men and women had a similar comorbidity number (mean 6, $p = 0.83$), women had more prescribed medicines than men (7.68 vs 7.13; $p = 0.001$). Comorbidity profile was also different between genders. More men than women had a diagnosis of chronic obstructive pulmonary disease, chronic kidney failure, ischemic cardiomyopathy, peripheral arterial disease, liver disease and cancer. On the contrary women had a higher percentage of obesity, pulmonary embolism, valvular heart disease, hypothyroidism, depressive syndrome, falls and fractures, dementia, and auto-immune disease. Men were at higher risk of dying in the year following hospitalization ($p = 0.018$). Charlson index was lower in women than in men (5.98 vs 6.26; $p < 0.001$).
Conclusions: Comorbidity profile seems to be different between genders. This finding could be important for definition of different strategies for prevention and screening in elderly men and women. Prognostic implications also apply.

P-828

Polypharmacy In Community-Dwelling Older Adults: A Cross-Sectional Review

Abstract Area: Multimorbidity

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Background: Older adults are a heterogenous cohort of patients, often with multiple comorbidities and prescribed numerous drugs. Polypharmacy, defined as use of five or more medications [1], and inappropriate prescribing are risk factors for adverse outcomes [2]. This cohort is at higher risk for adverse events due to pharmacokinetic and pharmacodynamic changes associated with ageing. This study aims to identify polypharmacy in community-dwelling older adults attending the Integrated Care Programme for Older Persons (ICPOP) Hub.
Method: We performed a cross-sectional review of patients attending ICPOP Hub between January 2022 and May 2022. Patients' prescriptions were obtained from pharmacies and/or general practitioners (GP) and cross checked against the medications brought to appointments. Patients' medical history was obtained from the patient/family, GP and hospital letters. Their medications were analysed by a specialist in geriatric medicine (Consultant and/or Specialist Registrar).
Results: A total of 68 patients were included in this study with mean age of 83.5 years. 94% of the population were prescribed 5 or more medications, with an average of 9.5 medication. 46 participants had medications stopped, of which 50% had two or more medications discontinued. 48 participants had medications commenced, of which 58% had only one new medication commenced. The most common medication started was Vitamin D supplement (50%). Only 9 patients did not require any change to their medication prescription. An average of 1.24 medications were stopped following assessment.
Conclusion: Assessment in the ICPOP hub led to reductions in inappropriate medications prescribed in our multi-morbid older people cohort while identifying and commencing appropriate treatments for patients.
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P-829

Engaging older adults living with frailty, multiple long-term conditions and a recent deterioration in health in research: findings from the Lifestyle in Later Life—Older People's Medicine (LiLL-OPM) Study

Abstract Area: Multimorbidity

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Introduction: Older adults living with frailty and multiple long-term conditions (MLTC), particularly those with a recent deterioration in health are under-served by research, despite their high utilisation of health and social care. We aimed to determine if it was feasible and acceptable to carry out a research project with this group of older people.
Methods: Twelve participants living with frailty, MLTC, and a recent deterioration in their heath aged 68–92 (9 female) were recruited from an Older People's Medicine Day Unit. Semi-structured interviews were conducted in participants' homes using open-ended questions focused on approaches to recruitment and data collection methods. Data were analysed using thematic analysis.
Results: Facilitators and barriers were identified. Older adults described the requirement for a personal and flexible approach to research such as home visits organised around routines. Home visits are convenient and would reduce the barriers of hospital visits (mobility and communication problems, travel costs and reliance on informal carers). Further declines in health could prevent future participation, but a flexible approach could again account for such health-related difficulties. Informal carers support participation in

research but researchers need to be aware that they may have health difficulties themselves. Participants may require training in using digital technology if this is to be used during research.
Key conclusions: A personal and flexible approach should be incorporated into the design of future research involving older adults living with frailty, MLTC and a recent deterioration in health. This would aid recruitment and retention of this under-served group.

P-830

Attitudes and barriers towards resistance exercise training in older adults living with frailty, multiple long-term conditions and a recent deterioration in health

Abstract Area: Multimorbidity

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Introduction: Older adults living with frailty and multiple long-term conditions (MLTC), particularly those with a recent deterioration in health, are at increased risk of sarcopenia. Resistance exercise (RE) training is currently the most effective treatment for sarcopenia. However, little is known about attitudes and barriers towards engaging in RE in this group of older people.
Methods: Fourteen participants living with frailty, complex MLTC, and a recent deterioration in their health aged 69–92 years (10 female) were recruited from an Older People's Medicine Day Unit in Newcastle. Semi-structured interviews were conducted in participants' own homes using open-ended questions focusing on attitudes and barriers towards RE. Data were analysed using thematic analysis.
Results: Physical and psychological barriers to engaging in RE were identified. The main physical barrier was a self-perceived lack of strength to perform RE. Psychological barriers included a fear of falling or injury during exercise. There was a general lack of awareness and understanding of RE, with most participants having never heard of the term and being unaware of potential benefits. When RE was described, several participants stated that they would be willing to try RE, but it was apparent that an individualised approach with tailored personal support would be required to support engagement.
Key conclusions: A range of barriers and enabling factors to RE exist which should be incorporated into the design of future programmes. Further work is needed to inform older people living with frailty, MLTC and a recent deterioration in health about the potential benefits of RE.

P-831

Investigation of factors associated with hypotension as adverse drug events in older hospitalized patients

Abstract Area: Multimorbidity

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Background: Adverse drug events (ADEs) and hypertension increase with age, and these are both common in the daily medical practice of the older people In the management of blood pressure (BP) for the older patients, changes in living environment, such as hospitalization, often causes excessive BP reduction. However, there is still a lack of studies on the incidence of hypotension as ADEs and related factors in older hospitalized patients. The purpose of this study was to determine the incidence of hypotension as ADEs in hospitalized older patients and to identify the major risk factors.
Methods: A total of 1031 patients aged 65 years or older admitted to the ward of geriatric medicine in Osaka university hospital were evaluated. We collected basic patient profile from medical records, including details of ADEs, suspected drugs, and date of onset of ADEs. Hypotension was defined as SBP < 100 mmHg or SBP < 120 mmHg with symptoms.
Results: There were 95 ADEs occurred during the hospitalization period, and hypotension was the most frequent among ADEs (27 (28%)). The most suspected drugs for hypotension were calcium-channel antagonists, and ADEs occurred on average of 10 ± 7 days after admission. It was also found that low daily physical activity and a cardiovascular disease requiring treatment with antihypertensive drugs were independently associated with hypotension.
Conclusion: Hypotension as ADEs are occurred frequently in older hospitalized patients, and BP should be carefully managed from the early stage of hospitalization, after assessing the patient's prescription and daily activity.

P-832

Intertrigo, a common dermatological problem in the elderly with multimorbidity

Abstract Area: Multimorbidity

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Objective: To describe the characteristics of a common dermal lesion.
Material: Descriptive and cross-sectional study based on a clinical case.
Result imaging case: A 91-year-old woman with a history of diabetes mellitus 2, obesity (BMI > 35) and heart failure. She presents a geriatric syndrome: urinary incontinence, immobility, frailty, partial dependence. On abdominal examination: obesity, trunk with skin folds from the mesogastrium to the perineal area, at the bottom of the skin folds there is erythema with fissures and whitish desquamation, adopting a shiny appearance, and in the lumbar area, presence of pustular lesions, in the form of satellite lesions. In the presence of this dermal lesion in the folds, the following differential diagnosis should be made: atopic dermatitis or seborrheic dermatitis; dermatochondrosis of the skin; inverse psoriasis; pemphigus; and neoplasms such as extramammary Paget's disease. Treatment consists of the correction of aggravating factors, the use of antiseptics and drying solutions

such as zinc or copper sulfate fomentations. If there is an inflammatory component, corticoid cream. In case of fungal superinfection, imidazole derivatives for cutaneous use. Once the inflammation is controlled: astringent solutions and barrier creams can be useful for the prevention of recurrence. In our case, zinc sulfate was treated for one week and, due to poor response, betamethasone was prescribed. In response, topical betamethasone cream was prescribed for 5 days. Imidazole cream was added for two weeks with favorable results. She was prescribed topical betamethasone cream for two weeks with favorable results.

Conclusion: Localized dermatitis in folds is defined generically as intertrigo, it is due to physical factors as humidity and friction. It is directly related to obesity, diabetes, immobility, malnutrition, hyperhidrosis and urinary incontinence. It manifests as a poorly demarcated erythema, ruptured subcorneal pustules with detachment erosions, sometimes with an exudative appearance. This lesion may be aggravated by bodily secretions. Its main complication is the high rate of superinfection.

P-833

Pain and quality of life in older men and women: cross-sectional findings from the survey of health, ageing and retirement In Europe

Abstract Area: Multimorbidity

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Introduction: Pain is associated with poorer physical and mental health in older adults. We investigated the association between pain and quality of life in older adults.

Methods: Data from 34,090 community-dwelling adults $\geq$ 65 years, without cognitive impairment, who were direct respondents in Wave 6 of the Survey of Health, Ageing and Retirement in Europe (SHARE) were analysed. Participants were asked "Are you troubled with pain?", and "In the last month, have you felt that you would rather be dead?". The association between pain intensity and the response to the "rather be dead" question was analysed by binary logistic regression, adjusted for age, sex, country, self-rated health, co-morbidities, medications, physical inactivity, living alone, loneliness, and stratified by sex.

Results: The mean age was 73.8 years (standard deviation 6.6, range 65–102); 18,775 (55.1%) participants were women. 2,475 (7.3%) reported they felt they would rather be dead: this proportion increased with the severity of pain: 758/17,524 (4.3%) with no pain, 201/3395 (5.9%) with mild pain, 779/9275 (8.4%) with moderate pain and 737/3896 (18.9%) with severe pain reported they felt they would rather be dead. In age and sex-adjusted analyses, mild, moderate and severe pain were all associated with an increased likelihood of feeling "I would rather be dead" compared to no pain. After full adjustment, severe pain was associated with an increased likelihood (odds ratio 1.56, 95% confidence interval 1.35–1.81) of feeling "I would rather be dead".

Key conclusions: Pain is significantly associated with poorer quality of life in older adults.

P-834

Analysis of costs per hospitalization of the care continuity team of geriatrics of albacete

Abstract Area: Multimorbidity

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Purpose of the study: To analyze the avoidance of hospital admissions and visits to the emergency room or early dischargeduring a hospitalization in the elderly, attended by the Care Continuity Team (CCT) of Geriatrics ofAlbacete, as well as the savings (€) due to the intervention.

Methods: Retrospective study of the first 890 patients seen by the CCT between 1st October 2016 and 30 th November 2019. Clinical variables and the comprehensive geriatric assessment were collected. As variables ofcontrol, the service where patients come from, the referral of the patient and the number of visits made were identified. Outcome variables adverse events were collected at 30 days: emergency room visits, hospital admissionsfor any reason or for the same reason and mortality. The cost saved per patient hospitalization isdetermined based on the cost per process published by SESCAM in 2013, and the reduction in hospital staydividing the cost per process by the average stay and multiplying it by the days of hospitalization avoided. It also was determinedthe cost saved per visit, dividing the total cost by the number of visits made.

Results: Age 87.3 (SD 5.6). 536 women (60.2%). 420 patients referred from geriatrics (47.2%), 403 (45.3%)from emergencies and 67 from other care facilities (7.5%). BI 44 (SD 32), Charlson 3.7 (SD 2.2), Reisberg GDS3.5 (SD 2.1). Reasons for consultation by large groups: Digestive system 55 (6.2%), circulatory system 200 (22.5%),respiratory system 321 (36.1%), urinary system 179 (20.1%), mental and neurological pathology 62 (7.0%) and others 73 (8.3%). The mean number of visits per patient was 1.7 (SD 1.1). 225 patients attended the emergency room in the firstmonth (25.3%), 145 for the same reason (16.3%). 167 were hospitalized (18.8%) in the first month of follow-up,141 (15.8%) for the same reason. Hospitalization occurred after the first CCT visit in 28 patients (3.1%)0.73 patients died 30 days after the intervention (8.2%). 287 patients (32.2%) had some adverse event in the first month. Types of care: 100% received education/support measures, 207 (23.3%) nursing care, 103 (11.6%) bladder catheter management, 749 (84.2%) changes in medication, 111 (12.5%) intravenous medication and in 304 (34.2%) got biological samples. There were no differences in adverse events depending onage, gender, origin, disability, cognitive impairment, comorbidity or main diagnosis. Savings of costs occurred in 642 patients (72.1%). The mean savings per patient in the program was €2302 (SD 2169), €3191 (SD€1919) if only those with savings were counted. The total savings of the program was €2,048,540.79 (€53,909/month and €1627/visit). Care for patients coming from the emergency department represented an average saving of €3096 (SD 2234), andof those from geriatrics €1512 (SD 1810), difference €1584 (95% CI 1244–1924; $p < 0.001$). There Were notdifferences in cost savings related to age, gender or cognitive impairment. Patients with higher Barthel, higher Lawton and lower Charlson resulted in greater savings ($p < 0.001$). Heart failure represented a saving of €2786/patient, respiratory pathology €2877/patient and the rest of pathologies €1664/patient ($p < 0.001$). The Savings quartiles were for the entire

sample €0–€2079–€3548 and for those with some savings €1899–€2352–€5683. In the multivariate analysis of all participants, the absence of disability (OR 1.96; CI 95% 1.18–3.25; $p < 0.01$), emergency department (OR 4.94; 95% CI 3.37–7.22; $p < 0.001$), respiratory pathology (OR 9.46; CI 95% 5.92–15.13; $p < 0.001$) and heart failure (OR 16.03; 95% CI 9.16–28.03; $p < 0.001$), represented ahigher probability of saving in the top quartile, adjusted for age $\geq$ 80 years, gender, high comorbidity, dementia andnot visits.
Conclusions: The intervention of the RCT of Geriatrics composed of a doctor and a nurse produces a decreasein hospitalizations, a shortening of hospital stays, a reduction in visits to the emergency room, and savingsof costs for hospital admissions of €53,909/month. The patients who produce the most savings come from the emergency room,with heart failure or respiratory pathology and with good functional status.

P-835

Predictive value of integrated care for older people screening tool and comorbidities for all-cause mortality and falls in the older community-dwelling elderly

Abstract Area: Multimorbidity

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Introduction: In 2019,WHO proposed ICOPE screening tool to conduct preliminary screening of intrinsic ability (IC) in the community-dwelling elderly. The study compared the predictive value of IC screening tool and comorbidities for adverse health outcomes in the elder community-dwelling seniers in Beijing.
Methods: This study included the elderly in an elderly-friendly community in Beijing from 2018 to 2020. Social-demographic data and CGA were collected at baseline,using ICOPE screening tool to assess the IC in elderly,which included 5 dimisions 9 terms. Adverse outcomes were recorded during follow-up in 2021. The predictive value of IC and comorbidities for mortality was compared based on the DeLong test.
Results: A total of 245 elderly people (84.0 ± 4.5) were included, with 138 women (56.3%). Median follow-up time was 40 months, with 28 all-cause deaths and 109 falls. Multivariate Cox regression (adjusted for age, sex, comorbidity and polypharmacy) showed that impaired IC could independently predict all-cause death (HR 1.761, $p = 0.002$) and falls (OR 1.352, $p = 0.025$). Impaired chair-rise-test (HR 3.301, $P = 0.023$), weight loss (HR 3.031, $P = 0.008$), disorientation (HR 2.541, $P = 0.018$) were independent predictors of all-cause death. Impaired chair-rise-test (OR 2.877, $P < 0.001$), disorientation (OR 2.552, $P = 0.008$), depression (OR 2.344, $P = 0.038$) and loss of interest (OR 2.197, $P = 0.012$) were independent predictors of falls. The AUC of ICOPE screening tool for predicting all-cause death and falls was 0.818 and 0.714 respectively. The predictive value of comorbidity (CCI) and IC for all-cause death was compared according to Delong test (0.818 vs 0.676, $P = 0.033$).
Key conclusions: As a simple and effective screening tool, IC screening tool can be popularized in the community elderly. IC may be a better predictor of adverse outcomes than disease in the elderly with stable comorbidities.

P-836

Impact of anemia on 5-year survival in very old patients: results of the Moscow 85 + prospective observational study

Abstract Area: Multimorbidity

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Background: Anemia is one of geriatric syndromes.
Aim: To estimate impact of anemia on 5-year survival in Moscow subjects aged 85 + .
Methods: We enrolled 237 consequent in-patients (24% males) aged 85–98 (mean 88 ± 3) years who had stable condition without evidence of acute illness or decompensation of chronic diseases. We measured hemoglobin level at admission. Follow-up was 5 years. Endpoint was all-cause mortality.
Results: Median follow-up was 3.64 years (min 40 days, max 6.03 years, IQR 2.60 to 4.52 years). Ninety-eight patients (41.4%) died. Kaplan–Meier analysis demonstrated that 5-year survival (49.1% vs 67.2%; $p = 0.005$) and survival time (mean [95% CI]: 3.97 [3.60; 4.34] vs 4.69 [4.36; 5.03] years; chi-square = 8.2; $p = 0.004$) were worse in patients with anemia ($n = 112$, 47.3%) compared with patients without anemia ($n = 125$; 52.7%). Cox regression showed that anemia was associated with a 1, eightfold increase in 5-year mortality risk (HR 1.78; 95% CI 1.19 to 2.67; $p = 0.004$). Anemia influenced on 5-year mortality risk in women only (HR 2.00; 95% CI 1.27–3.15; $p = 0.003$), but not in men (HR 1.23; 95% CI 0.52–2.96; $p = 0.637$).
Conclusions: In Moscow subjects aged 85 + , frequency of anemia was 47.3%. Anemia was associated with a 1, eightfold increase in 5-year mortality risk, but this effect was achieved in women only.

P-837

Severity of anemia influences on 5-year survival in very old patients: results of the Moscow 85 + prospective observational study

Abstract Area: Multimorbidity

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Background: Anemia is one of geriatric syndromes.

Aim: To estimate impact of anemia severity on 5-year survival in Moscow subjects aged 85 + .
Methods: We enrolled 237 consequent in-patients (24% males) aged 85–98 (mean 88 ± 3) years who had stable condition without evidence of acute illness or decompensation of chronic diseases. We measured hemoglobin level at admission. Follow-up was 5 years. Endpoint was all-cause mortality.
Results: 125 patients (52.7%) had normal hemoglobin, 69 (29.1%)—mild and 43 (18.1%)—moderate anemia. Median follow-up was 3.64 years (min 40 days, max 6.03 years, IQR 2.60–4.52 years). Ninety-eight patients (41.4%) died. Kaplan–Meier analysis demonstrated that in patients with moderate anemia 5-year survival was the worst (44.2%, 52.2% and 67.2% in patients with moderate, mild anemia and normal hemoglobin respectively; p for trend = 0.013), survival time was the lowest (mean [95% CI]: 3.40 [2.82; 3.97], 4.23 [3.79; 4.68] and 4.69 [4.36; 5.02] years respectively; Chi-square = 11.6; p = 0.003). Cox regression showed that in comparison to normal hemoglobin (reference, HR = 1.00) mild anemia was associated with a trend to 52% increase in 5-year mortality risk (HR 1.52; 95% CI 0.96–2.41; p = 0.074), moderate anemia—with a 2.1-fold increase (HR 2.06; 95% CI 1.25–3.38; p = 0.005).
Conclusions: In Moscow subjects aged 85 + , severity of anemia was associated with 5-year survival.

P-838

Splenic abscess in the elderly

Abstract Area: Multimorbidity

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Background: In medical literature, there are less than 1000 reports of splenic abscesses (SA). SA is an uncommon disease with high morbimortality. The diagnosis of SA is a clinical challenge since it is often difficult due to the nonspecific clinical picture. The presence of multiple chronic comorbidities complicates the clinical course in elderly patients.
Methods: We present an ex-smoker, 77-year-old woman with an aortic valve replacement for severe stenosis, hypertension, obesity, heart failure, chronic kidney failure, insulin-requiring type 2 diabetes mellitus, and hypothyroidism. The patient received full treatment for an episode of vulvovaginitis and lower urinary tract infection. The patient showed up with constant fever, leukocytosis, and upper-left abdominal pain. Ultrasound and MRI confirmed the presence of a SA. Serial blood cultures and urine cultures were negative.
Results: The patient underwent antibiotic therapy and percutaneous drainage due to her high anesthetic risk. Abscess resolution failed. The patient underwent a successful laparoscopic splenectomy. Pathology confirmed SA. The organism cultured from the SA was *Escherichia coli*. The patient received pneumococcal, meningococcal, H. influenzae type b, and influenza vaccinations.
Conclusions: The adequate therapeutic modalities for SA are still controversial. Antibiotic treatment only, percutaneous drainage combined with antibiotic therapy, or splenectomy are efficient methods for the treatment of SA. However, a splenectomy can provide the best outcome management and should be promptly tried in cases of multiple or extensive SA. The reasons to prefer the laparoscopic approach include lower surgical mortality, shorter hospitalization, faster recovery, and reduced complications. The optimal treatment requires the use of the multidisciplinary patient team's resources.

P-839

Hypothyroidism and comorbidity in the elderly

Abstract Area: Multimorbidity

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Background: Hypothyroidism is very common in patients over 65 and the risk increases with age. Subclinical hypothyroidism as the mildest form of thyroid disorders causes metabolic changes that are correlated with an increased risk of atherosclerosis, cardiovascular and cerebrovascular disorders. The aim of this study was to determine the correlation between hypothyroidism and comorbidity in the elderly.
Materials and methods: The study included 122 patients out of a total of 648 patients hospitalized at the Clinical Department of Geriatrics, KBC "Zvezdara" for 3 months. Results The mean TSH and fT4 in the group of patients with hypothyroidism were 12.78 mIU/L and 14.25 pmol/L as opposed to euthyroid patients. The frequency of females was significantly higher ($p < 0.001$). TSH values in the group of patients with hypothyroidism differed statistically significantly in favor of females where TSH was lower ($p = 0.038$). Hypothyroidism affected patients' mobility and range of motion with statistically high significance ($p < 0.001$). In patients with hypothyroidism, with statistically high significance, HLP was more common than in euthyroid patients ($p < 0.001$). Heart failure occurred more frequently in patients with hypothyroidism ($p < 0.001$). Osteoporosis occurred more often in patients with hypothyroidism ($p < 0.001$), as well as cognitive deficit in patients with hypothyroidism, occurred more often and with high statistical significance ($p < 0.001$). We didn't find significant differences between groups for arterial hypertension ($p = 0.348$), diabetes mellitus ($p = 0.711$), chronic kidney disease ($p = 0.871$) and the incidence of chronic pulmonal disease ($p = 0.275$).

P-840

Health of aging inmates of the Mexican penitentiary system: a secondary analysis of the National Prisons Survey 2021

Abstract Area: Multimorbidity

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Introduction: Population in prisons has aged as in any other context. However, this group of individuals is underserved to a number of needs, beginning from the lack of knowledge of how they age. This is particularly true in those countries with high social inequalities. Therefore, the aim of this study was to describe health status and its association with time served in prison.
Methods: Taking advantage of the National Prisons Survey from 2021. A national survey of prisoners performed by the National

Institute of Geography and Statistics every 5 years Description of the main health-related variables were included. In addition, in order to determine the impact of imprisonment, time served was assessed. Relative and absolute frequencies or means and standard deviations (SD) were used accordingly to describe the main variables such as chronic illness and visual, hearing and mobility impairments.
Results: The sample had 8,747 prisoners 50 years and older, 13.8%of them were women with a mean age of 56.9 years (SD 6.41). The mean time of imprisonment was 8.9 years (SD 7.9), 17.7% had diabetes, 29.5% had hypertension, 10.36% had suicidal ideation, 40.9% were visually impaired and 16.98% were hearing impaired. Overall, 17.7% of the sample had mobility impairments. Adjusted multivariate analysis showed that longer time imprisoned was associated with having increased risk for chronic diseases but a protective effect for mobility impairment (OR 0.99 IC 95% 0.98–0.99).
Conclusion: Older prisoners have an increased risk of chronic diseases, though they appeared to be less likely to have mobility impairments.

P-841

The relation between Anemia and systemic inflammation in acutely admitted geriatric patients: a pilot study

Abstract Area: Multimorbidity

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Introduction: Anemia is common in older people and is associated with frailty, physical impairment and increased mortality. We aimed to study whether hemoglobin was correlated to inflammation and comorbidity in admitted geriatric patients.
Methods: Blood samples were collected from acutely admitted geriatric patients during two weeks in December 2021. We registered comorbidity with Charlsons Comorbidity Index (CCI). Anemia was identified according to the WHO definition (hemoglobin < 12.0 g/dl for women and < 13.0 g/dl for men). Potential associations between hemoglobin, c-reactive protein (CRP) and creatinine were investigated using Spearman's rho.
Results: In total 79 patients (84 ± 8 years, 56% women, CCI 7 ± 3) were included. Systemic levels of hemoglobin was 11.8 ± 2.3 g/dL and 57% of the patients had anemia. In patients with CRP > 100 the frequence of anemia was 15/20 (75%). Levels of hemoglobin was associated with CRP ($r = -0.37$, 95% CI -0.55 to -0.15, $p = < 0.001$) but not creatinine ($r = -0.21$, 95% CI -0.42 to 0.02, $p = 0.06$). In patients with a CCI ≥ 5 and CCI < 5, anemia was present in 43/70 (61%) and 2/9 (22%), respectively.
Key conclusions: The present pilot study showed more than half of acutely admitted geriatric patients have anemia, with the highest prevalence among patients with high comorbidity. Notably, systemic levels of hemoglobin was closely related to the systemic level of inflammation, indicating that subtyping anemia and to what extent anemia resolves without treatment should be studied further.

P-842

Sleep-related painful erections associated with rapid eye movement sleep behaviour disorder: a case report

Abstract Area: Multimorbidity

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Introduction: Sleep-related painful erections (SRPE), in which painful erections wake a person from rapid eye movement (REM) sleep, are a rare parasomnia.[1] Both the aetiology and the most effective management remain unclear. However, there may be an association with REM sleep behaviour disorder (REMSBD), a syndrome in which normal REM sleep-associated muscle atonia is lost, during which vivid dreams are acted out.[2] We present a case in which the conditions co-occurred. Case HistoryA 74-year-old male presented with a 15-year history of being woken multiple times nightly by painful erections associated with the urge to micturate, causing severe fatigue. There was no loss of normal sexual function and painful erections did not occur while awake. He also gave a history of frequent violent, vivid dreams and of moving during these to the extent that he found himself on the floor. He also reported symptoms suggestive of obstructive sleep apnoea (OSA). He was therefore diagnosed with SPRE and REM sleep behaviour disorder. He was treated for the latter with clonazepam.
Discussion: A brief narrative review of the literature revealed that while this condition remains uncommon, there is increasing recognition of SRPE as a distressing condition that may be associated with obstructive sleep apnoea [3]. There is limited evidence for management options, but these include benzodiazepines, antidepressants, antiepileptics and baclofen, as well as management of underlying OSA where present [1,3].
Conclusion: More work is required to establish the pathophysiological basis and optimum management of SRPE, a rare condition that may be associated with REMSBD.
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P-843

Severe multineuritis revealing systemic lupus erythematosus at the age of 76 years

Abstract Area: Multimorbidity

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Introduction: The onset of systemic lupus erythematosus (SLE) in the elderly is often insidious. Initial manifestations are usually

atypical and non-specific. Associated comorbidities interfere with the diagnosis. We report a rare case of multineuritis revealing SLE at the age of 76 years.
Observation: A 76-year-old woman was admitted to hospital for an etiological assessment of multineuritis with an altered general condition. she reported photosensitivity,xerostomia,xerophthalmia, inflammatory polyarthralgia and paresthesias. The physical examination revealed pale skin, vitiligo lesions, papulo-squamous erythematous lesions, diffuse alopecia and polyarthritis. The neurological examination showed an asymmetric distal motor deficit, abolition of osteotendinous reflexes,and bilateral and asymmetric hypoesthesia in gloves and socks. The biological work-up showed a normocytic normochromic regenerative anemia, an inflammatory syndrome, thrombocytopenia. The direct Coombs test was positive for Ig G confirming the autoimmune origin of the haemolytic anaemia. The EMG showed a severe sensory-motor multineuritis. Neuromuscular biopsy revealed neurogenic atrophy. Ophthalmological examination showed a positive Shirmer's test associated with superficial punctate keratitis. Salivary gland biopsy showed chronic Chisholm stage III sialadenitis. NAA, native anti-DNA, anti-SSA, anti-SSB and rheumatoid factors were positives. The diagnosis of SLE associated with GSS was retained. The patient was treated with Hydroxychloroquine, 3 boluses of solumedrol® followed by oral corticosteroids, monthly boluses of cyclophosphamide (endoxan®), Bisolvan® and artificial tearsConclusionNeurological signs in the elderly should be interpreted with caution. Indeed, most of the neuropsychiatric syndromes related to SLE classified by the ACR have a symptomatology close to that of other neurological conditions common in elderly subjects.

P-844

Association of vogt koyanagi harada syndrome and behcet's disease after 65 years

Abstract Area: Multimorbidity

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Introduction: Vogt-Koyanagi-Harada syndrome is a severe granulomatous panuveitis associated with extraocular manifestations. To our knowledge, no case of association with Behcet's disease has been reported in the literature. Through an observation and a review of the literature we detail an exceptional case of association of vogt-koyanagi-Harada syndrome and Behcet's disease in an elderly patient.
Observation: A 67 year old patient, followed for Vogt-Koyanagi-Harada syndrome, whose diagnosis was evoked by the sudden onset of visual disturbances. The ophthalmological examination revealed panuveitis with depigmentation of the retina. The skin examination revealed vitiligo with poliosis of the eyelashes. The neurological examination was normal, as was the study of the cerebrospinal fluid. The ENT examination revealed vertigo, the audiogram was normal. The standard biological examinations were normal, Viral serologies were negative. The patient was put on oral corticosteroids at a dose of 1 mg/kg/day for 8 weeks with a degression over several months. The evolution was marked by an improvement of the clinical symptoms. In 2011, the patient consulted for recurrent oral and genital aphthosis,associated with inflammatory polyarthralgias. The physical examination revealed oral and genital aphthosis, andlesions of pseudo folliculitis on the back. The pathergic test was positive. The ophthalmological examination showed sequelae of panuveitis. The diagnosis of an associated Behcet's disease was thus retained. The patient was put on colchicine with rapid improvement of clinical signs.
Conclusion: The autoimmune theory is reinforced by this association of Behcet's disease with Vogt-Koyanagi-Harada syndrome, not described in the literature to our knowledge.

P-845

Laryngeal amyloidosis of the elderly

Abstract Area: Multimorbidity

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Introduction: Laryngeal amyloidosis is a rare cause of dysphonia in the elderly. Only a few cases have been reported in the literature. material and methods:We report the observation of a patient with laryngeal amyloidosis.
Observation: A 67 year old female patient with no previous history of laryngeal amyloidosis consulted for a dysphonia that had been evolving for 3 years and had been progressively worsening for a week, associated with laryngeal pain. The ENT examination with endoscopy revealed a lesion bleeding on contact with the left ventricular band and extending to the anterior commissure. Biopsy concluded to be laryngeal amyloidosis. The immunohistochemical study was inconclusive. The rest of the physical examination noted macroglossia and bilateral synovitis of the fingers. In the extension work-up, salivary gland involvement with amyloid deposition was found. There was no hepatosplenic, cardiac or renal involvement. The biological work-up, including a blood count, protein electrophoresis and an inflammatory work-up, was normal. No clinical or biological signs pointing to multiple myeloma were found.
Conclusion: A literature review and analysis of this case will be performed to determine the epidemiological, clinical, and therapeutic profile of laryngeal amyloidosis, which is most often type AL.

P-846

Multimorbidity clusters in the oldest olds in the EpiChron Cohort: a large-scale epidemiologic study based on real-world data

Abstract Area: Multimorbidity

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Introduction: Multimorbidity is an important challenge for healthcare systems for its increasing prevalence and high impact on people's health and well-being. NICE recommendations aim to identify individuals who may benefit from an approach to care that takes account of multimorbidity. Although the risk of multimorbidity increases with age, little is known regarding the clinical profile of different age groups amongst the oldest old population.
Methods: Based on the information from the EpiChron Cohort, we applied k-means clustering to identify and refine patterns of multimorbidity in individuals who died during the period 2010–2019 at the age of 80–89, 90–99, and $\geq$ 100. The Cohort links demographic, clinical (primary and specialized care), and drug dispensation information of the Spanish National Health System in Aragón (1.3 M).
Results: Descriptive analysis showed a lower morbidity burden and medication use in centenarians compared with other olds. Cluster analysis revealed multimorbidity patterns of cardiovascular and metabolic diseases, pulmonary obstructive conditions and neoplasms, and many other profiles, each with different composition by gender and age group. We saw that one in three octogenarian women had a metabolic profile; a clinically complex cluster with up to seven chronic diseases and the highest prevalence of polypharmacy (64%). We also observed clusters of dementia and genitourinary symptoms in individuals with medication with anticholinergic activity.
Key conclusions: Our study offers an opportunity to use real-world data to better understand the urgency to adequately address multimorbidity in our elderly and help healthcare systems to design effective models of care.

P-847

Managing complexity in the elderly: a case report from a primary care setting

Abstract Area: Multimorbidity

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Introduction: General Practitioners (GPs) manage an increasing number of elderly patients with multimorbidity and social challenges. We aim to maintain functional independence and improve the patient's quality of life, navigating complexity, with a patient-centred care, that is the cornerstone of General Practice.
Case report: A 93-year-old woman, who lives alone and attends GP's appointments mostly unaccompanied, seeks medical assistance mentioning leg edema, pain and a skin rash. Clinical history: hypertension, overweight, frequent urinary infections, presbycusis, cataracts, depressive syndrome, insomnia and mild cognitive impairment. Although independent in most of her daily living activities, she reports frequent forgetfulness and lack of family and social support, while having unstable compliance to social and medical care. The findings on the physical exam are suggestive of varicella-zoster-virus infection on L3 dermatome. The blood tests reveal a severe polycythaemia. Given the biopsychosocial complexity of this case, a system map and an influence diagram were used to define the goals of care. The patient is medicated accordingly and referred to an hematologist and a social worker. In the meantime, an appointment is scheduled to re-evaluate her medical conditions in the presence of her daughter, to establish a long-term intervention plan, based on shared decision-making.
Discussion: System maps and influence diagrams can be useful tools to assess complexity in the elderly. A patient-centred approach is the key to recognise complexity and establish a care plan based on shared decision-making with the patient, aiming for better compliance and to improve the patient's quality of life.

P-848

A retrospective cohort study comparing the clinical characteristics, treatment and outcomes of biopsy-confirmed sarcoidosis in late-onset and younger-onset patients

Abstract Area: Multimorbidity

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Background: Late-onset sarcoidosis (LOS) accounts for up to one-third of cases and is diagnostically challenging due to the difficulty in satisfactorily excluding malignancy and infection, often necessitating repeated investigations. Endobronchial ultrasound (EBUS) is the gold standard for diagnosing pulmonary sarcoidosis. This study aims to compare the clinical presentation, treatment and outcomes in patients with biopsy confirmed sarcoidosis in older and younger patients.
Methods: A retrospective cohort analysis was performed on all patients with EBUS-confirmed sarcoidosis at a tertiary referral centre between 2012 and 2019. Electronic healthcare records were reviewed to obtain information on clinical presentation, confirmatory investigations, treatment and outcomes. LOS was defined as patients aged > 65 years.
Results: In total, 247 patients were included. LOS accounted for 9.3% ($n = 23$). Extra-pulmonary and systemic features were less common in LOS. Threre was no difference in systemic treatment between age groups and LOS patients experienced comparably high rates of satisfactory outcomes. Confirmatory investigations were infrequent and EBUS was safe and well-tolerated.
Conclusion: LOS was lower than expected and extra-pulmonary involvement was uncommon suggesting a pre-selected population. Referral for EBUS should be considered as first line for older patients with unexplained thoracic adenopathy provided further diagnostic investigations are in line with their goals of care. Clinical outcomes

were excellent with low rates of progression, extra-pulmonary organ involvement and systemic therapy initiation, differing from prior studies and may represent less severe disease at diagnosis, enhanced diagnostic certainty or referral bias.

P-849

Determinants of resting energy expenditure in very old nursing home residents

Abstract Area: Nutrition

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Background and aims: Energy requirements in old individuals are not well defined especially in institutionalized old persons despite a high prevalence of malnutrition. This study aimed to measure resting energy expenditure (REE) and to determine factors possibly related to change in REE as a basis for estimating energy requirements.
Methods: In this cross-sectional study including residents of a nursing home, REE (indirect calorimetry), body composition (bio-impedance analysis), and biological, anthropometrics data were collected. Statistical approaches were conducted to determine independent factors associated with REE. Various published predictive equations of REE were compared on our population.
Results: 72 nursing home residents, mostly women (80.5%) aged 87.4 ± 6.6 years were included. According to GLIM criteria, 65.3% of the institutionalized population were malnourished. Mean REE was 1006 ± 181 kcal/day. In multivariate analysis adjusted on gender and age, REE was positively associated with calorie intake, fat-free mass (FFM), functional abilities (French Autonomie Gérontologie Groupe Iso Ressources scale) and elevated CRP level (> 25 mg/l). Significant differences appeared between measured REE and predicted REE by using various published equations.
Conclusions: REE of very old nursing home residents is influenced by FFM, calorie intake, functional abilities, and CRP levels and is poorly predicted by a classical equation based on age, gender, height, and weight. This suggests a metabolic adaptation to caloric restriction and inflammation and prompts to consider the level of physical activity and the presence of sarcopenia when assessing caloric requirements in this population.

P-850

Association between diet quality, nutritional state, and sarcopenia in older adults over 80 years

Abstract Area: Nutrition

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Backgrounds: It is being proposed that nutritional quality is a key factor for sarcopenia prevention, especially among older adults over 80 years old. Previous studies demonstrated a significant association between low protein intake and low muscle mass and muscle strength. However it was also shown that nutrition patterns and nutritional quality may be as important or even more relevant for sarcopenia prevention than protein intake as an single nutritional variable. Additionally, prevalence of sarcopenia was assessed through the EWGSOP 2010 and 2018 revised criteria and subsequantially compared.
Objectives: This study aims to investigate the prevalence of sarcopenia and its associations with diet quality and nutritional status in older adults aged 80 years and over.
Methods: A cross-sectional study enrolled individuals 80 years of age or older who were in outpatient follow-up at a tertiary hospital in southern Brazil between March and October 2018. To obtain energy and macronutrient intake data a 24-h dietary recall (24HR) was conducted to allow the Healthy Eating Index (HEI) calculatation. Nutritional status was categorized based on the Mini Nutritional Assessment (MNA). Sarcopenia was diagnosed using the 2010 and 2018 EWGSOP criteria. To measure muscle mass, an electrical bioimpedance test was performed and the muscle mass index was calculated. Muscle strength was measured by handgrip dynamometry and gait speed was measured in a 4-m test. In order to test the association among studies variables and sarcopenia a Multivariate Poisson Regression Analysis was conducted and results were expressed in Prevalence Ratios (PR)Results:119 included participants (> = 80 years old), predominantly female (n = 67; 56.3%), mean age 83.4 ± 3.0 years, and 43.7% had a low education level (n = 52). The prevalence of sarcopenia was 46.7% (EWGSOP 2010) and 17.6% according to the revised consensus definition. Nutritional quality measured by the HEI was not associated with muscle mass or the diagnosis of sarcopenia in this study. However, for each 100 kcal increase in Total Energy Intake it was identified a significant risk reduction for sarcopenia (PR 0.83 CI95% 0.77–0.91; $p < 0.001$) and for severe sarcopenia as well (PR 0.79 CI95% 0.71–0.89; $p < 0.001$). Differently than anticipated, high protein intake [> = 1.2 g/kg] was independently associated with a greater risk for sarcopenia (PR 3.19 CI95% 1.36–7.54; $p = 0.008$) and for severe sarcopenia (PR 5.43 (1.58–18.6).
Conclusion: In this study, the Healthy Eating Index was not significantly associated with Sarcopenia. However it was demonstrated that the higher the Total Energy Intake the lower was the risk for sarcopenia; Differently than expected, higher protein intake was independently associated with sarcopenia. Further analysis is required to confirm the aforementioned results, so a nested longitudinal study was planned to investigate the association between different nutrition patterns and sarcopenia.

P-851

The organization of audit of the state of clinical nutrition in long-term care institutions

Abstract Area: Nutrition

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Clinical nutrition is the process of ensuring an adequate supply of nutrients to the patient with the help of medicines of various forms: enteral, parenteral and mixed nutrition. For patients living in long-term care facilities, frequent geriatric problems are low mobility,

sarcopenia, frailty, malnutrition, dysphagia, recurrent falls syndrome, anorexia and other conditions that may require the appointment of additional clinical nutrition. Our experience shows that a therapist or a general practitioner works in long-term care institutions, who may not have sufficient experience and knowledge in matters of supplemental nutrition: indications for its appointment, monitoring the effectiveness and safety of this treatment, as well as the choice of the dosage form of supplemental nutrition. The state of clinical nutrition in long-term care institutions requires an audit, so we have developed a special questionnaire, which consists of the following items: age, height and weight (BMI), weight loss in anamnesis, is there any loss of appetite at the moment, has the diagnosis of nutritional disorders been carried out in the patient, is there a confirmed fact of malnutrition, there are are there contraindications for taking additional enteral nutrition medications, dosage form, dosage and duration of taking the drug, are there any side effects against the background of taking supplemental nutrition medications (if they are prescribed). A separate question has been submitted for filling in by the doctor: the estimated dosage form and dosage of the supplemental nutrition drug for this patient. The questionnaire is easy to use, contains open-ended questions that can be answered in monosyllables. Both the doctor himself and the nurse or the manager of a long-term care facility can answer this questionnaire. Our study will help to determine the presence of problems in prescribing this therapy to elderly patients in long–term care institutions, to study the prevalence of indications for supplemental nutrition, and also, if this therapy is available, to study its effectiveness and safety. We also hope that the audit of the state of clinical nutrition in long-term care institutions will be able to increase the awareness of practitioners in the issues of supplementary nutrition.

P-852

Hyporexia in acute geriatric care

Abstract Area: Nutrition

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Introduction: Hyporexia, defined as decreased appetite, is common among older adults with acute conditions. Our aim was to assess its prevalence, clinical course, interventions and mortality in patients admitted to an acute geriatric unit.
Methods: Retrospective study of all patients admitted to an acute geriatric unit in 6 months that reported hyporexia in the last 3 months. Sociodemographic data, functional and cognitive status, malnutrition (defined as an MNA ≤ 7), length of stay and in-hospital mortality data were collected. Management of hyporexia and changes during hospital admission were also assessed.
Results: 360 patients, 44.4% reported hyporexia (mean age 91.9 ± 5.6 years, 61% women, 34% living in care homes, 46% with severe physical disability, 89% cognitively impaired). Hyporexia was less frequent in those institutionalized (38%) vs at home (49%, $p = 0.004$). Length of stay was longer in those with hyporexia (5.6 vs 4.7 days, $p = 0.025$). 62% of patients with hyporexia had malnutrition, 36% were prescribed nutritional supplements. Other interventions targeting hyporexia were: laxatives (73%), mirtazapine as orexigen (14%), withdrawal of potentially anorectic drugs (49%), oral hygiene (21%), dietary interventions (45%) and prescription of exercise (16%). 65% showed some improvement in food intake. Mortality was only increased in highly dependent (Barthel < 20) (28% vs. 16%, $p = 0.048$) and malnourished patients (29% vs. 10%, $p = 0.004$). Malnutrition was an independent risk factor for mortality in hyporectic patients (OR 3.27; 95% CI 1.22–8.77).
Conclusions: Hyporexia is common and may be improved by interventions on drugs and diet. It is commonly associated with malnutrition, and this increases the risk of mortality.

P-853

Oropharyngeal dysphagia in older patients is associated with simultaneous sensory and motor dysfunction in swallowing pathways

Abstract Area: Nutrition

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Introduction: Oropharyngeal dysphagia (OD) is particularly prevalent in the elderly, increasing aspiration risk, malnutrition and dehydration. Biomechanical age related swallowing alterations are well-known, while sensory/motor neurophysiological brain changes remain to be defined.
Methods: Cross-sectional observational study in 12 elderly (> 70 years) with OD (EOD) and 12 healthy volunteers (HV) using videofluoroscopy, pharyngeal sensory evoked potentials (pSEP) and motor evoked potentials (pMEP) to intrapharyngeal electrical and transcranial magnetic stimulation, respectively.
Results: (a) Biomechanics. 75% of EOD had safety alterations ($PAS = 3.8 \pm 1.9$), delayed time to laryngeal vestibule closure (362 ± 64 ms EOD vs 185 ± 57 HV, $p < 0.001$) and upper esophageal sphincter opening (265 ± 68 ms vs 189 ± 31, $p < 0.001$). (b) Neurophysiology. EOD present higher pharyngeal sensory (12.2 ± 6.7 mV vs 5.9 ± 2.2 mV; $p < 0.001$) and tolerance thresholds (26.7 ± 7.9 mV EOD vs. 15.6 ± 7.5 mV HV) and an increase in latency of the peaks N1 (81.7 ± 5.8 ms vs 73.2 ± 7.4 ms; $p < 0.01$), P1 (128.9 ± 17.2 ms vs 106.7 ± 17.0 ms; $p < 0.01$) and N2 (191.9 ± 20.5 ms vs 155.9 ± 15.6 ms, $p < 0.01$) of the pSEPs. The motor threshold was lower in HV in both hemispheres (right: $92 \pm 6\%$ vs $82 \pm 11\%$, $p < 0.03$; left: $91 \pm 8\%$ vs $78 \pm 11\%$, $p < 0.01$) and the latencies of the pMEPs were lengthened also in both hemispheres in EOD (right: 8.3 ± 1.3 ms vs 6.6 ± 1.7 ms, $p < 0.01$; left: 7.7 ± 1.1 ms vs 6.3 ± 1.4 ms, $p < 0.01$).
Conclusions: Elderly patients with OD have high prevalence of impaired swallowing safety with delayed orpharyngeal swallowing response associated with 1) pharyngeal hyposensitivity, 2) impaired conduction and cortical integration of pharyngeal sensory inputs, 3) reduced excitability of the pharyngeal motor cortex and 4) delayed efferent neural response. This characterisation opens the door to specific neurorehabilitation treatments for these elements in EOD patients.

P-854

A step-wise, multidimensional intervention of anorexia of aging: a case report

Abstract Area: Nutrition

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Introduction: Anorexia of aging is an important geriatric syndrome that leads to malnutrition and poor quality of life. The causes are numerous and regaining the appetite is difficult.
Methods: Case reportResults: An 85-year-old woman came to the geriatric clinic with no appetite, fatigue, and low body weight (BMI 14.4 kg/m^2). She was previously admitted to the hospital for a "thorough examination" and diagnosed with "dementia and gastritis". Now she could barely lift 1 kg or cook and had difficulty with bathing. Comprehensive geriatric assessment (CGA) was performed: malnutrition according to GLIM criteria, walking speed 0.5 m/s, 5-time sit-to-stand test (5XSST) 13.4 s, GDS-15 14/15, polypharmacy with 18 medications. Her denture caused pain at chewing. She rated zero points for overall health state and wept disappointment in life. The goal of care was discussed and anorexia of aging was at the center. We applied a step-wise intervention. Week 1: Deprescribing was performed and a food processor was recommended while waiting to see a dentist. Week 2: Depression was discussed and mirtazapine was prescribed (7.5 mg/day, slowly increased); an oral nutritional supplement was recommended together with dietary education. One month later: GDS-15 decreased to 6/15 and MMSE 27, excluding dementia. The patient started physical training with a steady schedule. Two months later, CGA found a sufficient dietary intake, increased body weight (2.2 kg, 7%), and improved physical function (walking speed 1.1 m/s, 5XSST 10.5 s). The patient regained confidence and hope for life.
Conclusion: CGA and a step-wise, multidimensional intervention are helpful in anorexia of aging.

P-855

Digestive and nutritional implications of polypharmacy in older adults

Abstract Area: Nutrition

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Introduction: Polypharmacy is use of 5 or more prescription medications on a regular basis. This review will highlight the issues surrounding polypharmacy and the consequences of these interactions for the older adult. Polypharmacy is widespread among older people, but the adverse outcomes associated with it are unclear. We analyzed the prevalence of digestive and nutritional adverse effects.
Design: Descriptive study in an acute geriatric unit between December 2021 and March 2022. The patient was assessed for dysphagia using the viscosity volume test, loss of appetite and nutritional status using the mini nutritional assessment sort form. The chronic medication prescribed prior to admission is collected and with the help of the Medynut® (application for consultation on medications that affect nutritional status) those drugs that have dysphagia, anorexia or weight loss and xerostomia are recorded. The coding of the diagnosis of malnutrition in medical reports was also analyzed.
Results: 97 patients, 69.7% women. Was 88.28 years. The mean body mass index was 25.16 ± 4.83, mean MNA-SF was 8.58 ± 2.59.59 patients presented dysphagia. Loss of appetite was present in 56.7%.The mean number of drugs prescribed was 9.22 ± 3.24. Analytically: protein 6.4 (± 0.8), albumin 3.2 (± 0.4), cholesterol 166.5 (± 45.3). We found 50 prescribed drugs with dysphagia/anorexia adverse effects in Medynut. Among the most prescribed drugs that caused xerostomia were: enalapril, bisoprolol, mirtazapine. Only 50% of reports coded the diagnosis of malnutrition.
Conclusions: Polypharmacy is potentially harmful to the patient. We must work on deprescribing in a multidisciplinary manner.

P-856

Validation of the Visual/Verbal Analogue Scale of food ingesta (ingesta-VVAS) in oncology patients undergoing chemotherapy

Abstract Area: Nutrition

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Background & aims: Oncology patients undergoing chemotherapy are at risk of losing weight due to low energy intake. The Visual/Verbal Analogue Scale of food ingesta (ingesta-VVAS) has previously shown to be a valid quick and easy tool to discriminate between oncology patients who ingest more or less energy than required. The aims of the current study were to: 1) validate the ingesta-VVAS in an external population; 2) explore discriminative properties of questions that we hypothesized to predict reduced energy intake too.
Methods: In 2019–2021 dietitians performed 322 interviews in 206 adult oncology patients (mean age 62 year (SD 12)) undergoing chemotherapy in two Dutch hospitals, including a 24-h dietary recall, assessment of the ingesta-VVAS and 12 additional questions. First, the Area Under the Receiver Operating Characteristic curve (AUC) was calculated to determine the accuracy of the ingesta-VVAS in predicting low energy intake (< 75% of Total Energy Expenditure (TEE)). Second, using the ingesta-VVAS and additional questions as potential predictors, the optimal model to predict low energy intake was determined.

Results: The ingesta-VVAS score was linearly associated with energy intake as % of TEE (standardized beta = 0.39, $P < 0.001$), with no differences between groups based on use of oral nutritional supplements, body mass index, in/outpatient setting or sex. The accuracy of the ingesta-VVAS score to predict low energy intake was poor (AUC = 0.668, 95%-CI 0.603–0.733). At a cut-off of ≤ 7, sensitivity and specificity were respectively 61.0% (95% CI 51.4%-69.9%); and 68.7% (95% CI 62.3%-74.6%). If in a hypothetical cohort of 100 patients 35% has a low energy intake, 14 patients (95% CI 11–17) will be missed using the ingesta-VVAS, while 20 patients (95% CI 16–25) would be incorrectly classified as having a low energy intake. The optimal multivariate model included the ingesta-VVAS score and the question on 'feeling sick' (AUC = 0.680, 95% CI 0.615–0.746).
Conclusions: We externally validated the ingesta-VVAS to screen for a low energy intake in oncology patients undergoing chemotherapy. In our study the accuracy of the tool was poor. Adding a question on feeling sick only slightly improved model performance. Further external validation is warranted before the ingesta-VVAS can be implemented in clinical practice.

P-857

Clinical audit of older hospital patients investigating the prevalence of malnutrition, sarcopenia and frailty

Abstract Area: Nutrition

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Background: Malnutrition, frailty and sarcopenia are common geriatric syndromes affecting older adults. This study aimed to assess the prevalence of malnutrition, frailty and sarcopenia and the interaction between multiple geriatric syndromes in older hospitalised patients.
Methods: 524 patients hospitalised in Queen Elizabeth Hospital, Lewisham and Greenwich NHS Trust were recruited. Patients were evaluated for frailty using Clinical Frailty Scale (CFS), sarcopenia using SARC-F and malnutrition using nutrition screening tool (NST) and geriatric nutritional risk index (GNRI). Results: The prevalence of malnutrition was 26.9% (NST) and 10.5% (GNRI). The prevalence of severe frailty (39.3%) and sarcopenia (66%) was high. 14% of patients suffered from all three conditions. Severe frailty was present in nearly all patients with sarcopenia (96.9%) and 37% (NST) and 18.9% (GNRI) of people with high risk of malnutrition. These disorders were significantly correlated, where the strongest relationship was observed between frailty and sarcopenia ($r = 0.85$, $p < 0.001$). GNRI at moderate and major risk of malnutrition (odds ratio [OR] 2.24 and 3.95) and moderate and severe frailty (OR 10.15 and 148.00) were associated with sarcopenia (all p values < 0.001). We also demonstrated that dementia increased the risk of sarcopenia (OR 7.49, $p < 0.001$). In Kaplan–Meier survival curve, malnutrition, frailty and sarcopenia contributed to mortality. Levels of albumin, C-reactive protein and haemoglobin were related to severity of geriatric syndromes ($p < 0.05$).
Conclusion: The prevalence of malnutrition, frailty and sarcopenia was high among older hospitalised patients. The presence of these geriatric syndromes indicated poor survival, which could also be predicted by abnormal levels of biomarkers.

P-858

Functional constipation and anorexia in community-dwelling older adults: korean frailty and aging cohort study (KFACS)

Abstract Area: Nutrition

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Anorexia is a relevant geriatric syndrome because it accounts for most malnutrition in older adults. Constipation has been suggested as a risk factor for anorexia. This study aimed to examine the association between anorexia and functional constipation in community-dwelling older adults. Data on 899 subjects aged 72–86 years were obtained from a follow-up survey of the Korean Frailty and Aging Cohort Study in 2018. Anorexia was assessed using the Simplified Nutritional Appetite Questionnaire (SNAQ), while functional constipation was diagnosed based on Rome IV criteria. Anorexia and functional constipation were present in 30.9% and 19.6% of the participants, respectively. Age, female sex, chewing problems, malnutrition, polypharmacy, low Mini-Mental Status Examination (MMSE) score, depressed mood, low serum albumin, and functional constipation were associated with anorexia in the univariate analysis. In the multivariate logistic regression, functional constipation was associated with anorexia (OR 1.478, 95% CI 1.038–2.104) after adjusting for age, female sex, and MMSE score. However, after further adjusting for depressed mood (OR 2.568) and chewing problems (OR 2.196), the relationship was no longer significant. This study showed that functional constipation is associated with anorexia in community-dwelling older adults, but this association is confounded by depressed mood and chewing problems.

P-859

A Danish definition of dysphagia: a multi-professional Delphi study

Abstract Area: Nutrition

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Introduction: Dysphagia is a symptom in many patients and elderly as well and has several consequences. Despite this, there is no clear definition of dysphagia. The purpose with the present study was to generate a Danish definition of dysphagia to enhance collaboration across sectors and professions. MethodsA Delphi methodology was used to achieve consensus among experts from different professions and contexts. The Delphi process was initiated and performed by a multi-professional group of experienced researchers and board members of the Danish Society for Dysphagia. The process consisted of a literature search leading to the draft of different definitions.

Afterwards, two Delphi rounds between professionals and a stakeholder round among patients were conducted.
Results: Round one consisted of seven definitions rated by 194 participants. The second round contained the four highest ranking definitions from round one. In round two there were 279 responders. Both rounds had a wide representation of sectors and geography and most of the participants had more than four years of experience working with dysphagia. After the two Delphi rounds, one definition was clearly preferred: Dysphagia is broadly understood as functional impairments that either prevent or limit the intake of food and fluids, and which make swallowing unsafe, inefficient, uncomfortable or affect quality of life.
Conclusion: This Delphi study resulted in a generic Danish definition of dysphagia, which was broadly accepted by different healthcare professionals, across sectors and among patients. The shared definition may enable better collaboration on patient care but more clearly delineated subtypes may be necessary to support research purposes.

P-860

Nutrition care resulting in improved strength and mobility for colombian older adults with malnutrition risk: results of a quality improvement program

Abstract Area: Nutrition

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Introduction: Malnutrition or its risk affects up to 30% of older adults receiving outpatient care. We assessed whether a comprehensive, nutrition-focused quality improvement program (QIP) prevented the decline of nutrition status, muscle mass (calf circumference), handgrip strength, and mobility among Colombian older adults presenting for outpatient care following a recent hospitalization and/or for chronic disease management.
Methods: At-risk or malnourished patients based on the Mini Nutritional Assessment-Short Form (MNA-SF) received care from the outpatient clinical service of Hospital Universitario San Ignacio in Colombia between 09/2019–03/2020. Patients were followed for up to 12 weeks after baseline visit, received a 60-day supply of oral nutritional supplements (ONS) containing HMB (β-hydroxy-β-methylbutyrate) to support muscle health, and received nutrition and exercise counseling. Muscle strength was assessed via handgrip strength measurements utilizing a hand dynamometer, while mobility was assessed via the Short Physical Performance Battery (SPPB) pre and post QIP.
Results: Of 504 QIP participants, 69% were females, with > 2 comorbidities, and a mean age of 74. Significant improvements in nutritional status (9.3 vs 11.4), calf circumference (30.2 cm vs. 31.9 cm), and handgrip strength (19.3 vs. 19.8) were observed (p-values < 0.05). A 6.1% relative decrease in time to complete the gait speed test and a 5.9% relative decrease in time to sit were observed as part of the SPPB (p-values < 0.05). 78% of participants improved or maintained SPPB balance scores.
Conclusions: These findings highlight the importance of nutrition-focused QIPs with ONS containing HMB for older adults during their recovery phase post a recent hospitalization and/or for chronic disease management.

P-861

Older adults' and healthcare professionals' perspectives on the role of the mediterranean diet and the gut microbiome in healthy ageing

Abstract Area: Nutrition

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Introduction: Dietary and microbiome-based strategies, including the Mediterranean Diet (MD), may promote healthy ageing. We explored older adults' and healthcare professionals' (HCPs) understanding of the MD, gut health, and the microbiome, in healthy ageing. Methods Semi-structured 1:1 interviews and focus groups (FGs) were conducted remotely from July 2021 to January 2022 in Ireland with older adults (55 +), recruited through social, retirement and disease-support groups, and separately with HCPs, recruited through researcher networks and professional associations. Interviews/FGs were recorded, transcribed, and coded using inductive thematic analysis.
Results: Forty seven older adults were interviewed (50% male; 49% aged 60–69 years; 28% 70 +), and 26 HCPs including dietitians ($n = 8$); geriatricians ($n = 5$); therapists ($n = 4$); nurses, pharmacists, catering managers ($n = 2$ each). Older adults considered the MD "a nice way to enjoy food", good for cardiovascular health and longevity, but with accessibility and acceptability challenges (increased salads/fish, less meat/dairy). They felt fibre, 'live' yoghurt, and probiotics maintained gut microbiota, having "something to do with" cognitive and digestive health. HCPs believed microbiota-health effects were "not common knowledge" among older adults, although becoming more topical among professionals and the public. HCPs felt the MD is included, but not overtly, in healthy eating advice, mostly through the promotion of mixed-fibre intake. Many considered a "whole-food approach" to be most important within the MD, considering also socio-cultural and food environments.
Key conclusions: While 'gut health' was considered important, specific effects of the MD on gut microbiota, and the significance of this for healthy ageing, was poorly recognised in our sample.

P-862

The effect of ginger on body weight and fat loss: a systematic review of clinical trial studies

Abstract Area: Nutrition

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Introduction: Obesity has become one of the greatest health concerns all over the world. Estimates indicated that 38% of the world's adult population will be overweight in 2030 without effective interventions. Currently, several phytochemicals and plant-derived supplements, such as ginger reduce the risk of overweight and obesity. Over the last years, interest in ginger components on preventive effects of overweight and obesity has increased and scientific studies focusing on verification of ginger's effect on its preventive and therapeutic actions have increased. The aim of this systematic review is to provide a comprehensive information regarding the effect of ginger on body weight and fat loss.
Methods: A systematic search was conducted on the databases of PubMed, Clinical Trials, Scopus and Sciences untill 2021 with the search term of the key words. Searching was limited to articles with English language and the eligibility of included articles were evaluated by three authors, which also extracted data.
Results and conclusion: Majority of the included studies supported that ginger has an effect on weight lowering and fat loss. Ginger and its main bioactive constituents were reported to attenuate obesity by regulating peroxisome proliferator-activated receptors (PPARs) and the inflammatory signaling pathway in adipocytes. In addition, 6-gingerol and 6-shogaol also exhibited anti-obesity effects by altering the activities of some lipid metabolism marker enzymes and decreasing the expression of various lipogenic marker proteins in studies. This review article provided evidences supporting effect of ginger on body weight lowering and fat loss and demonstrates the importance of future clinical trial studies.
Key terms: Ginger, overweight/obesity, body fat, Zingiber officinale, Systematic review, Clinical trials

P-863

Anorexia in older people: normal aging or underlying disease?

Abstract Area: Nutrition

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Introduction: Anorexia is a challenging problem among older people. Apart from being the result of so-called anorexia of aging, it can also be a symptom of underlying disease. Despite the high prevalence of anorexia, only few recommendations exist about the evaluation in older people. The objective of this study is to summarize evidence and provide guidance through creating a flowchart.
Methods: A systematic literature search was performed. Keywords for older people (aged, geriatrics, older adult), anorexia (also loss of appetite, unintentional weight loss) and diagnosis were combined. After removal of duplicates and case-reports, articles were selected based on title and abstract by two reviewers. Relevant data was further extracted and processed into an evidence-based flowchart. ResultsOut of 589 hits, 24 articles were eventually included. Thirteen articles discussed anorexia, ten of them the anorexia of aging. Two articles covered pathologic causes and one article defined the association between anorexia and disability. The remaining articles discussed the approach of unintentional weight loss in older people.
Key conclusions: The first step in the evaluation of anorexia in older persons is a detailed history and clinical examination. Additional full bloodwork, urine analysis, chest x-ray and a faecal occult blood test should be performed. In case of other gastrointestinal symptoms or persistent anorexia, ultrasound and upper endoscopy are further recommended. Logopedic evaluation should be performed, and social and psychological factors should be taken into consideration. These recommendations are summarized in a flowchart.

P-864

Nutrition impact symptoms in geriatric inpatients

Abstract Area: Nutrition

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Introduction: Assessing nutrition impact symptoms (NIS) systematically might improve the quality of nutritional care in geriatric inpatients at risk of malnutrition.
Aim: To assess the frequency of NIS in geriatric inpatients using the Eating Symptoms Questionnaire [1] and two additional questions (ESQ + 2).
Method: All patients admitted to the geriatric unit between 28 March and 22 April 2022 were assessed. A nursing student asked the patients about NIS and filled in the ESQ + 2 directly in redcap.
Results: 121 patients were assessed and of those 37 patients (30.6%) were excluded due to cognitive impairment or language barriers. The 84 participants had an average age of 85.1 years (SD 7.2), 57 (67.9%) were women. Mean number of NIS from the ESQ + 2 were 4.1 (SD 2.9). The frequency of NIS were; nausea 31 (36.9%), vomiting 20 (23.8%), pain in the stomach 22 (26.2%), diarrhoea 27 (32.1%), constipation 27 (32.1%), pain in the mouth 10 (11.9%), dryness of the mouth 52 (61.9%), pain that affects appetite 17 (20.2%), problems with chewing 24 (28.6%), problems with swallowing 11 (13.1%), taste alterations 16 (19.0%), bothered by smells 5 (6%), pain preventing eating 11 (11.9%), exhaustion affecting eating 41 (48.8%), shortness of breath affecting eating 20 (23.8%) and other nuisances affecting appetite or preventing eating 15 (17,9%).
Key conclusions: Nutrition impact symptoms are common in geriatric inpatients. Most complaints are potentially modifiable and more attention should be paid to manage symptoms in order to improve nutritional care.
Reference
1. Nordén, J., et al. (2015). "Nutrition impact symptoms and body composition in patients with COPD." Eur J Clin Nutr 69(2): 256–261.

P-865

Dietitian led, early identification of malnutrition risk in the emergency department improves rates of assessment

Abstract Area: Nutrition

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Background: Screening for malnutrition in the older adult, frail population is required to identify those who are at risk. Screening within the Emergency Department is the earliest possible screening time for patients presenting to hospital. Frailty at the front door (FATFD) teams are ideally positioned to facilitate screening of this patient cohort.

Aim: The aim of this quality improvement initiative is to improve malnutrition risk identification in a frail older Emergency Department (ED) population within a FATFD team.
Methods: Dietetic Assessment was promoted in a Comprehensive Geriatric Assessment (CGA) if there was a 'yes' response to-have you lost weight and/or do you have a poor appetite? Patient demographics were prospectively entered onto Excel. An updated, shortened CGA included the MST screen to allow detection of the frail older person at risk of malnutrition. Patent demographics, MST and Clinical Frailty Score (CFS) score were prospectively entered onto Excel. Results were analysed using descriptive statistics.
Results: Pre standardised screen, an average of 7 patients were assessed per week. The mean (SD) age was 83.75(6.9) years. The male to female ratio was 1:1.5. No information was available on malnutrition risk or CFS. Post standardised screen, mean (SD) CFS was 5 (1.5) for those screened. An average of 10.3 patients were assessed per week. The mean (SD) age was 84(7) years. The male to female ratio was 1:1.2. Conclusion: Prioritisation of malnutrition risk screening was feasible within an abbreviated CGA and resulted in a 47% increase in the numbers of patients receiving specialist dietetic assessment. Future steps will be to promote self-management of nutrition using targeted information packs.

P-866

Importance of and attention to individual aspects of a health-promoting diet in community-dwelling older people—an enable-study

Abstract Area: Nutrition

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Introduction: To promote healthy aging, it is important to know whether older people are aware of the principles of a balanced diet. Therefore, we investigated how important community-dwelling older people rate certain aspects of a health-promoting diet, to what extent they pay attention to them and whether these statements are reflected in their usual food intake.
Methods: We included 159 healthy participants (78.2 ± 2.8 years, 49.7% female) from Nuremberg and Freising, Germany. Fifteen nutrition aspects derived from recommendations of the German Nutrition Society were rated for importance (very important—unimportant) and attention (very strong—not at all) using 5-level scales. Food intake was recorded by combined food frequency and 24 h recall questionnaires.
Results: For all aspects, importance was more frequently rated high than attention. Most frequently rated as "very important" was "drinking 1–1.5 L a day" (69.8%), and "healthy diet" (53.5%). Least frequently rated as "very important" were "not eating too little" and "eating legumes" (both 10.1%), with a similar picture for attention. In each case, more than two thirds who rated the respective aspect as (very) important also stated that they paid (very) strong attention to it, only for "not eating too little" and "eating legumes" this proportion was lower (50%). Ratings of importance and attention were generally reflected in food intake.
Conclusion: For the majority of healthy, community-dwelling older adults a balanced diet is a high priority. Identified discrepancies between importance and attention imply that health promotion should support the practical implementation of nutritional aspects in everyday life.

P-867

Nutritional risk and its relationship with physical function in community-dwelling older adults

Abstract Area: Nutrition

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Introduction: Simple screening approaches are needed to identify nutritional risk in older people, before overt malnutrition develops, along with the associated poorer health outcomes (e.g. sarcopenia and frailty). This study compared nutrition risk scores, calculated from the DETERMINE Checklist, with physical function outcomes in community-dwelling older adults.
Methods: Participants of the Hertfordshire Cohort Study (HCS) were recruited. Self-reported physical function was assessed using the SF-36 PF (Short Form-36 Physical Function) scale. The Short Physical Performance Battery (SPPB) was performed (gait speed, chair rise time and standing balance). Hand-grip strength was measured. Frailty was assessed (presence of ≥ 3 Fried frailty criteria: unintentional weight loss, weakness, self-reported exhaustion, slow gait speed and low physical activity). Nutrition risk scores were calculated from the DETERMINE checklist (range 0–21). Analyses were adjusted for sex, age, education and number of comorbidities.
Results: 176 participants (94 men and 82 women), median age 83.3 (IQR 81.5–85.7) years, were assessed. Almost half (47%) scored either 'moderate' or 'high' nutritional risk. Higher nutrition risk scores were associated with poorer self-reported physical function (difference in SF-36 PF score: − 0.36, 95% CI (− 0.60, − 0.12) SD per unit increase in nutrition risk score, $P = 0.004$) and higher odds of being frail (odds ratio Fried frailty: 2.23, 95% CI (1.15, 4.33), $P = 0.017$). There were no significant associations with the other outcomes examined.
Conclusions: Cross-sectional associations between higher nutrition risk scores and poorer self-reported physical function and greater likelihood of frailty suggest that this tool may have utility for detecting nutritional problems in older populations.

P-868

The incidence and mortality of refeeding syndrome in older malnourished hospital patients based on three different diagnostic criteria

Abstract Area: Nutrition

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Background: Refeeding syndrome (RFS) lacks both a global unified definition and diagnostic criteria. Therefor different diagnostic criteria are used; phosphate (traditional criterion (TC), the Friedli consensus recommendations (CR) and the ASPEN CR. We aimed to investigate the incidence of RFS in older malnourished hospitalized patients and study the mortality rates in patients with or without RFS based on these three different criteria.
Methods: A longitudinal study with data originated from a randomized controlled trial conducted between March 2017 and August 2019. Totally 85 patients at risk of RFS were included. All patients were provided with enteral nutrition, and phosphate, magnesium and potassium were measured daily during the intervention period. Friedli CR and ASPEN CR had phosphate, magnesium and potassium in their criteria, but with different cut-off values. Incidences were reported, and Kaplan–Maier estimates were used to determine whether mortality was more prevalent in patients with RFS.
Results: The mean (SD) age was 79.8 years (7.4), and the mean (SD) BMI was 18.5 (3.4). kg/m^2 . The incidences of RFS were found to be 12.9% (TC), 31.8% (Friedli CR) and 65.9% (ASPEN CR). Totally 36.5% (n = 31) and 56.5% (n = 48) died at three-month and one-year follow-up, respectively. There was no significant difference in mortality between patients with or without RFS regardless of which criteria that were used.
Key conclusion: Our results show that using different diagnostic criteria significantly impacts incidence but not mortality. Thus, a unified definition and diagnostic criteria will better predict incidence rates.

P-869

Early identification and nutrition intervention of frail older adults at risk of malnutrition by an emergency department frailty intervention team (FIT)

Abstract Area: Nutrition

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Introduction: Frailty is a nutrition related condition which is potentially reversible if modifiable risk factors including malnutrition are identified at an early stage [1,2]. National guidance recommends early identification of risk of malnutrition and provision of timely, appropriate oral nutritional support [3]. Over ½ of older adults presenting to the Emergency Department (ED) are malnourished/at risk of malnutrition[4]. This study evaluates the early identification and nutrition intervention of frail patients at risk of malnutrition by FIT.
Method: A retrospective study of frail patients presenting to a level 4 hospital ED over three months was performed. Each patient had a Comprehensive Geriatric Assessment performed. A referral to Dietetics was indicated by: Malnutrition Screening Tool (MST) score ≥ 2, dysphagia, grade ≥ 2 pressure ulcer or already prescribed oral nutritional supplements (ONS). Data was collected from a Hospital Clinical System using Excel®. The data recorded included: Clinical Frailty Score (CFS), referral reason, 4AT and admit/discharge location. Results: 117 frail patients were referred to Dietetics by FIT. The median CFS was 5 (mildly/moderately frail) with an IQR of 1. 43% (n = 50) had 4AT = 0. 75% (n = 88) had MST ≥ 2 identifying risk of malnutrition 13.6% (n = 16) were already prescribed ONS 9.4% (n = 11) had dysphagia 6.8% (n = 8) had a grade ≥ 2 pressure ulcerNutrition support intervention was provided by the Dietitian to 100% (n = 117) within 24 h of referral. 27% (n = 32) were discharged from ED and 72% (n = 85) were admitted.
Conclusion: FIT have successfully implemented recommendations from the National Clinical Guideline No.22 [3]. Early dietetic intervention in ED, for those admitted and discharged, may prevent the onset/progression of malnutrition in frail patients.
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P-870

Nutrition and functional decline in aging adygs population

Abstract Area: Nutrition

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Introduction: With increasing globalization the world is facing the threat of the preservation of small peoples. Our research is devoted to aging of one of the indigenous peoples of the North Caucasus—the Adygs, whose number does not exceed 100,000 people.
Methods: 184 Adyg patients (84 men and 100 women) aged 65 to 93 years were examined in "Adygeya Republican Clinical Hospital" (Maikop). Were used screening of functional declines ICOPE (WHO, 2021), comprehensive geriatric assessment, the original questionnaire for the study of eating behavior. Waist circumference, weight, height, Quetelet index were measured, wrist dynamometry was performed.
Results: The consumption of a large amount of animal fats, simple carbohydrates, salt with the dominant fried food were revealed in eating behavior of Adygs. Vegetables were consumed daily only by 22.3 + 1.2% of men and 31.9 + 2.4% of women; fruits—by

20.1 + 2.7% of men and 33.2 + 1.9% of women. It was correlated with obesity in 31.4 + 3.5% men and 40.7 + 4.7% women, $r = +0.8$, $p < 0.05$. The average Quetelet index was 30.3 + 2.5 kg/m^2 in the male group, 32.8 + 3.5 kg/m^2 in the female group. Unfavorable eating habits were correlated with functional decline. 12.9 + 0.9% of men and 11.3 + 1.5% of women had fall-related injuries. Hearing and vision loss were observed in 16.1 + 1.6% of men and 16.9 + 1.8% of women. 84.2 + 2.8% had cognitive disorders, 74.0 + 4.2% had a reduced walking speed. In all cases age-dependent decrease in the hand strength was noted, $r = +0.9$, $p < 0.05$.

Key conclusions: Study demonstrates the strong correlation between unhealthy nutrition, anthropometric abnormalities and functional decline in aging adygs population.

P-871

Malnutrition identified by GLIM criteria is prevalent in post-stroke patients undergoing rehabilitation even if they are free from dysphagia complaint

Abstract Area: Nutrition

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The primary objective was investigating the prevalence of malnutrition (MN) by Global Leadership in Malnutrition (GLIM) criteria in post-stroke rehabilitation patients free from dysphagia complaint and its associations with stroke-related parameters. The secondary objective was assessing their dietary quality. We hypothesized that malnutrition rate would be high in stroke patients even if they were free from dysphagia. We included 81 patients with a chronic stroke who received inpatient rehabilitation. We assessed spasticity by the modified Ashworth-scale (MAS), motor function evaluation via Brunnstrom staging, functionality by Barthel-Index (BI), and burden of co-morbidities via cumulative illness rating scale (CIRS). We considered two alternative definitions of low muscle mass (LMM), skeletal muscle mass (SMM)/height2, SMM/body-mass-index (BMI). We evaluated the dietary content with a 24-h recall test. MN was present in 21% and 53.1% when SMM was adjusted by height2 and BMI, respectively. 88.9% of the participants were detected to failed to receive protein 1 g/kg/d, and 91.4% failed to receive 1.2 g/kg/d. The median amount of calories received by the participants was as low as 14.5 kcal/d, and elemental calcium received daily was only 510 mg/d. MAS-hip [odds ratio (OR) = 14.973, p = 0.03], functional ambulation classification score (FACs) (OR = 0.01, p = 0.002) and CIRS score (OR = 2.33, p = 0.006) were independent associates of GLIM (LMM adjusted by height2)-identified malnutrition. Ankle spasticity by MAS was the only independent associate of GLIM (LMM adjusted by BMI)-identified MN (OR = 0.36, p = 0.047). Muscle adjustment by BMI seems to be more appropriate in post-stroke patients because the presence of LMM and protein MN would go undetected otherwise. Malnutrition was associated with indicators of functional impairment. Recognition of malnutrition aid in decreasing dependency rates by subsequent introduction of nutritional interventions.

P-872

Acceptability of fortified beverages in geriatric patients with poor oral intake in an acute setting

Abstract Area: Nutrition

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Introduction: Poor oral intake can lead to malnutrition. Acceptability of milk and milk-based oral nutrition supplements is usually observed to be poor amongst Asian elderly. This study hypothesises that common beverages consumed by the elderly will be equally palatable even when fortified with oral nutrition supplements or full-cream milk.

Methods: 30 patients (mean age 83 ± 5) admitted to an acute geriatric ward and referred to dietitian for poor oral intake were recruited. They were given 3 cups either coffee, tea or malted drink to do a blind taste test. Drinks were either prepared with 15 ml of low-fat milk (STD), oral nutrition supplements (ONS), or full-cream milk (FCM). Subjects then filled up a questionnaire.

Results: 83% liked STD, 93% liked FCM, and 83% liked ONS. There is no significant difference between the acceptability of STD, ONS and FCM ($p > 0.05$).

Key conclusions: The results show that compliance to oral nutrition supplements can be improved if it is mixed with familiar-tasting beverages. Increased compliance will attenuate malnutrition and reduce waste. Beverages prepared with full-cream milk are well-tolerated and should be considered as a fortification alternative if oral nutrition supplements are not accessible. We recommend that oral nutrition supplements or full-cream milk be routinely used in food preparation for at-risk and malnourished elderly.

P-873

Malnutrition is associated with low oxygen radical absorbance capacity

Abstract Area: Nutrition

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Rationale: Reactive oxygen species could be important causative agents of several human diseases, including cancer and atherosclerosis, as well as the aging process itself. Malnutrition is also a geriatric syndrome resulting in increased morbidity, mortality, and adverse clinical outcomes. Diseases, socioeconomic factors;

psychological conditions; and hunger can cause malnutrition. Although there are studies based on the measurement of total antioxidant capacity (TAC) in malnutrition, there is no study evaluating the relationship between oxygen radical absorbance capacity (ORAC), a frequently used tool to measure antioxidant capacity, and malnutrition.
Methods: A total of 157 geriatric outpatients who received no nutritional supplement were included in the study. Patients were asked to remember and record all the foods they consumed for 24 h. In addition, all participants underwent nutritional assessment via Mini nutritional assessment short-form (MNA-SF), and anthropometric measurements were performed within the scope of the comprehensive geriatric evaluation. 24-h food consumption records were analyzed using the Bebis version 8 program, and the statistical data analysis was made using the SPSS program.
Results: The median ± SD age of participants was 71 ± 10 years and; 65% (n = 102) were female. Patients were divided into two categories (i.e., ORAC < 5000 and ORAC ≥ 5000 groups), and 94 (59.8%) and 63 (40.2%) patients were in each group, respectively. The median value of the MNA-SF score was significantly lower in ORAC < 5000 group. (p = 0.005) (Table 1) In our study, the MNA-SF score of the patients was positively correlated with ORAC values (r = 0.230, p = 0.004).
Conclusion: The deficiency and importance of micronutrients in the diets of patients with malnutrition are known. In addition, the antioxidant deficiency should be considered in these patients' nutritional content; furthermore, the lack of antioxidants in the nutritional interventions should also be taken into account. We hope this study shall give an idea in terms of considering the increase of ORAC values in the diet in the treatment of malnutrition. Further larger sampled studies are needed to confirm these findings.

P-874

Nutrage: "Food, nutrition & active aging"

Abstract Area: Nutrition

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Introduction: Italy is one of the countries with the highest proportion of individuals over 65. A longer life expectancy is associated with an increased prevalence of chronic disorders and reduced functional capacity. In fact, among elderly people with multi-morbidity, the prevalence of physical and/or cognitive disability exceeds 65%.Healthy food choices and diets are essential for preventing many age-associated diseases. It is well known that the Mediterranean Diet (MD), particularly rich in vegetable proteins, mono/polyunsaturated fatty acids, microelements and micronutrients, is a powerful protective tool against the onset of many of such diseases.
Methods: The NUTRAGE project focuses on the study and development of innovative approaches and technologies related to agriculture and to food (bio)technologies, aimed at maintaining or increasing the nutritional and health value of food. Nutritional requirements and responses, genetics and genomics (including the microbiota) will be analysed in samples of older Italians. The molecular and cellular mechanisms of the aging process, biomarkers of aging, and strategies to delay aging through dietary interventions will be scrutinized. Furthermore, omics will be used to develop predictive models for personalized nutrition.
Results: The project intends to produce biological and clinical data on the impact of MD in the health of older adults, and to develop "Nutrition Education" programmes, to promote dietary patterns that can prevent or delay the onset of age-associated diseases and functional impairments.
Key conclusions: Nutrage is an innovative project, based on the multidisciplinary approach to healthy diet, as one of the main determinants of healthy and active aging.

P-875

Risk of poor nutritional status associated with age-related body composition changes: sarcopenia, obesity and sarcopenic obesity in Polish community-dwelling older people

Abstract Area: Nutrition

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Introduction: Poor nutritional status (PNS) is a modifiable factor determining abnormalities in body composition—sarcopenia, obesity, and sarcopenic obesity (SO). We aimed to assess the prevalence of these conditions and their association with PNS in elderly Polish population.
Methods: We analysed data from 211 community-dwelling people (mean age 72.4 ± 7.0; 60.2% women). Participants were divided into four groups depending on their body composition phenotype. Sarcopenia was diagnosed based on the European Working Group on Sarcopenia in Older People 2 (EWGSOP2) recommendations using Polish cut-off points for the Appendicular Lean Mass (ALM) index. Obesity was diagnosed in women with the Percent Body Fat (PBF) > 42% and men with PBF > 30%. Subjects fulfilling the criteria for obesity and concomitantly having reduced muscle strength (EWGSOP2 criteria) and muscle mass (ALM/BMI < 0.512 in women and < 0.789 in men) were classified as SO phenotype. Participants without obesity and sarcopenia were categorized as 'normal' phenotype. Nutritional status was estimated with the Mini Nutritional Assessment, and a score of < 24 indicated PNS.
Results: Almost half of the study sample had abnormal body composition (60.7% men and 42.5% women; p = 0.001). Sarcopenia, obesity, and SO were diagnosed in 10%, 32.7%, and 7.1% of participants. PNS was found in 31.3% of subjects. Its prevalence differed between phenotypes: 81% in sarcopenia, 60% in SO, 14.5% in obesity, and 28.3% in 'normal' phenotype group (p = 0.000).
Key conclusions: Abnormal body composition is prevalent in elderly subjects. Sarcopenia and SO are often associated with PNS.

P-876

Food consumption of long-lived elderly during the COVID-19 pandemic

Abstract Area: Nutrition

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Introduction: The confinement as a result of the COVID-19 pandemic caused changes in the lifestyle of the elderly population [1,2]. Some studies suggest changes in food consumption, but data are still scarce [3,4]. The aim of the study was to compare the food consumption of the oldest old, before and during the second year of the pandemic. Methods: Cohort study with elderly people aged 80 years and over, who were not frail. Food consumption data were obtained from 24-h food records applied before and during the pandemic. We also collected anthropometric data, maximum handgrip strength and physical exercise in these two moments. Results: We evaluated 38 elderly with a mean age of 88.7 ± 5, 63.2% were female. The average protein consumption increased during the studied period from 52.6 g to 63.9 g ($p = 0.013$) with no change in the consumption of calories, fiber and other macronutrients. Considering micronutrients, there was an increase in calcium intake from 435.1 g to 631.4 g ($p < 0.001$), magnesium from 186.5 mg to 198.9 mg ($p = 0.043$) and zinc from 5.8 mg to 7.6 mg ($p = 0.009$). We found no difference in mean weight ($p = 0.53$) and calf circumference ($p = 0.22$). However, there was a significant reduction in the mean maximum handgrip strength from 22.7 kg to 21.4 kg ($p = 0.028$). The practice of physical exercise, reduced by 50%. Conclusion: Food consumption improved during the pandemic, however it was not able to avoid the loss of strength related to reduced physical exercise. The oldest old studied increased the risk of sarcopenia.

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P-877

Anorexia in patients with advanced dementia in acute care

Abstract Area: Nutrition

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Introduction: Anorexia is a common symptom among hospitalized patients with advanced dementia. Our objective is to describe the characteristics and mortality of these patients when admitted to an acute geriatric unit (AGU) and three months after hospital discharge.
Methods: Retrospective study of all patients with advanced dementia (GDS 6–7) admitted in a 6 months period to an AGU. Anorexia was defined as reduced appetite or reduced food intake in the last three months and malnutrition by a MNA sf ≤ 7. We compared patients with and without anorexia. Results:158 patients had advanced dementia (mean age 92.2 years, 50.6% men's). 55.7% had anorexia and of them 78.4% had malnutrition. The group with anorexia had a higher mortality three months after hospital discharge (56.1% vs 25.4%, $p = 0.001$). Of those with anorexia, more advanced dementia was associated with a higher mortality (GDS 7 81.8% vs GDS 6 43.18%, $p = 0.002$). Anorexia was the main complaint on admission in 25% of the patients, these had more depression than those having anorexia as a secondary complaint (45.5% vs 16.7%, $p = 0.006$). Conclusion:Half of the patients with advanced dementia that admitted to an acute geriatric unit had anorexia, being the main complaint in 25%. These patients have higher rates of depression and mortality after three months of hospital discharge. These findings support the idea that anorexia should considered a prognostic factor in patients with advanced dementia.

P-878

Trace elements and gut hormones in older patients with malnutrition

Abstract Area: Nutrition

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Introduction: Malnutrition was ever proposed the independent predictor for mortality of older patients aged within 3 months after ED visit. Trace elements deficits was induced by selective food intake in the elderly and later lead to protein calorie malnutrition. Gut hormones, including ghrelin, cholecystokinin (CCK), Glucagon-like peptide-1 (GLP-1), peptide YY (PYY), c-peptide, and insulin are considered to be major regulators of appetite, and they are released in response to nutritional stimuli. This project aims to analyze the variance of gut hormones and trace elements on older patients with malnutrition.
Methods: This prospective study included patients aged ≥ 65 years at the emergency department from August 2018 to February 2019. All patients underwent compressive geriatric assessment including Mini-Nutritional Assessment-Short Form and blood tests for fasting plasma gut hormones and trace elements (Selenium, Zinc, Copper) serum levels.
Results: We enrolled 115 older patients with a mean age of 83.1 years, including 31 (27.0%) patients in normal group, 48 (41.7%) patients in at risk of malnutrition group, and 36 (31.3%) patients in the malnutrition group. As compared with 3 groups, c-peptide had significant higher serum level in at risk of malnutrition group ($p < 0.05$) and Cu seemly had the trend of higher serum value in malnutrition group ($p = 0.071$). Ghrelin, CCK, GLP-1, PYY, Zn, and Se had no significant difference in comparison within 3 groups.
Conclusion: The nutrition deficit status seemly had relationship with c-peptide in older patients. Cu, not Zn or Se, might had some important role in older patients with malnutrition.

P-879

Individually tailored dietary counseling among old home care clients—effects on frailty among persons with protein-energy malnutrition

Abstract Area: Nutrition

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Introduction: Frailty and protein-energy malnutrition (PEM) is common in older home care clients. In this study we evaluated the effect of individually tailored dietary counseling on frailty status among older (aged 75 years or over) home care clients with PEM or its risk.
Methods: This is a part of larger Nutrition, Oral Health and Medication (NutOrMed) study in Finland. The study population consisted of home care clients with PEM or risk of it (intervention group $n = 90$, control group $n = 55$). PEM was defined by score < 24 and/or plasma albumin < 35 g/L. Registered nutritionist gave individually tailored nutritional counselling for participants or their caretakers at the baseline. Nutritional treatment plans included conventional food items. The frailty was assessed using the abbreviated Comprehensive Geriatric Assessment (aCGA) at the baseline and after six-month intervention. The aCGA consists 15 questions from tree different domains: cognitive status (MMSE), functional status (ADL, IADL) and depression (GDS-15).
Results: The mean age was 83.9 in the intervention and 84.3 in the control group. At the baseline frailty prevalence was 58.9% ($n = 53$) and after six-month 37,8% ($n = 34$) in the intervention group and, respectively 63.6% ($n = 35$) and 52.7% ($n = 29$) in the control group. The intervention decreased significantly ($p = 0.004$) the prevalence of frailty in the intervention group but not in the control group.
Key conclusions: An individually tailored nutritional counseling reduced prevalence of frailty among vulnerable home care clients with PEM or its risk. This finding emphasis the importance of individually tailored nutritional counseling even among frail home care clients.

P-880

Fructooligosaccharides (FOS): 30 g FOS to relief constipation without laxatives at long term care facility

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Constipation is widely considered to be a common problem among the elderly, as evidenced by the high rate of laxative use in this group, Chronic use of laxatives in elderly has been associated with numerous complications, including diarrhea, fecal soiling, hypoalbuminemia, and high serum levels of magnesium and phosphorus.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology".All stakeholders were involved and interventions were carried out in three steps. First step was to establish a nutrition management protocol which outlined use of fructooligosaccharides (1st PDSA), Second step to stop all laxatives and refer to dietitian to assess and prescribe liquid fructooligosaccharides, They are received Liquid Fiber with FOS for one Month, first week start with 15 ml daily, on second week and the doses for some patients are increase to 15 ml Twice/day, third and fourth week the dose maintenance and continue same dose. Fluid intake also increases (2nd PDSA), Third step was to monitor bowel motion every shift by using the Bowel Movement using Bristol stool chart assessment stool (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed patients passing stool every day (frequency from 2 to 3 times/day, and type of stool between 3–4 as Bristol stool scale) without laxatives administration, also no more gases, fullness, distention and bloating present with patients.
Conclusion: Prevention of constipation in the long-term care facilities is really challenging due to the complexity of the medical conditions. However, this project has shown constipation treatment and prevention is possible if interventions are implemented by dietitian and also decreasing using of the laxatives which reduce the cost.

P-881

Fluid management (Enteral feed & IV fluid): improving fluid management using "FAM" protocol by involving multidisciplinary team members at enaya specialized care center

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, all are high risk of dehydration. On artificial feeding, IV fluids may need to be given urgently and fluid intake through feeding tube will need to be appropriately amended as per the requirements. If managed improperly then it is associated with increased risk of mortality and morbidity.
Methods: A multidisciplinary team was formed to conduct a quality Improvement project to improve fluid management using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved, and interventions were carried out in three steps. First step was to establish a FAM (Fluid Assessment & Management) protocol which outlined use of a standard fluid deficit calculator and accordingly manage with appropriate fluid and quantity (1st PDSA), Second step was to educate physicians and early involvement of dieticians and monitoring by nurses (2nd PDSA) and Final step was directed towards family who were also involved in feeding (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing, Dieticians) showed compliance with use of a standard protocol from 0 to 35% within 1 month and subsequently increased to 100%,dieticians were involved in all cases started on IV fluid and establishing a guideline on management of fluids.

Conclusion: Multidisciplinary approach using standard tools in calculating fluid deficits and managing it with appropriate quantity of fluid replacement has led to better outcomes with no iatrogenic complications.

P-882

Improving person-centered dietetic care by involving patients/family in plan of care at long term care

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities. A person-centered care is a practice of caring the residents and their families and It also involves partnership of healthcare professionals includes listening to,informing and involving the patients in their care;providing care that is respectful of and responsive to,individual patient preferences, needs and values, and ensuring that resident values guide all clinical decisions.
Methods: A multidisciplinary team was formed to conduct a quality Improvement project to improve fluid management using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in three steps. 1st was to Dietitians interviewed all patients using the appropriate languages and discussed plan of care with patient/Family (1st PDSA), 2nd step was to Patient/Family Engagement in Dietetics and Nutrition Care from admission to Discharge (2nd PDSA) and 3rd step was patient/Family satisfaction survey questionnaire was developed to evaluate the nutrition counselling and services provided by the Department of Nutrition and Dietetics (3rd PDSA).
Results: Following culture change strategy intervention showed there was a noticeable family/Caregiver satisfaction improved from 30 to 75% and subsequently increased to 96%, which was beyond the set target of 90%.
Conclusion: Build a positive communication between patients/family it is not easy. Patients strongly desire individualized nutrition care and greater involvement in care, Family and caregivers feel more involved in the care, hence increasing overall satisfaction.

P-883

Amino acid and pressure ulcer (PI): improve PI by use amino acid (L-arginina, glutamine and hmb) at long term care

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Older adults are more likely to have chronic wounds and the effect on quality of life is particularly profound in this population. Nutrition plays an essential role in wound healing, wound care practices, and nutritional support needs to be considered a fundamental part of wound management.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology".All stakeholders were involved and interventions were carried out in four steps. First step was to establish a nutrition management protocol which outlined use of an amino acid (Arginine glutamine and beta-hydroxy-beta-methylbutyrate (1st PDSA), Second step to refer all wound cases to dietitian to assess and prescribe amino acids (2nd PDSA), Third step was to pilot in units of the long-term care facility to analyze the effectiveness of this initiative (3rd PDSA), Fourth step to Calculate percentage of wound healing and reassess by dietitian (4th PDSA).
Results: Following WHO multimodal improvement strategy (build it,teach it,check it,sell it and live it) showed all wound healed 100% in long term by given the resident L-Arginina as supplement to accelerate healing and to reduce the cost.
Conclusion: Treat chronic wound in the long term care facility is really challenging due to the complexity of the medical conditions. However, this project has shown healed chronic wound is possible if interventions are implemented by Dietitian and multidisciplinary team members.

P-884

Dementia and nutrition care: developing an evidence—based model for nutritional care at long term care facility

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Centre provides care for people who are Diagnosis with Dementia.. Currently there are 23 patients diagnose as Dementia (13 on oral Intake, 8 on NGT and 3 on PEG). Elderly suffering from dementia are at increased risk of malnutrition due to various nutritional problems, and the question arises which interventions are effective in maintaining adequate nutritional intake and nutritional status in the course of the disease.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology".All stakeholders were involved and interventions were carried out in three steps. First step was to establish Management of Weight Loss in the Elderly protocol (1st PDSA), Second step to Provide Provision of adequate food according to individual Dysphagia Levels and needs with respect to personal preferences (2nd PDSA), Third step was use of Oral Nutrition Supplement to improve nutritional status.
Results: Following WHO multimodal improvement strategy (build it,teach it,check it,sell it and live it) showed all patients gaining weight after Dietitian Intervention by increase calorie,Protein and add Oral Dietary Supplement, there is significant improvement of oral intake comparing 6 months ago to present. This resulted to progressive increase in BMI and improve albumin level.
Conclusion: Nutrition intervention is important in order to address the feeding concerns that are present in different stages of Dementia. This is to ensure that patient is adequately fed and to achieve a healthy weight. However, this project has shown prevent weight loss is possible if early interventions are implemented by Dietitian.

P-885

Obesity alleviates mortality risk in nursing home residents with self-reported weakness

Abstract Area: Nutrition

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Introduction: In nursing home residents, obesity alone was reported to demontrate lower risk of mortality, compared to other body phenotypes. In this setting, it was also reported that self reported weakness could be used as a practical proxy of low muscle strength measurement. In this study, we aimed to analyse whether self reported weakness gained an increased risk of mortality when it was accompanied by obesity in nursing home residents.
Methods: This is a retrospective, longitudinal follow-up study. We recorded age, sex, nutritional status, number of diseases and medications. We assessed weakness by asking whether participants consider their grip strength was decreased compared to the same-aged healthy individuals. We assessed obesity via Tanita BC-532 bioimpedance analyzer, using fat percentage method. We compared 'weak alone' group with 'weak + obese' head to head, to find out which one demonstrated higher risk of mortality.
Results: We included 73 participants, with a mean age of 76.3 ± 8.0 and 38.4% being female. Median follow-up time was 46 months, and mortality occurred in 47.9%. In multivariate analysis adjusted for age, gender, undernutrition, number of diseases and regular medications, 'weak + obese' group demonstrated a lower risk of mortality compared to 'weak alone' group (HR = 0.2, 95% CI = 0.04–0.6; p = 0.006).
Key conclusions: According to our study, obesity accompanying self-reported weakness demontrated a lower risk of mortality, compared to self-reported weakness without obesity. This is another study supporting 'obesity paradox' in older adults. Further studies with larger samples are needed to support these findings.

P-886

Bimuno: Administration of a prebiotic supplement to treat diarrhea without antidiarrheal medication at long term care units

Abstract Area: Nutrition

ALAnoud ALFehaidi[1]

[1]HMC

Introduction: Enaya Specialized Care Center in Hamad Medical Corporation in Qatar is a 200-bedded long-term care facility to residents who have multiple comorbidities and behavioral problems, Diarrhea is common in the elderly and can become a severe condition if not managed properly. Diarrhea is one of the leading causes of unintentional underfeeding in geriatric unit's patients while use of antibiotics leads to a significant change of the gut microbiome, antibiotic associated diarrhea, clostridium difficile infections and other causes connected with hospital stay. Scientific data shows that some prebiotics are useful in treatment of diarrhea.
Methods: A quality Improvement project is conduct by using "Plan-Do-Study-Act (PDSA) quality improvement methodology". All stakeholders were involved and interventions were carried out in three steps. First step was to establish a nutrition management protocol which outlined use of prebiotic (Bimuno)(1st PDSA), Second step to consult dietitian to assess and prescribe prebiotic (Bimuno), They were received prebiotic (Bimuno) for 2–4 week, first week start with 3 g Bimuno twice/day, on second week and the doses for some patients are increase to 3 g four times /day, third and fourth week the dose maintenance and continue same dose. Fluid intake also increases (2nd PDSA), Third step was to monitor bowel motion every shift by using the Bowel Movement using Bristol stool chart assessment stool (3rd PDSA).
Results: Following multimodal multifaceted intervention by the interdisciplinary team members (Physicians, Nursing and Dieticians) showed patients passing stool every day (frequency from 2 to 3 times/day, and type of stool between 3–4 as Bristol stool scale) without antidiarrheal medication administration, also no more gases, fullness, distention and bloating present with patients.
Conclusion: Treatment diarrhea in the long-term care facilities is really challenging due to the complexity of the medical conditions. However, this project has shown diarrhea treatment and management without antidiarrheal medication is possible if interventions are implemented by dietitian to prescribed prebiotic supplement and also decreasing using of the antidiarrheal medication which reduce the cost.

P-887

Effect of a novel liquid thickener on hydration status and its acceptability and GI tolerance in patients with oropharyngeal dysphagia: a 14-day interventional pilot study

Abstract Area: Nutrition

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Introduction: Dehydration is the main complication of oropharyngeal dysphagia (OD). Our aims were to study the acceptability, gastrointestinal (GI) tolerance, compliance and palatability, and the therapeutic effect of the 14-day intervention with thickened fluids (TF) by ThickenUp® GelExpress (TUGE), on hydration status in patients with OD.
Methods: Prospective pilot study. OD was assessed by videofluoroscopy (VFS) while swallowing 10 and 20 ml of liquid (< 50 mPa s) and TUGE at slightly-thick (56.2 ± 3.5 mPa s), nectar/mildly-thick (154.2 ± 0.0 mPa s), honey/moderately-thick (407.2 ± 11.7 mPa s), and pudding/extremely-thick (614.2 ± 11.4 mPa s). A diary on the palatability, GI tolerance, and compliance to the thickener was recorded in accordance with the UK Advisory Committee on Borderline Substances guidance. Hydration status was assessed by monitoring daily TF intake, and analytical parameters (serum and urinalysis).
Results: 16 patients (74.4 ± 10.2 years, 37.5% women) were included, who had efficacy and safety impairments at VFS (PAS 5.5 ± 2.2, delayed laryngeal closure 303.5 ± 110.7 ms, and 43.8% aspirations). The TF adherence and the volume of thickened drinks

were high (93–100% and 1488 mL/day respectively). Acceptability was high, with a minority indicating that they disliked TUGE, distributed as qualifiers "appearance" in 1 subject (6.3%), "taste" in 1 subject (6.3%), or "texture" in 3 subjects (18.8%). Burping or flatulence were reported in 6 subjects (37.5%), without serious GI side effects. A reduction vs baseline of hemoglobin (14.3 ± 1.5 g/dl vs 13.9 ± 1.6 g/dl, $p = 0.016$), hematocrit (42.8 ± 4.2% vs 41.8 ± 4.3%, $p = 0.040$), calcium (9.7 ± 0.6 mg/dl vs 9.4 ± 0.3 mg/dl, $p = 0.028$), magnesium (2.1 ± 0.2 mg/dl vs 2.0 ± 0.2 mg/dl, $p = 0.006$) and urea (40.6 ± 13.1 mg/dl vs 36.9 ± 11.3 mg/dl, $p = 0.039$) was found. Key conclusions: This pilot study shows TUGE was well-accepted, well-tolerated and significantly improved the hydration status in patients with OD.

P-888

Screening of nutritional status in older adults using novel web service NRS 2002/GeroS/CEZIH in Croatia

Abstract Area: Nutrition

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Malnutrition is a frequent condition in older population leading to diminished physical/mental function and impaired clinical outcome. Nutritional Risk Screening 2002 (NRS 2002) is a widely used tool in a routine clinical practice for nutritional risk identification, with relatively small amount of data about its validation in elderly population [1]. Moreover, nutritional screening has not been a regular part of medical care in majority of Croatian health and social-care facilities. NRS2002 was incorporated within the gerontologic service of the Croatian Central Health Information System (Geros/CEZIH) to facilitate implementation of routine nutritional screening in medical care. This web service has been optionally available to healthcare professionals at all levels of care for the elderly to assess major gerontologic-public health determinants. From March 2015 to December 2021, we retrospectively analyzed data of 960 65 + patient entries in different health care settings. Majority were recorded in primary care (55.9%), followed by acute care (27.5%), nursing homes (11.8%), and long-care facilities (3.8%). Basic antropometric parameters like BMI (Body Mass Index) revealed that majority of patients (41.0%) had normal weight, 16.3% were obese, 18.3% overweight and 14.4% underweight. According to NRS-2002 31.8% of patients were at nutritional risk. Analysis of functional ability based on physical mobility revealed that most subjects were completely mobile (60.4%) and fully independent (45.5%). Our results confirm high prevalence of malnutrition in the elderly population on all levels of health care. The NRS 2002/GeroS/CEZIH web service proved highly useful in timely monitoring of nutritional risk as a part of routine geriatric assessment.

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P-889

Practicalities and outcomes of nasogastric tube feeding in older adults on general medical wards

Abstract Area: Nutrition

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Introduction: Nasogastric (NG) tube feeding can be used to provide nutrition and hydration in those who have inadequate intake or dysphagia (both of which may arise from acute illness). Studies are lacking on the practicality of NG feeding in older adults in the UK. We aimed to describe those who receive NG feeding, self-extubation rates, volume of feed received, and mortality.

Methods: This was registered as a service evaluation. Participants, aged > 65, who underwent NG feeding in medical wards were included. The Dietetics department list includes patients who are under review for inadequate nutritional intake, and all in-patients on NG feeding for any reason. All cases on the list were reviewed using electronic health records to determine those who received NG tube feeding. NG feeding is offered to individuals who have inadequate nutrition despite best conservative efforts of oral supplementation and may be trialled in those who lack capacity, in their best interests. Data was obtained on demographics, comorbidities, evidence of self-extubation, feed delivered, and in-hospital and six-month mortality.

Results: 52 individuals received NG feeding, with mean age 82 and median clinical frailty scale 6. Self-extubation rate was 69%. Median feed delivered was 255 ml/day, and median number of days fed was 10. In-hospital mortality was 29% and six-month mortality was 48%.

Key conclusions: There was evidence to suggest NG feeding in older in-patients is challenging with a high self-extubation rate of 69% and a relatively low median feed delivered of 255 ml/day. Mortality rates were high and this proportion of patients.

P-890

Associations of weight-adjusted waist index with fat mass, muscle mass and all-cause mortality in 32-year follow-up in older men from Helsinki Businessmen cohort

Abstract Area: Nutrition

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Introduction: We tested how a simple index of body composition weight-adjusted waist index (WWI) predicted all-cause mortality during a 32-year follow-up of older Caucasian males with a homogenous socioeconomic background.

Methods: Participants were 1347 males from the Helsinki Businessmen Study, born 1919 to 1934. In 1985/86 (mean age 60 years) they took part in various health measurements during a clinic visit. WWI was calculated as waist circumference (cm) divided by square root of body weight (kg). Body fat (BF) % and skeletal muscle mass

(SM) % were calculated using validated formulas (including waist and hip circumferences, weight, and age). Mortality was retrieved from registers through 2018, and Hazard Ratio (HR) for all-cause mortality calculated for WWI quartiles, and correlation between BF% and WWI and SM% and WWI tested.
Results: High WWI increased mortality risk; in Q4 vs. Q1 Hazard ratio (HRO) for WWI was 1.55 (1.30–1.85). WWI correlated also positively with BF% ($r = 0.699$, $p < 0.001$) and negatively with SM% (-0.686, $p < 0.001$).
Key conclusion: High WWI increased risk of all-cause mortality, and it was strongly correlated positively with BF% and negatively with SM%. It thus seems to be an accurate, easy-to-use index for determining body composition and mortality risk without expensive measurements.

P-891

Description of the SPRINTT trial nutrition intervention and feasibility

Abstract Area: Nutrition

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Introduction: The "Sarcopenia and Physical Frailty in Older People: Multicomponent Treatment Strategies" (SPRINTT) project sponsored a multi-center randomized controlled trial (RCT) with the objective to determine the effect of physical activity and nutrition intervention for prevention of mobility disability in community-dwelling frail older Europeans. We describe here the design and feasibility of the SPRINTT nutrition intervention.
Methods: The nutrition intervention was carried out mainly by individual nutrition counseling. Nutrition goals included achieving a daily protein intake of 1.0–1.2 g/kg body weight, energy intake of 25–30 kcal/kg of body weight/day, and serum vitamin D concentration $\geq$ 75 mmol/L. Survey on the method strategies and feasibility of the nutrition intervention was sent to all nutrition interventionists of the 16 SPRINTT study sites.
Results: Nutrition interventionists from all study sites responded to the survey. All responders found that the SPRINTT nutrition intervention was feasible for the target population, and it was well received by the majority. The identification of participants at nutritional risk was accomplished by combining information from interviews, questionnaires, clinical and laboratory data. Although the nutrition intervention was mainly carried out using individual nutritional counselling, other assisting methods were used as appropriate.
Conclusions: The SPRINTT nutrition intervention was feasible and able to adapt flexibly to varying needs of this heterogeneous population. The procedures adopted to identify older adults at risk of malnutrition and to design the appropriate intervention may serve as a model to deliver nutrition intervention for community-dwelling older people with mobility limitations.

P-892

Inadequate daily protein and energy intake according to nutritional risk status in Turkish older outpatients

Abstract Area: Nutrition

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Introduction: There is not enough data on inadequate daily protein and energy consumption rates according to the nutritional risk status in geriatric outpatients in developing countries. The aim of this study is to evaluate inadequate daily protein and energy intake according to the nutritional risk status by MNA-SF and GLIM criteria in Turkish geriatric outpatients.
Material and methods: A total of 106 patients aged 60 years and over were included. Nutritional status was assessed by using the MNA-SF and GLIM criteria. Three consecutive day dietary records were collected to calculate the amount of daily protein and energy intake. Nutrition Information System (BeBis) 8.2 full version program was used to analyze the daily energy and nutrient values of each food item consumed. Results: According to MNA-SF, 63.2% of the patients were in normal nutritional status, 26.4% were at risk of malnutrition, and 10.4% were malnourished. According to the GLIM criteria, 21.7% patients had malnutrition. Three-day food consumption records revealed that the 71.6% of the patients with normal nutritional status by MNA-SF, had protein consumption insufficiency and 86.5% had energy insufficiency, In the group with no malnutrition according to GLIM criteria ($n = 83$), 68.7% had protein insufficiency and 81.9% had energy insufficiency according to the 3-day food consumption records.
Conclusion: Inadequate daily protein and energy intake were detected high independent of the nutritional risk status by the GLIM criteria and MNA-SF in Turkish geriatric outpatients.

P-893

Poor nutritional status and sarcopenia in older adults with COPD

Abstract Area: Nutrition

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Chronic obstructive pulmonary disease (COPD) is ranked among civilization diseases. The prevalence of COPD is four times higher in subjects over 60 than people younger than 50. Abnormal nutritional status and changes in body composition are among the most prevalent comorbidities in subjects with COPD, with a substantial, negative

impact on prognosis. Concomitance of malnutrition and sarcopenia (malnutrition-sarcopenia syndrome, MSS) increases the risk of death. The present analysis aimed to assess the prevalence of malnutrition, sarcopenia and malnutrition-sarcopenia syndrome in elderly subjects with COPD and investigate the relationship between COPD severity and these conditions. A cross-sectional study involving 124 patients with stable COPD, aged $\geq$ 60, participating in a stationary pulmonary rehabilitation program. Nutritional status was assessed following the Global Leadership Initiative on Malnutrition (GLIM) criteria and sarcopenia with the European Working Group on Sarcopenia in Older People 2 (EWGSOP2) criteria. The results of pulmonary function tests were obtained from the hospital database. Malnutrition was diagnosed in 28 (22.6%) subject, sarcopenia in 16 (12.9%) patients and 12 (9.6%) of them had MSS. The prevalence of severe and very severe obstruction was significantly higher in patients with malnutrition-sarcopenia syndrome ($p = 0.0068$) compared to subgroup without malnutrition or sarcopenia and subgroup with only one condition. Despite the well-known adverse consequences of malnutrition and sarcopenia and their high prevalence in elderly subjects with COPD, both conditions are rarely diagnosed in such patients. Lack of diagnosis precludes implementation of therapeutic intervention. Based on our results, we suggest screening for both malnutrition and sarcopenia in all elderly subjects with COPD, regardless of its severity.

P-894

Determination of malnutrition by the global leadership initiative on malnutrition criteria and three nutritional tests in older inpatients

Abstract Area: Nutrition

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Introduction: Malnutrition (MN) prevalence might vary according to the methods and tests used. Global Leadership Initiative on Malnutrition (GLIM) criteria, Short Nutritional Assessment Questionaire (SNAQ), Malnutrition Universal Screening Tool (MUST), and Mini Nutritional Assessment-Short Form (MNA-SF) have not been co-investigated on MN in older inpatients. So, we aimed to compare those common tools to the GLIM criteria among hospitalized older patients.
Methods: Eligible older inpatients from the Internal Medicine Department from June 2021 to May 2022 were enrolled in the study. Nutritional status was assessed by the GLIM criteria, SNAQ, MUST, and MNA-SF.
Results: A total of 194 inpatients were included in this study (Mean age 72.2 $\pm$ 8.4, 54.6% females). The prevalences of MN with GLIM criteria, MNA-SF, SNAQ, and MUST were 50.0% (30.4% Stage 1, 19.6% Stage 2), 69.5% (at risk of MN 38.1%, 31.4% MN), 43.3% (4.6% moderate MN, 38.7% severe MN) and 47.4% (9.3% medium risk, 38.1% high risk), respectively. Sensitivity and specificity values of MNA-SF, SNAQ, and MUST for MN diagnosed by the GLIM criteria were; 96.9% vs 57.7%, 84.5% vs. 99.0%, and 95.9% vs. 96.9%, respectively.
Key conclusions: The prevalence of MN significantly varied by the use of different tests. The highest MN prevalance was with MNA-SF and the lowest with SNAQ. The MUST tool was with the highest sensitivity and specificity for MN defined with the GLİM criteria.

P-895

Vitamin status in real life for elderly outpatients

Abstract Area: Nutrition

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Vitamins deficiency in elderly hospitalised patients is frequent. We didn't know the prevalence in an outpatient elderly population. A prospective study was carried out (November 2021–May 2022) on elderly patients referred by their GP to day hospital for geriatric assessment. Oral agreement for each participant was researched, each data was anonymized. Water-soluble vitamin included vitamin B9, B12 and C; fat-soluble vitamin: vitamins D25, A, E, K; essential trace elements: selenium, zinc and iron plasma. Descriptive, comparative analyses were led (Student or Mann–Whitney test, Chi square $\pm$ Yates or Fisher test). Forty-nine patients were included (86 $\pm$ 5 years, 31 women, 48 were at home). Sixteen patients had fat-soluble vitamin deficiency (9 for vitamin D25-mean: 10.4 $\pm$ 7.7 ng/ml, 4 for A—mean: 1.39 $\pm$ 0.2 µmol/L, 5 for K without anticoagulant therapy—mean 72.6 $\pm$ 17.3 ng/L). Water-soluble vitamin deficiency was present in 12 patients (6 for B9—mean 2.3 $\pm$ 0.8 ng/ml, 9 for C—mean 13.9 $\pm$ 4.7 µmol/L). Essential trace elements deficiency was found in 37 patients (6 for selenium, 31 for zinc, 18 for iron plasma). SPPB score tended to be lower in patients with water-soluble vitamin deficiency ($p = 0.058$). CKD-EPI was significantly lower in patients with essential trace element deficiency (57.8 $\pm$ 16.7 VS 81.4 $\pm$ 6.6; $p < 0.001$). Water-soluble vitamin deficiency was more frequent for women ($p = 0.029$). Sarcopenic patients, chronic kidney disease and women are risk factors for potential deficiencies in elderly outpatients.

P-896

Prevalence of undernutrition and its association with cognitive decline and incident dementia: results from the PROMED-COG Project

Abstract Area: Nutrition

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Introduction: Workpackage 2 of the "PROtein enriched MEDiterranean diet to combat undernutrition and promote healthy neuroCOGnitive ageing" (PROMED-COG) project aims to estimate the prevalence of undernutrition in adult and older people and its impact on cognitive function.
Methods: Three Italian longitudinal cohorts were included: The Italian Bollate Eye Study [1], involving dementia-free community-dwelling individuals aged 40–74 years; the Progetto Veneto Anziani [2], involving adults aged ≥ 65 years; the Italian Longitudinal Study of Ageing [3], including individuals aged 65–84 years. After data harmonization, we operationalized undernutrition considering the GLIM criteria [4]. The associations between undernutrition and cognitive decline (change in Mini-Mental State Examination [MMSE] scores into the worst quartile) or dementia incidence were evaluated by Cox proportional hazard regression models. MMSE scores trajectories over the follow-up were identified by assessing the Bayesian Information Criterion, and their association with undernutrition was tested through multinomial logistic models.
Results: Undernutrition prevalence in the pooled cohort (n = 9071) was 14.3% and was higher among females (15.4% vs 13%) and the oldest ones (3.5% among subjects aged < 60 years to 28.8% in those 85 +). Undernutrition was associated with cognitive decline [Hazard Ratio (HR) = 1.20, 95% Confidence Interval (CI): 1.02–1.41) and dementia incidence (HR = 1.57, 95%CI: 1.01–2.43). Three MMSE trajectories were identified: rapid decrease (4.8%), gradual decrease (22.1%), and constant high scores (73.1%). Undernutrition at baseline was associated with a higher odds of belonging to the rapidly decreasing trajectory compared to that with constantly high scores (Odds Ratio (OR) = 1.81, 95%CI: 1.12–2.93).
Key conclusions: Undernutrition is prevalent among older people and may affect cognitive health.
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P-897

Nutritional status and basic daily activity in older adults 65 + . data from epidemiological study "EVKALIPT"

Abstract Area: Nutrition

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Introduction: Malnutrition in aged people is often associated with negative outcomes. However, there is little information available on correlation between malnutrition and basic daily activity.
Methods: Epidemiological study EVKALIPT included 4308 patients (30% men) aged 65 to 107 (mean 78.3 ± 8.4) years from 11 regions of the Russian Federation. More than half (60%) of the participants were examined in a polyclinic setting, 20%—in a hospital, 19%—at home and 1%—in nursing homes. Patients underwent a comprehensive geriatric assessment including the screening part of the Minimal Nutrition Assessment (MNA) and basic activity assessment according to the Barthel scale.
Results: The median Barthel Index score was 95 (IQR 85–100). Functional dependence was found in 61% of patients. The median MNA was 12 (IQR 10–13). In patients with dependence (n = 2639), the MNA total score was lower—12 (10; 13) vs 13 (11; 14) ($p < 0.001$), and the prevalence of malnutrition was higher—8.2% vs 2.3% ($p < 0.001$) than in independent patients (n = 1669). The MNA positively correlated with the Barthel index score ($r = 0.43$; $p < 0.001$). Univariate regression analysis showed that dependence in daily life was associated with a 3.9-fold increase in the chances of malnutrition (CI 2.71–5.46; $p < 0.001$).
Conclusions: The prevalence of malnutrition among patients with dependence was 8.2%. Dependence in daily life was associated with a 3.9-fold increased chance of malnutrition.

P-898

Risk of malnutrition and its association with frailty associated factors in the older person

Abstract Area: Nutrition

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Introduction: To assess the relationship between malnutrition risk in the frail older person, with other frailty factors.
Methods: All patients who had a CGA completed by an Integrated Care Team for Older Persons from March 2020 to July 2021 inclusive were studied. Data was entered onto an Excel database by a trained administrator. The variables included were: age, gender, swallow screen, living alone, cognition, loneliness, Clinical Frailty Score (CFS), falls history and risk of malnutrition using the Malnutrition-Screening Tool (MST). Odds ratio (OR), 95% confidence intervals (CI) was used to determine if there was an association between malnutrition risk and each variable in the total group.

Results: In total, 567 patients (325 female, 242 male), mean age 82yrs (SD = 19), with median CFS of 6 were studied. Sixty-eight percent (n = 384) reported a fall, 37.2% (n = 211) had a positive swallow screen, 44% (n = 251) lived alone, 35% (n = 198) had positive cognitive screening, 14% (n = 80) reported loneliness and 31.6% (n = 179) were identified as at risk of malnutrition. A positive association was identified between risk of malnutrition and cognitive impairment (OR 1.9: CI 1.2–3.1) and a reported fall (OR 2.2; 95%CI 1.4–3.5). In the population who had a fall and risk of malnutrition, the association remained in those aged $\geq$ 80yrs (OR 2.6; 95% CI 1.46–4.5) and female (OR 3.6, 95%CI 1.7–7.4).
Conclusion: Frail older persons identified with falls risk & cognitive impairment will be targeted for specialist dietetic intervention.

P-899

Development of anorexia of aging assessment scale among patients aged 65 and over, with and without dementia. A study protocol and recruitment status

Abstract Area: Nutrition

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Introduction: It is estimated that anorexia of aging may affect up to 30% of geriatric patients. Impairment of the mechanisms regulating hunger and satiety leads to a reduction in the caloric content and variety of the diet, and consequently contributes to the development or aggravation of already existing malnutrition.
Methods: The objective of the study is to develop and validate a scale to assess the appetite and eating behaviours of patients aged 65 years and over. Patients will be categorized by the degree of cognitive impairment and latent class analysis will be performed to identify subgroups sharing certain nutritional behaviors.
Results: We plan to evaluate 120 patients using a questionnaire composed of 100 questions concerning 4 main areas connected with appetite alterations: symptoms and comorbidities, eating behaviours, psychological and social conditions, functional independence. Further, we will assess patient's cognition, mood, nutritional status, and will assay blood for appetite hormones. As of June 2022 we recruited 58 (48.3% of the total sample) patients, of whom 32 scored 24 points and above in MMSE. Key conclusions: We set out to develop a tool for the assessment of appetite in persons with dementia. To the best of our knowledge currently there is a lack of such dedicated tool. Patients with dementia are at a greater risk of developing malnutrition, using a scale for appetite assessment could contribute to the application of tailored nutritional intervention and prevent further consequences of inadequate intake.

P-900

Factors affecting nutritional status in older people

Abstract Area: Nutrition

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Introduction: Older people are particularly prone to alterations of nutritional status, several factors being involved. Aim of the study was to highlight some of these factors in older people. Material and MethodsWe included 891 consecutively admitted older patients. Gender distribution: 67% women, 33% men; age range 65-97, mean 81 years. Sample was divided into: adults (50–64 years) and elderly (70–97 years). Parameters considered: gender, age, place of residence (urban/rural), income, marital status, comorbidity, medicines, Body Mass Index (BMI), and scores on: Simplified Nutritional Appetite Questionnaire (SNAQ), Mini Nutritional Assessment—Short Form (MNA-SF), Mini Nutritional Assessment (MNA). ResultsOverweight elderly male had the highest risk of losing 5% of body weight over the next 6 months according to SNAQ score ($p < 0.05$). Older women with a SNAQ score predicting risk of losing 5% of body weight over the next 6 months had the highest prevalence of taking only 2 meals a day ($p < 0.05$). Highest prevalence of a malnutrition score on MNA-SF was seen in older male subjects. Older people, irrespective of gender, presented a significant trend of overestimating their nutritional status ($p < 0.05$). Older people at risk of malnutrition, irrespective of gender, had a significantly higher prevalence of dementia ($p < 0.05$). Presence of at least 3 comorbidities related to nutrition had a higher prevalence amongst older single male patients from urban areas ($p < 0.05$).
Conclusions: Malnutrition in older people is influenced by several factors including BMI, age, gender, comorbidities, meals, place of residence. Older people tend to overestimate their nutritional status.

P-901

Nutritional status of nursing home residents in Akureyri, Iceland

Abstract Area: Nutrition

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Introduction: A good nutritional status plays an important role in the functioning of the immune system and to be able to maintain a good mental and physical health. Unfortunately, malnutrition is common among old adults, both in Iceland and throughout the world. The prevalence of being at risk of being malnourished or being malnourished has been shown to be highest in nursing homes residents (60–80%), but in Iceland this has never been studied.
Objective: There is an urgent need to study this in Iceland to be able to evaluate the need for nutritional therapy for this group, and to furthermore implement appropriate measures to improve the at-risk

resident's nutritional status. Material and methodsAll nursing home residents at Heilsuvernd Nursing Home in Akureyri, Iceland (N = 197) were screened for the risk of malnutrition using a validated nutritional screening tool, the Icelandic Short Nutritional Screening Tool (INST). The screening tool gives the individual 1–30 points depending on how high the risk is of being malnourished. At low risk are those who score 0–2 points, at risk are those who score 3–4 points and at high risk are those who score ≥ 5 points.
Results: The youngest participant was 65 years old and the oldest was 97 years old, 74,6% of the participants had experienced an average of 4.8 ± 5.1 kg weight loss over the course of 6.9 ± 7.7 months. A total of 56.3% of the participants were at high risk of malnutrition and 24.4% at some nutritional risk.
Conclusions and next steps: Unfortunately, the prevalence of malnutrition among nursing home residents in Akureyri Iceland is high and is not unlike the prevalence in other countries. The main issues with maintaining a good nutritional status are in Iceland a decreased appetite or nausea and difficulties with swallowing or chewing foods. These issues show in the high rate of weight loss among the participants which indicates a below needs intake of both protein and energy. We hope to be able to make a good argument for the nursing homes of Iceland to hire nutritionists and speech pathologists to tackle these issues. The nutritionist should provide all nursing home residents at risk for malnutrition with nutrition therapy and the speech pathologist should see to all with a swallowing or chewing problem to assess their needs. These measures should be taken to first and foremost, improve the quality of life and nutritional status of the residents of nursing homes in Iceland.

P-902

Birth size modifies longitudinal associations between midlife educational level and physical function at late-life

Abstract Area: Nutrition

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Background: Physical function is a main pillar of healthy ageing and previous studies have shown that socioeconomic factors in early life, including education may have strong influence. Examining healthy ageing from a life course perspective can add insight into possible preventive measures for maintaining independence and quality of life at late-life. Our objective was to investigate the longitudinal association between midlife education and late-life physical function, over the mean time-period of 25 years, as well as examining birth size as an effect modifier.
Methods: Participants were 1604 men and women from the Age Gene/Environment Susceptibility (AGES)—Reykjavik Study who had measures from birth, midlife and late-life. Multivariate linear regression was used and included gait speed (GS) and timed up and go test (TUG) at late-life as outcome measures and midlife educational level as exposure. To examine effect modification, data was stratified by birth size as ponderal index (PI) in three groups.
Results: Participants with primary education had slower GS of 0.05 m/s ($p < 0.001$) and longer TUG time of 0.66 s ($p = 0.006$) compared to the reference (college/university). Birth size modified the abovementioned association, with those in the low PI group having a slower GS of 0.1 m/s ($p < 0.001$) and taking 1.35 s longer to complete TUG between educational groups (primary education vs. reference). However, significance was lost for those born larger.
Conclusion: Our results indicate that low PI may predispose individuals to lifestyle mediated health effects of lower education, such as slower GS and longer TUG time at late-life.

P-903

Validation of a telephone-based adminstration of the simplified nutritional appetite questionnaire

Abstract Area: Nutrition

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Background: Anorexia of aging is the reduction of appetite with increasing age, which appears multifactorial and connected to malnutrition. An instrument to screen this phenomenon is the Simplified Nutritional Appetite Questionnaire, whose telephone-based administration (T-SNAQ) will be validated in this study.
Methods: This is a cross-sectional single-center study that spanned 10 months involving community-dwelling older adults people aged 70 years and older. The SNAQ was translated and culturally adapted into German using an internationally recommended methodology. Because of the pandemic situation all assessments were accomplished through telephone interview and self-administered questionnaires. The internal reliability of the T-SNAQ was evaluated with Cronbach´s alpha coefficient. Test–Retest reliability was assessed using the intraclass correlation coefficient. The feasibility of the T-SNAQ was measured by the mean time of the survey duration. Concurrent validity was evaluated by means of the correlation between the T-SNAQ and parameters such as Mini-Nutritional Assessment Short-Form (MNA-SF) and daily caloric and protein consumption.
Results: 120 participants including 71 women and 49 men with a mean age of 78.0 ± 5.84 years were recruited. The mean score of the T-SNAQ was 15.67 (2.14). It took 95 s to complete the questionnaire via telephone interview. Cronbach´s alpha coefficient and the intraclass correlation coefficient were 0.64 and 0.92, respectively. The T-SNAQ was significantly positively associated with MNA-SF as well as daily caloric and protein consumption.
Conclusion: The T-SNAQ is a simple instrument with sufficient reliability, validity, and feasibility to screen anorexia of aging in community-dwelling older adults, especially when social contact is absent.

P-904

The role of communicative spaces in multidisciplinary team working

Abstract Area: Nutrition

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Introduction: Providing optimal nutritional care is fundamental to patient recovery and reduces complications associated with the adverse effects of malnutrition (undernutrition). However, good hydration and enjoyable mealtimes with appropriate support for the patients who need it are not often prioritised. Multidisciplinary approaches are needed to optimise nutritional outcomes [1]. Nutritional care involves a coordinated approach to delivering food and fluids by different healthcare professionals and views the patient as an individual with needs and preferences [2]. This abstract draws on a study about the influence of organisational culture and nutritional care. It focuses on the role of 'communicative spaces' where people come together to discuss a shared problem aimed at taking action [3], particularly in multidisciplinary team working.
Methods: The study was undertaken through the collaborative efforts of a 16-member multidisciplinary action research (AR) team responsible for providing nutritional care to inpatients (clinical and non-clinical members as co-researchers). Data was gathered through six AR team meetings, service users' narrative of care, the researcher's journal and hospital audit data.
Results: The AR approach opened up a physical and conceptual communicative space for the multidisciplinary staff group, volunteers, governor representatives and researcher to engage throughout the study, sustained by the process reflection. The communicative space provided a discursive arena that facilitated shared learning about each other's roles and contextual issues relating to nutritional care practices in a way that was inclusive of the diverse staff perspectives. Insights from the discussion informed the team's decisions to prioritise areas for improvement in ward practices, which informed the next steps in the study.
Key conclusions: Communicative space plays a significant role in multidisciplinary working. However, when bringing people together, the communicative space requires a safe environment where trust is reinforced, and everyone's contribution toward the overall patient care is valued.
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P-905

rTMS in geriatric day hospital: the example of Charles Foix

Abstract Area: Old age psychiatry

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Introduction: Depression in the elderly is a frequent pathology, yet it is sometimes ignored, and treatment is often limited or inadequate. The response of elderly patients with cognitive impairment to drug therapy is decreased, and they are prone to iatrogenic conditions. Transcranial stimulation (rTMS) is a non-drug and innovative treatment.
Methodology: Patients receiving care in the geriatric day hospital at Charles Foix hospital and either presenting with symptoms of depression that barely or do not respond to drug treatments or developing an iatrogenic condition were included over a period of three years (February 2019 to May 2022). They were able to benefit from rTMS five days a week over a period of three or four consecutive weeks. The Geriatric Depression Scale (GDS) was used to assess depression before the procedure and one month after. Results: 36 patients with major cognitive impairment (23), mild impairment (8) or no cognitive impairment (5) were included; 8 men and 28 women. The average age was 79; ½ had developed an iatrogenic condition to drugs and 83% had tried 2 or more drugs therapy. 5 people were unable to complete therapy (anxiety, pain, tremors). 46 interventions were performed with an average initial GDS of 8.8/15. The average GDS after the operation was 4.8 (average decrease of 4 points, $p < 0.0001$). Prospects: rTMS appears to be a relevant treatment for the future to support the management of treatment-resistant depression in elderly patients. It would be beneficial to pursue this original treatment to improve patient well-being.

P-906

French adaptation and validation of the Clinical Anxiety Scale

Abstract Area: Old age psychiatry

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Background: The Clinical Anxiety Scale (CAS) is a 25-item tool derived from the Hamilton anxiety scale (HAS), a test used in clinical practice and research, that remains a reference standard. On the other hand, General anxiety disorder-7 (GAD-7) scale, is short instrument with good psychometric properties validated in different languages. The CAS is not yet available in French. Our aim was to develop a translated version of the CAS and to assess its internal consistency, test–retest reliability, and convergent validity with the GAD-7, French version.
Methods: Firstly, a forward–backward translation of the CAS was performed. Subsequently, healthcare professionals were recruited to complete the French versions of the CAS and GAD-7. CAS internal consistency was assessed using Crohnbach's alpha. CAS test–retest reliability was assessed 15 days apart in a subsample of 30 subjects. Convergent validity between CAS and GAD-7 was assessed using Pearson's correlation coefficients. Test–retest reliability was assessed using one-way random effects model to calculate the infraclass correlation coefficient (ICC).
Results: A total of 127 healthcare professionals volunteered (mean age of 35 ± 11 years, 61% women) to the study. Internal consistency and test–retest reliability of the translated CAS were both excellent as indicated by Cronbach's alpha (0.97) and ICC (0.97, 95%CI

0.93–0.98), respectively. The CAS and GAD-7 were highly correlated (Pearson's R 0.81, $p < 0.0001$).
Conclusion: CAS showed excellent internal consistency, test–retest reliability as well as convergent validity with the GAD-7. Further work should determine CAS sensitivity to change, and predicting validity before recommending its routine use for clinical purpose.

P-907

Frailty and multimorbidity in older adults with medically unexplained symptoms: need for integrated care

Abstract Area: Old age psychiatry

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Introduction: Older adults with medically unexplained symptoms (MUS) are referred to mental health outpatient clinics after exclusion of medical explanation of symptoms. Distinguishing between medical explained (MES) and MUS could be difficult in older age and appropriate treatment might be delayed.
Method: Two studies were conducted. The first was an observational pilot study in a specialised outpatient clinic. All referred patients ($n = 32$) received a parallel diagnostic trajectory by a geriatrician, psychiatrist and psychologist. The second study was a case control study in which we compared geriatric characteristics of older adults with MUS ($n = 118$) and MES ($n = 154$).
Results: In the first study we found that half of the patients had a primary complaint that could be linked to their chronic diseases. These patients were older, had a significant higher level of multimorbidity, were more frail and more functionally impaired than the other half of patients (mean age 73), who were strikingly healthy in geriatric sense. All patients had a somatoform disorder and more than half a depressive disorder. In the second study we found that older adults with MES had a slightly higher level of multimorbidity, but the likelihood of being frail was 3 times higher in the MUS population.
Conclusion: MUS are a challenging problem in older adults as they might be mingled with MES. Frailty and multimorbidity should be considered as potential explanation. It sheds new light on the connection between geriatrics, psychiatry and psychology and the necessity to integrate care for these patients. Thesis Benraad 2021: https://repository.ubn.ru.nl/handle/2066/229976
Key words: Integrated CareMedically Unexplained SymptomsFrailty.

P-908

Depression and frailty in a geriatric multidisciplinary outpatient clinic

Abstract Area: Old age psychiatry

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Introduction: Depression and frailty are prevalent in the elderly, each condition associated with an increased prevalence and worsening of the other. We aimed to characterize both syndromes in a geriatric multidisciplinary outpatient clinic (GMC).
Methodology: An observational study using clinical informatic data from elders (> 75 years) followed in a portuguese GMC. Patients with either depression (Geriatric Depression Scale) or frailty (PRISMA-7questionnaire) were compared with other patients concerning demographics, body mass index, basic daily life activities (Katz index), instrumental daily life activities (Lawton-Brody index), nutritional status (Mini Nutritional Assessment), medications and comorbidities (Cumulative Illness Rating Scale).
Results: From 123 patients, 80 (65%) were woman, median age was 83 years. Forty-seven (76%) patients had depression and 31 (56%) had frailty. Patients with depression had a higher prevalence of frailty (68% vs. 50%) and patients with frailty a higher prevalence of depression (90% vs. 80%). Patients with depression had lower body mass index < 22 (27% vs 10%), higher dependence on basic (13% vs. 0%) and instrumental (19% vs 8%) daily life activities and polimedication (92% vs. 72%). Patients with frailty also had lower body mass index < 22 (31% vs 11%), higher dependence on basic (19% vs. 0%) and instrumental (23% vs 0%) daily life activities and polimedication (93% vs. 74%).
Key conclusions: The prevalence of depression is concordant with literature. This study points toward a bidirectional relation between frailty and depression, as well as a negative impact of both on morbidity and functionality of the elderly. Further studies with a larger sample are needed.

P-909

Are red blood cells parameters, serum vitamin B12 and folic acid levels associated with severity of depression symptoms in hospitalized older adults?

Abstract Area: Old age psychiatry

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Introduction: It is estimated that as many as 15% of people over 60 years of age suffer from mental disorders. Depression is a disease that is difficult to detect and, due to the unknown aetiology, it is not always amenable to treatment. B-vitamins are actively transported through the blood/brain barrier and their levels and brain utilization are high. Scientific research shows that patients with unipolar and bipolar depression have anaemia or abnormal red cell parameters more often than patients with other psychiatric disorders. Therefore, the aim of this study was to analyze the relationship between red blood cell parameters, serum vitamin B12 and folic acid levels and depression symptoms in hospitalized older adults.
Methods: The research group consisted of 1199 hospitalized older adults from the Geriatric Department of the Medical University of Lodz (median age 82 (76–87)). Participants were divided into two subgroups according to the Geriatric Depression Scale (GDS). Group A: 0–5 points—no depression symptoms (698, M:226, F:472), group B: 6–15 points—elevated depression symptoms (501, M:109, F:392). Blood tests including RBC (Red Blood Cells), HGB (Hemoglobin),

MCV (Mean Cell Volume), MCH (Mean Cell Hemoglobin), MCHC (Mean Corpuscular Hemoglobin Concentration), vitamin B12 and folic acid levels were collected. Age, waist circumference (WC), calf circumference (CC), Body Mass Index (BMI) and chronic diseases of study participants were also recorded.
Results: No differences were found in BMI and WC in the female group. Women with depression symptoms were older and had a smaller CC compared to women with a lower GDS score. A significant difference in the MCHC parameter was observed. The prevalence of chronic diseases such as hypertension, diabetes, chronic heart failure and depression differed according to GDS score. In the male group, there were no differences in age, BMI, WC and CC, red blood cell parameters, vitamin B12 and folic acid levels between men divided according to GDS score. The prevalence of depression differed between the GDS groups.
Conclusions: This analysis shows generally no significant differences between red blood parameters, serum vitamin-B12 and folic acid levels and depression symptoms severity in hospitalized older adults. Nevertheless, as some tendency emerged, further larger and prospective studies are needed to confirm or disprove the results obtained in this study.

P-910

Factors associated with Caregiver Burden in Elderly Caregivers at Comprehensive Geriatric Clinic, King Chulalongkorn Memorial Hospital, Bangkok

Abstract Area: Old age psychiatry

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Introduction: The world's rapidly aging population has caused rising numbers of elderly caregivers. Due to insufficient data regarding elderly caregivers in Thailand, this research aims to determine factors associated with caregiver burden in elderly Thai caregivers.
Methods: A cross-sectional study was conducted at Comprehensive Geriatrics Clinic, King Chulalongkorn Memorial Hospital, Bangkok during August and September 2021 by interviewing 188 elderly caregiver participants. Information about factors related to caregiving was gathered, and the Zarit Burden Interview and the WHOQOL-BREF-THAI questionnaires were used to measure levels of caregiver burden and quality of life respectively. Linear regression analysis was used to identify factors associated with caregiver burden and quality of life in the participants.
Results: 188 valid responses were obtained. The mean Zarit burden and WHOQOL-BREF scores were 10.43 ± 14.31 and 117.24 ± 14.85 respectively. Linear regression analysis revealed significant associations between caregiver burden level and several factors: caregiver's age, caregiver's marital status, care recipient's gender, care recipient's ability to do instrumental activities, relationship of caregiver and care recipient, duration of care, time spent on caring per week, and number of family members. These factors were also all associated with quality-of-life level, except for care recipient's gender and number of family members.
Key conclusions: Most factors related to caregiver burden and quality of life in elderly caregivers were mutual. Caregiver burden scores were inversely associated with quality-of-life scores and directly associated with geriatric depression scores. Results from this study could be used in future screening tools.

P-911

Nursing home social loneliness in the elderly

Abstract Area: Old age psychiatry

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Introduction: According to the WHO, social isolation in the elderly is a public health problem, more evident after the Covid19 pandemic. Social isolation is the lack of contact and interaction with other people. Especially evident in Residences. It´s observed in 20–30% of the elderly in our region, up to 50% in Nursing Homes. OBJECTIVES To measure the prevalence of social isolation in elderly people in Nursing Homes, with the ESTE II multidimensional scale that measures social support, use of communication technologies and social participation in the community.
Material and methods: Demographic, clinical and functional data of residents of two pulbic Nursing Homes, able to answer the ESTEII Test of Social Loneliness (SL).
Results: 50 residents. 72% women (mean 86.3 years). MEC-35 scale mean 25.7, Barthel Index mean 62.4. Mild cognitive impairment 38%, Only 29% with studies. Previous depression 38%. 68% have medium loneliness level (values 11–20) and 12% high social loneliness (> 21). Results are similiar adjusting scale without technologies (66% and 18%) There are no significant differences between SL and sex ($p = 0.2$), age ($p = 0.6$), diagnosis of depression ($p = 0.6$) or cognitive impairment ($p = 0.37$). We found a relationship between SL value and Pfeiffer scale ($p = 0.05$).
Conclusions: Social loneliness in NH presents a very high prevalence, 80% in our sample, even discarding the technological aspect. Possible associated with cognitive status. The impact of Covid19 pandemic in NH has selected an older and more frailty sample. Interventions are needed to help mitigate social loneliness in residents who are otherwise surrounded by people.

P-912

Vascular disease and apathy symptoms in the very old: a cross-sectional and longitudinal meta-analysis of individual participant data

Abstract Area: Old age psychiatry

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van der Klei V.M.G.T.H., Poortvliet R.K.E., Bogaerts J.M.K., Blom J.W., Mooijaart S.P., Teh R., Muru-Lanning M., Palapar L., Kingston A., Robinson L., Kerse N., and Gussekloo J. for the TULIPS-consortium.

Introduction: Previous findings suggest a vascular foundation underlying apathy, but transdiagnostic and prospective evidence on vascular apathy is scarce. This study examines the association between vascular disease and the presence and development of apathy symptoms in the very old.
Methods: Four cohorts of the Towards Understanding Longitudinal International older People Studies (TULIPS)-consortium were included in a two-staged, individual participant data meta-analysis using generalized linear mixed models. Vascular disease was defined as a history of any clinical atherosclerotic pathology (angina pectoris, myocardial infarction, intermittent claudication, transient ischemic attack, stroke or related surgeries) and was related to apathy symptoms as repeatedly measured by the Geriatric Depression Scale (GDS-3A $\geq$ 2) over a maximum of 5 years.
Results: Of all 1868 participants (median age 85 years old), 53.9% had vascular disease and 44.3% experienced apathy symptoms. Participants with vascular disease had a 76% higher risk of apathy symptoms at baseline (odds ratio (OR) 1.76, 95% confidence interval (CI) 1.32–2.35), irrespective of depressive symptoms and only partially explained by stroke. Conversely, there was no association of vascular disease with the occurrence of apathy symptoms longitudinally, both in those with apathy at baseline (OR 1.00, 95% CI 0.84–1.20) and without (OR 0.96, 95% CI 0.84–1.09).
Conclusions: Vascular disease in the very old is associated with apathy symptoms cross-sectionally, but not longitudinally, independent of concomitant depressive symptoms. While these findings query the vascular apathy hypothesis and may discourage prevention of apathy by cardiovascular disease management, they emphasize the international relevance of their interplay in advanced age.

P-913

Retirement impact on self-perceived health, leisure activities participation, and physical activity in older adults: a comparative analysis of the Mexican Health and Aging Cohort

Abstract Area: Old age psychiatry

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Introduction: Retirement represents a transition in older persons' life; it involves social, physical, and psychological changes that impact the quality of life and wellbeing. This study aimed to analyze the impact of retirement on biopsychosocial variables and the prevalence of chronic disease in retired older adults compared with older adults working actively.
Methods: We conducted an analysis of the Mexican Health and Aging Study (MHAS), a national study in five waves designed to obtain a representative sample of the Mexican population aged $\geq$ 50 years; we analyzed data from older adults $\geq$ 60 years who reported to be retired during the 2018 wave and compared their self-perceived health and wellbeing during the 2015 wave, while still working; an additional transversal analysis was performed to compare the prevalence of chronic diseases, physical activity, and leisure activities participation between older adults $\geq$ 60 years retired in the 2018 wave and those actively working.
Results: Self-perceived health and well-being were better after retirement ($P < 0.001$). In the comparative analysis, the retired older adults reported less physical activity (44.9% vs. 30.8%, $P < 0.001$), higher prevalence of diabetes and cardiovascular diseases (31.7% vs. 19.6% and 11.8% vs. 6.5%, P 0.01), and more doctor visits (83.8% vs. 76.4%, $P = 0.01$). They also showed more significant involvement in leisure activities ($P < 0.001$) than those working.
Conclusion: This data demonstrates that retirement is an important checkpoint in life to focus on health care for the detection and prevention of health problems that cause dependence of care and negatively affect the quality of life of older adults.

P-914

From beginning to end

Abstract Area: Old age psychiatry

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Introduction: dementia can have a double etiology, especially in older people, in which the passing of the years increases the probability of having more diseases. Case report: 76-year-old patient, admitted to the Psychogeriatric Unit of Hospital Sant Jaume to control conduct disorders. Medical history: Dyslipidemia, rapid eye movement sleep behavior disorder since the age of 58, low-grade papillary urothelial carcinoma, right basal pulmonary nodule diagnosed two months earlier and treated with radiotherapy. Frontotemporal dementia diagnosed six months before admission. Baseline Geriatric assessment: Functional: Barthel index (BI) 80/100, independent ambulation. Cognitive: in the new neuropsychological evaluation carried out onadmission, significant cognitive deterioration was observed with a pattern of frontal, temporal, and parietal profile and severe alteration of the psychomotor and visuospatial executive functions and the presence of visual and auditory hallucinations, compatible with DC Lewy. Social: married. He lived with his wife. Evolution: During admission, he presented rapidly progressive worsening and severe behavioral symptoms of difficult pharmacological control, he died during admission. The brain autopsy revealed extensive Lewy body type alpha synucleinopathy, moderate Alzheimer-like pathology, vascular pathology with small acute ischemic infarcts at the right frontal and parietal cortical level, and subacute infarction in the right caudate nucleus and right parietal brain metastasis compatible with adenocarcinoma of probable pulmonary origin.
Conclusion: Different factors can influence the genesis and evolution of dementia, and the approach must be multifactorial.

P-915

Depressive symptoms among oldest-old persons living in social housing communities: preliminary data from Porto Importa-se project

Abstract Area: Old age psychiatry

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Introduction: Older people living in social housing may be at greater risk of mental health problems, such as depression. In this context, this study aims to examine the rate of, and sociodemographic contributing factors to depressive symptoms in oldest old persons living in social housing communities.
Methods: This study is part of an ongoing prospective project entitled "Porto Importa-se" and included a sample of people with 80 years and over, living in social housing communities of Porto city, Portugal. Participants were evaluated with the 15-item Geriatric Depression Scale (GDS-15) to assess depressive symptoms (cut-off ≥ 5). A semi-interview was used to collect the following sociodemographic data: age, sex, marital status, education level, living situation and monthly family income. Statistical analyses were performed with non-parametric tests, since normality was not assumed.
Results: Overall 604 persons were included (median = 84 years, range:80–97), mostly female (70%), widow (53%), living alone (54%) and 43% with low educational level (< 4 years). Based on GDS-15, 49.2% of sample presented depressive symptoms. A significantly higher percentage of cases with depressive symptoms was found in female (77.8% vs 61.6%; $p < 0.001$), widow (61.3% vs 48.5%; $p = 0.007$), living alone (62% vs 52.1%; $p = 0.015$), with low education (46.8% vs 38.4%; $p = 0.008$) and incomes (72.6% vs 59%; $p = 0.003$).
Conclusions: A significant proportion of oldest old persons living in social housing communities revealed depressive symptoms, particularly widows living alone, with low education and income. These findings highlight the need for the early screening of depressive symptoms and the implementation of support interventions to this vulnerable group.

P-916

Chronic pain and mood disorders in older people with knee osteoarthritis

Abstract Area: Old age psychiatry

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Introduction: Osteoarthritis of the knee is a common, chronic, and invalidating condition in older people. Study aimed at identifying patterns of mood disorders in elderly with chronic pain due to gonarthrosis.
Material and methods: A total of 735 subjects, age-range 50–97 years, were included, divided into two groups: 361 adults (50–64 years), 373 elderly (75–97 years). ResultsGonarthrosis was significantly more prevalent in urban area irrespective of age ($p < 0.05$). It was more prevalent in men of rural area ($p < 0.05$), but in urban area was more prevalent in women ($p < 0.01$). One in four patients presented diabetes mellitus, higher prevalence in men over 75 years ($p < 0.05$). Almost all patients presented chronic pain, with a higher intensity and longer duration in older women. Prevalence of mood disorders was highest in older women ($p < 0.001$). Age at menopause younger than 45 years was more prevalent in elderly women with depression (chi square = 8.521, $p < 0.05$). In general sample depression was significantly more prevalent than anxiety ($p < 0.001$). Majority of older women had combined mood disorders. Older patients in urban area without a family support network had significantly higher prevalence of depression ($p < 0.01$), irrespective of gender. Older women had significantly higher prevalence of somatization as compared to other gender and age-group ($p < 0.01$). Interestingly, over 75% of all patients reported favorable effects of medication for chronic pain.
Conclusions: Recognizing and treating chronic pain due to gonarthorisis has complex effects including on mood in elderly. Nevertheless, pain is not the only factor involved in mood disorders in elderly.

P-917

Rigid syndrome triggered by treatment with tricyclic antidepressants

Abstract Area: Old age psychiatry

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Drug-induced akinetic-rigid syndrome is well-defined and usually symmetrical. It can be reversible by discontinuing treatment, although in some patients it is maintained over time. It is well known that treatment with tricyclic antidepressants should be avoided in the elderly, since they produce multiple side effects, including an affinity for D2 receptors, justifying extrapyramidal effects. 77-year-old patient with a history of Diabetes Mellitus and right MCA stroke without repercussion, who was admitted to the Psychogeriatrics Unit due to falls and recently diagnosed cognitive impairment. On admission, MMSE 20/30 (basic education). CT scan showed signs of cortico-subcortical atrophy, and analytical results were normal. She functionally required supervision for ADLs, she used a walker, lived with her daughter, and had presented 3 falls in the last 6 months. Her current treatment was fluoxetine 20 mg, quetiapine 25 mg and clomipramine 75 mg, due to a doubtful diagnosis of OCD in youth. On examination, she had cogwheel rigidity predominantly on the left in the lower and upper limbs, unstable gait, and distal tremor. In addition, she presented decreased contact and a significant state of anxiety. She was managed by the progressive withdrawal of clomipramine, and subsequent fluoxetine with the progressive introduction of sertraline. Although the patient had been treated with

clomipramine for years, the stiffness began, as well as the falls, with the onset of cognitive impairment, this could be explained by an associated dopaminergic deficit. Although they are sometimes long-standing treatments, we cannot forget the deprescription of potentially inappropriate drugs.

P-918

Sex-related characteristics and trajectories of older inpatients with cognitive impairment and neuropsychiatric conditions

Abstract Area: Old age psychiatry

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Introduction: The biopsychosocial features of sex-related differences including multidimensional frailty are largely unknown in cognitive impairment (CI). This retrospective study aimed at identifying sex-specific multidimensional profiles of older patients with cognitive or neuropsychiatric diagnoses admitted to non-neurologic and non-psychiatric settings.
Patients & Methods: Records from 733 patients were evaluated by means of the comprehensive geriatric assessment (CGA) independent of setting of admission. All patients received a CGA with a Multidimensional Prognostic Index (MPI) scoring. Patients with neuropsychiatric main and secondary comorbidities impacting on cognition were included based on admission diagnosis, Cumulative Illness Rating Scale (CIRS), presence of cognitive impairment as coded geriatric syndrome, positive screening question "known cognitive impairment", Mini Mental State Examination < 25 points during hospitalization.
Results: Inclusion criteria were met in 150 patients (89 M, 80.5y; 61F, 81.5y) (CI). The remaining 583 patients (326 M, 78.6y; 257F, 79.4y) served as controls (CTR). In CTR, MPI at admission and discharge was significantly lower than in CI ($p < 0.001$). CI women had more cardiac diseases ($p = 0.017$), hypertension ($p = 0.023$), ophthalmological/otolaryngological diseases ($p = 0.017$), gynecologic/urological diseases ($p = 0.011$) and dermatologic/musculoskeletal diseases ($p = 0.032$) than CI men. In CI men, creatinine levels were higher than in CI women (2.4 mg/dl vs. 1.3 mg/dl, $p = 0.008$). CI women with lower Body Mass Index (BMI) showed a higher MPI score than CI men with lower BMI ($p < 0.01$). Finally, CI men with less education years had higher MPI scores than CI women ($p < 0.05$). DiscussionWhile it is well-established that women are frailer but die less than men, the interaction between sex and multidimensional assessment seems to disclose specific profiles in patients with CI. Sex is confirmed to display different MPI scores also in CI. Comorbidities, renal function, BMI and social factors appear to be particularly relevant for the post-discharge phase of older CI patients admitted to non-neurologic and non-psychiatric settings.

P-919

Diagnosis of Bipolar Disorder type 2 in an elderly patient after pharmacological switch

Abstract Area: Old age psychiatry

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Bipolar disorder (BD) in the elderly is defined as that diagnosed above 60 years of age. It is known that there is a higher frequency of type 2 BD (the one that presents with hypomania) than type 1 BD. Comorbidities such as kidney or liver failure, DM, or syndromes such as social frailty mean that treatment with mood stabilizers must follow exhaustive controls is difficult. This is the case of an 84-year-old patient who attends Geriatric consultations derived from primary care for a study of cognitive impairment. In the anamnesis in the consultation, the patient presents a picture of about 4 weeks of the evolution of verbiage, and compulsive purchases, and her daughter reports a recent memory loss, since she does not remember than he has done a few hours ago and tends to lose things, with a lack of insight. It was an independent patient for basic and instrumental activities of daily living, with cognitive tests: MEC 26/30 with attention deficit, MIS 3/8 points with much interference for this same reason, and a Clock Test in which the sphere was correctly made, there were no errors in the numbers or the hands. A cranial CT was performed in which nothing more than cortico-subcortical atrophy was observed, without vascular or frontal pathology that would justify this clinical picture. On a social level, she lived with a son diagnosed with borderline personality disorder and she had support from another daughter, and she rejected any kind of help. Regarding management, given that the patient had chronic kidney disease and very poor therapeutic adherence, in addition to conciliation insomnia, it was decided to progressively withdraw Sertraline and start Pregabalin at low doses. Within a week, the sertraline dose was lowered and pregabalin was started with a very good response.

P-920

The relationship between attitudes of aging and depressive symptoms in older adults: preliminary results

Abstract Area: Old age psychiatry

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Introduction: The perception of aging and internalization of the aging stereotypes might affect older persons' attitudes toward their own aging and psychological well-being. This study aimed to assess

the relationship between negative self-perceptions of aging and depressive symptoms.
Methods: Older adults who admitted to geriatric outpatient clinic were recruited for the study consecutively. The patients who were previously diagnosed with any psychiatric condition or under treatment for depression were excluded. Sociodemographic characteristics were obtained from each patient, and they were asked to respond a questionnaire about the self-perceptions of aging and depressive symptoms. The Attitudes of Aging Questionnaire (AAQ) was used to assess the self-perceptions aging and both Beck's Depression Inventory (BDI) and the short form of Geriatric Depression Scale (GDS-15) were used as self-reported measures of depressive symptoms. ResultsThirty-three patients with a median age of 73 years (65–86) and whose 39.4% were female were included. Most of the participants were married (n = 24, 72.7%) and more than half were educated over 5 years (51.5%). The AAQ scores were found to be moderately correlated with BDI scores in negative direction (r = − 0.539, P = 0.001) yet its correlation with GDS-15 scores did not reach statistical significance (P = 0.054). The correlations of the AAQ with both BDI and the GDS-15 scores were also significant and even stronger for the female participants (r = − 0.781, P = 0.002 and r = −0.639 and P = 0.019, respectively).
Conclusion: Negative self-perceptions of aging were related with a higher burden of depressive symptoms in older adults. This relationship was stronger for females.

P-921

Post operative drop in haemoglobin is associated with increased morbidity and mortality in fracture neck of femurs

Abstract Area: Perioperative care

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Introduction: Post-operative anaemia in hip fracture patients is associated with increased risk of blood transfusion, poorer outcomes, increased morbidity, and mortality. Our aim is to measure the drop in haemoglobin (Hb) post-operatively in hip fracture surgery and its impact on length of stay, morbidity and 30-day mortality.
Method: A retrospective study of neck-of-femur patients looking at pre-op and discharge haemoglobin levels, taking into consideration conditions that could affect Hb, and adverse effects peri-operatively. Data collected from Medway, Clinic letters, ICE and NHFD database.
Results: 257 patients were included in the study. Mean age was 82 (range 43–100). Pre-operatively 60 (23%) had normal Hb, 34 (13%) had borderline, and 163 (64%) had severe anaemia. 131 (51%) had hemi-arthroplasty, 61 (24%) had DHS, 45 (18%) had IM nail and 20 (7%) had THR. Normal Hb was found in 62 patients (24%), 33 (13%) had borderline and 162 (63%) had severe anaemia at discharge. 30 patients (11.7%) had post-op transfusions and 7 were prescribed oral iron. Readmission rate was 4.3% (11 patents) of which 8 (73%) had severe anaemia. Average length of stay in patients with severe anaemia was 21 days. Overall 30-day mortality was 17%(43 patients); in patients with severe anaemia, mortality was 50% (21 patients).
Conclusions: Most patients (63%) had severe anaemia at discharge. Our study demonstrates post op anaemia in hip fracture patients is associated with increased hospital morbidity and mortality. Identification of anaemia at admission and discharge provides an opportunity for treatment to avoid transfusions and improve patient outcomes.

P-922

Retrospective analysis on benefit of "Cross-speciality Geriatrics" in elderly patients admitted to Surgical Service

Abstract Area: Perioperative care

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Given that the majority of very elderly and frail patients who are admitted to hospitals do so in services other than geriatrics, it is necessary to continue implementing "Cross-speciality Geriatrics"" programs to bring the methodology and benefits of geriatric medicine to as many patients as possible. In some cases it is possible to improve patient outcomes and the efficiency of the healthcare system. Frailty is a useful predictor of adverse events in patients with events in patients with certain diseases, which makes it possible to anticipate their to anticipate their onset, to initiate prevention and recovery actions, to try to reverse vulnerability and even to assess the relevance of certain treatments. the relevance of certain treatments. It is currently considered that the best model of collaboration between geriatrics and surgical services is known as co-management or shared treatment co-management. In a support hospital, we performed the comprehensive geriatric assessment of 8 patients who underwent major abdominal surgery for oncological pathology at our center during 2021: 50% female, mean 85 years, Red Cross Mental Scale 1–2/5, Physical Red Cross Scale 2/5, Barthel index > 60/100. All from home. Charlson index of 5 points (High; Mortality in 3 years 85%). 25% had dysphagia and malnutrition. Six of the patients would have benefited from a consultation with the social worker. In addition to this, nutritional treatment, the prescription of physical physical exercise prescription and the adequacy of medication are considered pillars of prehabilitation and also of the treatment of frailty and their use will be frequent.

P-923

Association between intravenous iron therapy and short-term mortality risk in older patients undergoing hip fracture surgery: an observational study

Abstract Area: Perioperative care

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Introduction: Anaemia among older hip fracture patients leads to impaired mobility, prolonged recovery, and increased mortality. Intravenous iron is an alternative to allogenous blood transfusions to treat postoperative anae-mia. This study investigated the effect of

intravenous iron on short-term mortality risk and haemoglobin recovery among older, anaemic patients after hip fracture surgery.
Methods: This retrospective cohort study involved 210 patients from July 2018 and May 2020. The patients were enrolled if they had a haemoglobin level $\leq$ 6.5 mmol/L on the 3rd postoperative day. In May 2019 and henceforth, intravenous iron (Monofer © 20 mg/kg) was administered if the patients' haemoglobin on the 3rd postoperative day was $\leq$ 6.5 mmol/L. The primary outcome was 30-day mortality. The secondary out-come was the effect on haemoglobin level within 14 to 30 days postoperatively.
Results: The patients were divided into four groups: no treatment (n = 52), blood transfusion (n = 38), Monofer (n = 80), and blood transfusion & Monofer (n = 40). Seventeen patients (8%) died within 30 days after sur-gery. The patients who only received Monofer had significantly lower mortality than those who received no treatment (HR: 0.17, 95% CI: [0.03–0.93], P = 0.04). Eighty-six patients had their haemoglobin levels measured within 14 to 30 days postoperatively and there was no significant difference between the treat-ment groups (P = 0.12).
Conclusion: Intravenous Monofer on the 3rd postoperative day is associated with reduced 30-day mortality compared to no treatment among older, anaemic hip fracture patients. No significant differences were found in haemo-globin levels within 14–30 days postoperatively.

P-924

A prospective audit of the management of postoperative anaemia in patients after operative management of neck of femur (NOF) fractures

Abstract Area: Perioperative care

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Background: There is limited guidance on the diagnosis and management of anaemia and iron deficiency in post operative patients. We identified an international consensus statement that provided guidance on patient care with respect to postoperative anaemia and iron deficiency. Our aim was to determine if our practice was consistent with best practice recommendations.
Method: We conducted a prospective audit on a convenience sample of patients (> 60 years old) with NOF fractures who underwent operative management between January–April 2022. We collected data on pre and post operative haematological indices including haemoglobin, serum iron, ferritin and transferrin saturation as well as data on patients who received IV iron and red cell transfusions.
Results: We included 50 patients with NOF fractures who underwent hip replacement. All patients had post-op haemoglobin levels performed. Fifteen (30%) patients fulfilled the criteria for diagnosis of postoperative iron deficiency. Only 4/15 of these patients received IV iron postoperatively. Four patients who did not fulfil criteria for post-op iron deficiency received IV iron. Two patients had a post-op haemoglobin between 7 and 8 g/dL and appropriately received red cell transfusions. Four patients received red cell transfusions despite having post-op haemoglobin levels > 8 g/dL.
Conclusion: Our findings indicated approximately 1/3 of patients fulfilled criteria for post operative iron deficiency with only a small proportion treated. The impact of post-op anaemia management on functional recovery and quality of life need to be established. A local protocol for the management of post operative iron deficiency with and without anaemia will be developed.

P-925

Laxative prescription for opioid induced constipation in geriatric patients with hip fractures: a 2-cycle audit

Abstract Area: Perioperative care

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Background: Elderly patients presenting with surgical complaints including hip fractures are likely to require opioid analgesics but are more likely to suffer adverse events such as constipation. Constipation itself can cause additional pain, delirium, and bowel obstruction [1,2] and therefore can increase length of stay. National guidance has championed the use of opioid receptor antagonist for opioid induced constipation [3] and are being explored by this trust.
Objective: Cycle 1: To assess the use of and compliance of laxative prescription for geriatric patients admitted with hip fractures and the impact constipation had on developing additional complications and length of stay. Cycle 2: Introduction of PAMORA—opioid receptor antagonists including Naloxegol 25 mg OD/Naldemidine to reduce negatively associated outcomes of constipation within this population.
Methods: A prospective quality improvement project was conducted in the orthogeriatric department of a busy DGH. A search for trust guidelines was conducted to obtain an audit standard which included laxative regime and continence aims. Data was collected included the laxative regime prescribed, the length of time before bowels opened and documented constipation related side effects.
Results: Data was collected from 30 patients in the projects first cycle and 22 from the second. The mean number of days until bowels opened was reduced in the second cycle compared to the first with the addition of Naldemedine (mean 3.29 days vs 4 days).
Conclusion: Recommendations from 2-cycle audit: consider incorporating the use of Naldemedine for initial laxative therapy in geriatric patients with hip fractures into trust guidelines.
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P-926

Supporting SURgery with GEriatric Co-Management and Artificial Intelligence—SURGE-ahead develops a digital geriatrician

Abstract Area: Perioperative care

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Introduction: Geriatric co-management improves diverse outcomes in older adults undergoing surgery. Unfortunately, the number of geriatricians is limited, so that the concept has not yet been widely adopted. In SURGE-Ahead, a digital application with a dashboard-style user interface displaying (1) evidence-based recommendations for geriatric co-management and (2) artificial intelligence (AI) enhanced suggestions for continuity of care (COC) decisions will be developed.
Methods: The first three years are dedicated to the development of the digital application. Using literature analyses and expert workshops, an evidence base will be established. Based on the results and with support of an international advisory board, a minimum geriatric dataset (MGDS) will be defined as input data. User experience and ease of use will be evaluated in focus group sessions. Improvements will be implemented accordingly. In a one-year observational study with 200 patients from three departments of Ulm University Medical Center, data to train and develop the AI will be collected. In our project, special emphasis will be given to ethical aspects regarding the use of a digital application in geriatric co-management. During a subsequent three-year project phase, the developed application will be tested in clinical routine, allowing its further improvement through an iterative process.
Conclusion: SURGE-Ahead aims to provide surgical departments with digitized geriatric expertise. The application is meant to support the entire multidisciplinary team during perioperative care to improve treatment and COC decisions for older adults. At the congress the project and first results (MGDS and application design) will be presented and discussed.

P-927

Perioperative blood pressure medication management: a single district general hospital experience

Abstract Area: Perioperative care

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Introduction: People on antihypertensive medications at the time of surgery are at higher risk of post-operative of hypotension. Post-operative hypotension is common and associated with significant morbidity [1]. These outcomes can be reduced by early review of antihypertensives before surgery.
Methods: A retrospective review of patients who underwent elective total hip and knee replacements between August 2021 and December 2021 at a district general hospital in West Midlands, England. Results: 91 patients had elective hip and knee procedures during the study period. The mean age was 67.95 ± 10.95. 43 patients (47.3%) had hypertension. Of those, twenty-three (53.5%) had antihypertensives stopped on the day of surgery. The incidence of hypotension was 20.9% and was more likely to occur among hypertensives (34.9% v 8.3%) and patient's whose anti-hypertensives continued on the day of surgery (68.4% v 31.6%). The Incidence of post-operative hypotension was higher in patients on ≥ 2 blood pressure medications. Length of stay was longer in patients with post-operative hypotension (median 5.0 (3.0–6.0) v 3.0 (2.0–4.8).
Conclusion: Hypertensive patients have greater risks of post-operative hypotension and lengthened in-hospital stay. Stopping blood pressure medications before surgery may reduce these risks.
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P-928

Perioperative care of older people undergoing emergency laparotomy at Wythenshawe Hospital

Abstract Area: Perioperative care

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Introduction: The National Emergency Laparotomy Audit (NELA) has shown that patients aged ≥ 65 who undergo emergency laparotomy have poorer outcomes compared to younger patients. We audited the perioperative care of older people undergoing laparotomy at Wythenshawe Hospital, where a perioperative medicine for older people service was established in 2016.
Methods: A retrospective audit of all 61 patients aged ≥ 65 who underwent laparotomy between March 2020 and March 2021 was performed. Patient notes were audited against standards derived from NELA, Royal College of Surgeons and British Geriatrics Society.
Results: Patient age range was 65–99 (mean 76). 32/61 (52%) were deemed pre-operatively "high risk" as per NELA scoring. Clinical frailty scoring (CFS) on admission suggested that 15/61 (25%) aged ≥ 65 and 7/18 (39%) aged ≥ 80 were frail (CFS ≥ 5). Of patients identified as frail or having cognitive impairment, 14/24 (58%) received depth of anaesthesia monitoring and 13/24 (54%) received regional anaesthesia. 51/61 (83%) received input from a Geriatrician. 44/61 (72%) were admitted to ICU post-operatively but 2 frail (CFS ≥ 5) patients were not. 7/61 (11%) of patients died during admission. Key ConclusionsAll patients were assessed for frailty however there was variation in scoring between specialties. Where frailty was recognised, it was unclear whether this changed the surgical, anaesthetic, and post-operative management. Geriatrician input was much higher than the national average but this was not always in a timely manner. Length of stay and mortality rates overall were lower than the national average. Our audit has highlighted the need for further integration of geriatricians within peri-operative pathways for older laparotomy patients.

P-929

Geriatric care for surgical patients: results and reflections from a cross-sectional survey in acute Belgian hospitals

Abstract Area: Perioperative care

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Purpose: To explore geriatric care for surgical patients in Belgian hospitals and geriatricians' reflections on current practice.
Methods: A web-based survey was developed based on literature review and local expertise and was pre-tested with 4 participants. In June 2021, the 27-question survey was sent to the 91 heads of geriatric departments. Descriptive statistics and thematic analysis were performed.
Results: Fifty-four hospitals responded. Preoperative geriatric risk screening is provided in 25 hospitals, and systematically followed by geriatric assessment in 17 hospitals. Geriatric teams act on request of the surgical team in 43 hospitals, while 25 teams provide proactive care on $\geq$ 1 surgical wards. During the perioperative hospitalisation, geriatric teams provide non-medical advice in 49 and medical advice in 44 hospitals, and 36 teams attend multidisciplinary team meetings. Time allocation of geriatric teams goes mainly to postoperative evaluations and interventions, rather than to preoperative assessment and care planning. Geriatric education for surgical teams is offered in 16 hospitals. In 36 hospitals, surgical patients are admitted on geriatric wards, predominantly trauma/orthopaedic, abdominal, and vascular surgery. Ninety-eight percent of geriatricians feel that more geriatric input for surgical patients is needed. The most common reported barriers to further implement geriatric-surgical services are shortage of geriatricians and geriatric nurses, and unadjusted legislation and funding.
Conclusion: Geriatric care for surgical patients in acute Belgian hospitals is mainly reactive, although geriatricians favour more proactive services. The main opportunities and challenges for improvement are to resolve staff shortages in the geriatric work field and to update legislation and funding.

P-930

Older patients at the preoperative assessment clinic: changing the focus from fit for surgery to optimisation for surgery

Abstract Area: Perioperative care

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Background: The preoperative assessment clinic (PAC) assesses older patients undergoing elective orthopaedic surgery. The aim of this study was to examine how effectively PAC currently assesses older patients for likelihood of postoperative complications and requirement for rehabilitation.
Method: A single centre, retrospective study that received approval from the local ethics committee. Data were collected on all patients admitted to the specialist rehabilitation unit for older persons, between 1st May 2020 and 31st December 2021. Data were collected from hospital Information Technology platform, Bluespiers.
Results: 76 patients, 58 female; median age of 80 years were included. Median time from PAC to surgery was 95 days. Functional assessment was completed in 63.16% of cases, formal cognitive assessment, in 13%. Number of falls in the preceding year was recorded in 31% of cases. Whilst smoking and alcohol history was recorded in 96% of cases, number of units wasn't calculated. 45% ($n = 34$) of patients were identified as likely to require post-operative inpatient rehabilitation. PAC did not record sarcopaenia, polypharmacy or delirium risk factors. From our dataset, at least 13% had sarcopaenia, 80% had polypharmacy and 23% required opiate medications. Post-operatively, 16% of patients developed a delirium.
Key conclusions: Currently, PAC fails to optimally risk stratify frail, older patients. Failure to record frailty, sarcopenia, cognitive impairment and risk factors for delirium is leading to missed opportunities in terms of delirium prevention, and peri operative optimisation of older patients as well as discharge planning before surgery. Collaboration with specialist geriatric services at PAC should improve patient outcomes.

P-931

Is a bicycle accident as the cause of a hip fracture an indication that standard geriatric co-management is superfluous?

Abstract Area: Perioperative care

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Introduction: Deployment of geriatric care would be more sustainable if we could limit geriatric co-management to older hip fracture patients who benefit most from it. We hypothesized that older patients with a hip fracture due to a bicycle accident have a more favorable prognosis, compared to older patients whose hip fracture was caused by another type of accident.
Methods: Retrospective cohort study of hip fracture patients $\geq$ 70 years admitted to our hospital between 2018 and 2020. Nursing home residents were excluded. Primary outcome was length of hospital stay (LOS) in days. Secondary outcomes were delirium, infection, blood transfusion, intensive care unit stay and death during hospitalization. The group with a bicycle accident (BA) was compared to the non-bicycle accident (NBA) group using regression analysis, with correction for age and sex.
Results: Of the 875 patients included, 102 (11.7%) had a bicycle accident. BA patients were younger (79.8 versus 83.9 years, $p < 0.001$), less often female (54.9 versus 71.2%, $p = 0.001$) and lived independently (100 versus 85.1%, $p < 0.001$). Median LOS in the BA group was 0.91 times the median number in the NBA group ($p = 0.125$). For none of the secondary outcomes the odds ratio favored the BA group, except for infection during hospital stay (OR = 0.53, 95%CI 0.28–0.99; $p = 0.048$).
Key conclusions: Although hip fracture patients who had a bicycle accident appeared more healthy than other hip fracture patients, their clinical course was not more favorable. Based on this study, a bicycle accident is not and indicator that geriatric co-management can be omitted.

P-932

Introduction of a surgical older persons assessment service (SOPAS) in a large regional centre

Abstract Area: Perioperative care

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Introduction: The number of older people undergoing surgery is increasing.[Fowler;BritishJournalofSurgery;2019;106(8):1012–1018] Frailty in this group is associated with higher risk of postoperative morbidity and mortality.[Parmar;AnnalsofSurgery;2021;273(4):709–718][Lin;BMCGeriatrics; 2016;16(1):157] Inspired by Shipway's liaison service at North Bristol,[Shipway;FutureHealthcareJournal;2018;5(2):108–116] we have introduced a Surgical Older Persons Assessment Service (SOPAS) at our large regional centre.
Method: Prior to SOPAS, frailty was not recorded in our surgical population and Clinical Frailty Scale (CFS) was introduced to improve this. SOPAS was developed using QI methodology over multiple PDSA cycles. The service started in April 2021 and accepts referrals from surgical specialties, and also proactively screens admissions and at board rounds. We used a custom-made frailty viewer based on the Hospital Frailty Risk Score[Gilbert;Lancet;2018;391(10132):1775–1782] to analyse general surgical patients for mortality, re-admission rate, and length of stay since SOPAS' introduction. Those with Covid-19 were excluded.
Results: SOPAS has seen over 300 patients till date. Of these, 203 general surgical patients were identified through our frailty viewer which covered April 2021 to March 2022. This has shown a reduction in mortality of 2.95% and a mean length of stay reduction of 2.82 days compared to April 2020 to March 2021. This equates to an estimated saving of approximately 573 bed days or £108,767.
Conclusions: Introduction of SOPAS at our large regional centre has led to reductions in mortality and length of stay amongst general surgical patients. This is consistent with previous similar studies and has confirmed a significant cost saving. This data and experience will be used to further develop the service.

P-933

Moving on from MDT meetings: a trial of joint perioperative wards rounds with occupational therapists

Abstract Area: Perioperative care

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Introduction: Comprehensive Geriatric Assessment (CGA) is a tool designed to prevent institutionalisation and mortality of older adults [1]. There is evidence that CGA for surgical patients can reduce mortality and improve outcomes [2,3]. Traditional models of care involve separate assessments with MDT meetings for co-ordination. This project aimed to examine whether joint assessment would enable earlier identification of patients for therapy interventions, reduce duplication and improve quality of care.
Methods: A perioperative ward round was commenced, co-managed by a Consultant Geriatrician alongside a Senior Occupational Therapist (OT). General surgical patients aged $\geq$ 65 with a Clinical Frailty Scale of $\geq$ 4 or other complex needs received a CGA and an individualised MDT care plan.
Results: 33 patients were reviewed on 10 joint ward rounds between February and April 2022. 26 patients (80%) required substantial OT input. 15 patients (45%) required a full 'initial' assessment. No therapy referral had been received for 5 (33%) patients. Only 11 patients were already known to therapy, with 1 patient having substantial changes to discharge plan following joint review. The length of stay average for this group was 17 days with 2 outliers $>$ 30 days, when removed the average was 13.05 days.
Conclusions: Joint CGA resulted in the effective coordination of care for surgical patients. Key benefits demonstrated: earlier identification of patients for therapy input and complex discharge planning; reduced duplication in key CGA domains; improved MDT management of complex issues which affect patients' treatment and discharge plans; team building between AHP and medical colleagues.
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P-934

Benefits of post-operative specialist geriatric care for older patients undergoing elective orthopaedic surgery

Abstract Area: Perioperative care

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Background: The COVID 19 pandemic changed work practices across many different healthcare institutions. The difficulties with cross-site transfers created an opportunity to provide on-site post-operative rehabilitation for older patients undergoing elective orthopaedic surgery. The aim of this study is to assess the impact of post-operative specialist geriatric care on older patients.
Method: This is a single centre, retrospective study that received approval from the local hospital ethics committee. Data were collected on all patients admitted to the on-site specialist rehabilitation unit post-elective orthopaedic surgery between 1st May 2020 and 31st December 2021. Data were collected from hospital Information Technology platform, Bluespiers.
Results: 76 patients, 18 males and 58 females with median age 80 years, were included in this study. Cognitive impairment was established in 40.79% of cases, with 3 cases of newly diagnosed dementia. History of falls was identified in 32.89% and 13.16% had sarcopaenia. Median length of stay in the rehabilitation unit was 25 days. 51.32% were discharged independently, 23.68% went home with a new home care package (HCP), 15.79% were discharged with an existing HCP, 6.58% were transferred for further treatment and 2.63% went to residential care units.
Key conclusions: This data demonstrates the role for geriatric care in elective rehabilitation, with a significant proportion of patients being discharged independently. The benefits of a comprehensive geriatric assessment in the peri-operative setting include increased identification of cognitive impairment allowing appropriate implementation of brain health and identification of a history of falls, enabling falls risk assessment, management and bone health assessment.

P-935

Older patients at the preoperative assessment clinic: changing the focus from fit for surgery to optimisation for surgery

Abstract Area: Perioperative care

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[1]National Orthopaedic Hospital, Cappagh, Dublin, Ireland

Background: The preoperative assessment clinic (PAC) assesses older patients undergoing elective orthopaedic surgery. The aim of this study was to examine how effectively PAC currently assesses older patients for likelihood of postoperative complications and requirement for rehabilitation.
Method: A single centre, retrospective study that received approval from the local ethics committee. Data were collected on all patients admitted to the specialist rehabilitation unit for older persons, between 1st May 2020 and 31st December 2021. Data were collected from hospital Information Technology platform, Bluespiers.
Results: 76 patients, 58 female; median age of 80 years were included. Median time from PAC to surgery was 95 days. Functional assessment was completed in 63.16% of cases, formal cognitive assessment, in 13%. Number of falls in the preceding year was recorded in 31% of cases. Whilst smoking and alcohol history was recorded in 96% of cases, number of units wasn't calculated. 45% ($n = 34$) of patients were identified as likely to require post-operative inpatient rehabilitation. PAC did not record sarcopaenia, polypharmacy or delirium risk factors. From our dataset, at least 13% had sarcopaenia, 80% had polypharmacy and 23% required opiate medications. Post-operatively, 16% of patients developed a delirium.
Key conclusions: Currently, PAC fails to optimally risk stratify frail, older patients. Failure to record frailty, sarcopenia, cognitive impairment and risk factors for delirium is leading to missed opportunities in terms of delirium prevention, and peri operative optimisation of older patients as well as discharge planning before surgery. Collaboration with specialist geriatric services at PAC should improve patient outcomes.

P-936

Does vitamin D deficiency increase the risk of delirium and infections after fractured neck of femur surgery?

Abstract Area: Perioperative care

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Introduction: Delirium and infections are common among elderly patients with fractured neck of the femur (NOF), and both can lead to increased mortality and morbidity. The aim of this study was to evaluate whether vitamin D deficiency increases the incidence of post-operative delirium and infections following fractured NOF surgery in the elderly population.
Methods: In this single-centre retrospective cohort study, we included 181 patients who underwent surgery for fractured NOF during the summer months of 2020 and 2021. All patients were managed under the same perioperative care pathway. Serum vitamin D level (25-hydroxycholecalciferol) was measured on admission to hospital. Oral supplementations were then started according to local guidelines. Delirium assessments were completed preoperatively using the AMT score, and post-operatively using 4AT. We considered infection if patients had a course of antibiotics during the post-operative period.
Results: 168 patients (93%) had serum vitamin D measurements, and among them, 108 patients (64%) were found to be deficient in vitamin D. Low serum vitamin D levels were associated with higher incidence of post-operative infections (Z-score 2.33, $p = 0.02$); the incidence of infection was 54% (58/108 patients) compared to 35% (21/60 patients) in cohort with normal vitamin D levels. Vitamin D deficiency was not associated with post-operative delirium (11/108 patients, Z-score -0.96, $p = 0.34$).
Conclusion: In our study, vitamin D deficiency does not appear to materially affect the incidence of post-operative delirium among elderly patients with fractured NOF. However, it is associated with more frequent cases of post-operative infections.

P-937

Vascular complications and mortality after hip fracture surgery in older patients: role of preinjury antiplatelet, vitamin K antagonist and direct oral anticoagulant therapies

Abstract Area: Perioperative care

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Introduction: It is still unclear whether antiplatelets and anticoagulation therapies could confer worse clinical prognosis to hip fracture patients. We aimed to determine the role of preinjury antiplatelet and anticoagulant therapies as risks factors of postoperative vascular complications and mortality.
Methods: Observational retrospective study including all patients 70 years or older admitted to the orthogeriatrics unit with a hip fracture, for 8 months. Primary composite outcome was the occurrence of any thrombotic/hemorrhagic event, cardio/cerebrovascular complication, or death during admission. Univariate and multivariate analysis studied the association of the outcome with clinical variables, comorbidity using Cumulative Illness Rating Scale-Geriatrics (CIRS-G), and pre-injury antiplatelets (AP), vitamin K antagonists (VKA) or direct oral anticoagulants (DOACs).
Results: 399 patients were included, age 86 ± 7 years, 73.5% female. 51.5% subcapital fractures. 196 patients (49.1%) were on AP or anticoagulant therapies (115 AP, 48 AVK and 33 DOACs). 80 patients (20.4%) developed the study outcome: 63 (15.8%) had a vascular complication and 25 (6.4%) died. They were significantly older, more dependent, and comorbid, in higher percent on AVK (26.3 vs 8.2%); they also had longer time to surgery, longer length of

stay, required more transfusions, and had more infectious complications. Only age (OR 1.06, p = 0.01), comorbidity (OR 1.06, p = 0.05) and AVK treatment (OR 2.67, p = 0.009) remained significant in the logistic regression model.
Key conclusions: The variables independently associated to vascular complications or mortality in this sample of hip fracture patients were age, comorbidity and preinjury AVK treatment, whereas neither antiplatelets nor DOACs were associated with the outcome.

P-938

Development of a trauma and perioperative older people's service (T-POPS) during the COVID-19 pandemic at a Busy District General Hospital

Abstract Area: Perioperative care

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Introduction: The role of designated geriatrician-led perioperative services for older people admitted under surgical specialities has been evolving at pace during recent years. However, these services are not yet universal across the NHS. One such service was introduced at a district-general hospital in London in early 2020. We describe a service evaluation of its impact on the care of older people admitted under emergency general surgery.
Methods: We undertook a retrospective cohort study using electronic patient records to analyse 418 patient admissions (aged > 65 years) under the care of emergency general surgery before and after the introduction of a consultant geriatrician-led Trauma and Perioperative Older People's Service (T-POPS) between 2018–2021. We looked at key outcomes outlined in National Emergency Laparotomy Audit (NELA) and British Geriatrics Society (BGS) guidelines.
Results: There were 219 patient admissions in the pre-service (median age 79.3), and 199 in the post-service group (median age 80.4.) Pre-service implementation, 7.2% of patients were reviewed by a geriatrician during their admission which rose to 12% in those 25 patients undergoing a laparotomy. 0.45% had a clinical frailty score (CFS) documented. Post implementation, 100% of patients were reviewed by T-POPS during their admission, and 99% had a CFS documented. All were reviewed within 3 days of step-down from critical care or within 7 days of undergoing surgery. There was no difference in mortality between the two groups (p = 0.15). Conclusion: Introduction of T-POPS has greatly improved the standard of care for surgical patients aged > 65 as set out in NELA and BGS guidelines.

P-939

Preoperative dehydration identified by serum osmolarity is associated with frailty in patients with hip fracture

Abstract Area: Perioperative care

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Introduction: Preoperative dehydration is a well-known predictor of in-hospital complications and poor functional outcomes in older patients with hip fracture. In an orthopedic and geriatric cooperative setting, we aimed to investigate whether preoperative hyperosmolar dehydration (HD) was associated with frailty at discharge from hospital in older patients with hip fracture.
Materials and methods: This retrospective cohort study was conducted in a Danish university hospital. The study population consisted of patients aged 65 + years and surgically treated for hip fracture. HD was defined as serum calculated osmolarity above 295 mmol/L. Outcome was frailty at discharge measured by the Multidimensional Prognostic Index.
Results: A total of 214 patients was consecutively included in the study from March 11, 2018, to August 31, 2020. Mean age was 81.2 (SD: 7.6) years, and 69% of the patients were women. The prevalence of HD was 40% and significantly associated with severe frailty at discharge (Odds Ratio: 2.08 (95% confidence interval: 1.11–3.90; p = 0.02).
Conclusion: The prevalence of preoperative HD is high among older patients with hip fracture and is associated with frailty. A systematic screening for dehydration on admission is advisable and may contribute to a more adequate fluid management in the perioperative phase.

P-940

Establishing a national network to improve perioperative care for older people undergoing surgery

Abstract Area: Perioperative care

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Introduction: Increasing numbers of older people are undergoing surgery, and adverse clinician-reported, patient-reported and process-related outcomes are common within this group. Perioperative Comprehensive Geriatric Assessment (CGA) and optimisation has been shown to provide clinical benefit and to be cost-effective. However, in 2019 a UK survey showed almost half of acute National Health Service (NHS) trusts do not provide such a service. NHS Elect is an organisation which uses a Quality Improvement (QI) approach to work with NHS organisations to improve patient care.
Methods: The POPS Network is a 6 month collaborative programme of learning and development events, run by NHS Elect. The network works with NHS organisations to establish local POPS services. This involves bespoke QI coaching and support with data collection, monthly networking meetings to share experience, educational webinars and workshops, and online resources including a 'POPS Toolkit' of practical resources to facilitate service development.
Results: 6 NHS sites completed the programme in January 2022, resulting in 3 successful business cases to expand their POPS services. A second cohort of 7 sites is currently participating in the programme.
Conclusion: The POPS Network has developed a structured programme to support implementation of CGA and optimisation based perioperative services, resulting the successful establishment of POPS services. We plan to continue to expand the POPS Network to improve care for patients nationwide.

P-941

The value of a geriatrician in a vascular multidisciplinary team

Abstract Area: Perioperative care

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Introduction: The increase in life expectancy on the one hand, and the development of less invasive endovascular techniques on the other, have led to the need of multidisciplinary teams to evaluate the risk and benefits and the complications of patients in need of a vascular surgery. Multidisciplinary teams through prevention and treatment of geriatric syndromes and early management of decompensated frequent comorbidities have previously shown to improve outcomes.
Methods: We have conducted an observational comparative study of all the patients hospitalised in a Vascular Surgery Unit in 2019, and 2021. We have compared comorbidity, length of stay, complications, the type of interventions, drugs and diagnoses at discharge and destination at discharge between the two groups, and between patients with and without a geriatric medical consultation during 2021. Results and key conclusionsAfter analysing 450 patients (225 patients each year), we would show the results of the present study and hope to provide further evidence of the benefits of multidisciplinary teams work.

P-942

Factors associated with one-year mortality in very old patients undergoing emergency abdominal surgery

Abstract Area: Perioperative care

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Introduction: In recent years there has been an increase in urgent abdominal interventions in the very old patients. There are few studies that analyse the clinical evolution and mortality of these patients.
Material and methods: Prospective observational study from September 2018 to August 2020 in a tertiary hospital. Patients > 80 years old admitted to the General Surgery Department for emergency surgery due to abdominal pathology and assessed by the Geriatrics Unit were included. The variables collected were: sociodemographic data, Barthel Index, comorbidities (CIRS-G scale), Reisberg GDS Scale, Clinical Frailty Scale (CFS), Mini-Nutritional Assessment (MNA-sf) and polypharmacy. The anesthetic risk (ASA classification), the presence of medical-surgical complications (Clavien-Dindo classification) were recorded. Follow-up was performed and mortality at one year was collected. Descriptive analysis was performed and averages were compared using Student's t-test and Chi-squared, with a significance level of 5%.
Results: Eighty-three patients were included. Mean age was 86.5–4.6 years, and 48 (57.8%) were female. At 12 months 26 (31.3%) had died. Mortality at 1-year was associated with previous atrial fibrillation (47.8% vs 25%, OR 2.7 95% CI 1.1–7.5), heart failure (58.8% vs 24.2%, OR 4.5 95% CI 1.5–13.6), polypharmacy (40.4% vs 16.1, OR 3.5 95% CI 1.2–10.6), CFS > 3 (39.6% vs 16.1%, OR 3.4 95% IC 1.1–10.4) and severe complications during admission Clavien-Dindo 3 (52.6 vs 25%, OR 3.3 95% IC 1.1–10.4). There was no association between mortality and age, sex, dementia or anesthetic risk.
Conclusion: Frailty, polypharmacy, previous cardiopathies and severe postoperative complications are associated with 1-year mortality in very old patients undergoing emergency abdominal surgery.

P-943

Improving the peri-operative management of anticoagulation in patients with neck of femur fractures (NOFFs)

Abstract Area: Perioperative care

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Neck of femur fractures (NOFFs) are a clinically significant diagnosis, with 10% of patients dying within one month of diagnosis [1]. There is a strong association between earlier surgery and improvement in postoperative outcomes [2]. Taking anticoagulation can cause delays in patients being operated on. At Homerton University Hospital (HUH), no previous guideline existed to aid specifically in the management of patients with NOFFs on anticoagulation. We created a guideline in order to reduce delays to theatre, in keeping with national guidance (< 36 h to operation).
Methods: We audited all patients in 2020 admitted to HUH with NOFFs taking anticoagulation. A guideline was then created, reflecting new national guidance [3] on the management of anticoagulation pre-operatively for NOFF patients. Three PDSA cycles were completed, with repeat audit cycles following dissemination and teaching of guideline to relevant clinical groups.
Results: Following implementation of our guideline, 56% of patients had surgery within 36 h of admission, compared to 25% previously. Advice being given to the admitting team regarding timing of the operation was more consistent, and the admitting team needed to ask for advice less often. There was an overall increase in consistency of management.
Conclusions: Ensuring NOFFs are operated on promptly reduces the risk of co-morbidity and mortality [2]. There are often incorrect delays to theatre following anticoagulation administration due to perceived risk of bleeding. We created and implemented a new guideline, which successfully reduced time taken for patients on anticoagulation to be taken to theatre for operation.
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P-944

Review of peri-procedural management of diabetes mellitus in older adults in a tertiary centre

Abstract Area: Perioperative care

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Background: Increasing numbers of older adults with Diabetes Mellitus (DM), especially type 2, are undergoing both elective and emergency procedures. A multi-disciplinary team developed a protocol in our hospital in 2021 to guide the peri-procedural management of patients with DM.
Methods: Our aim was to review the adherence to this protocol in the older population. Four targets were reviewed including the achievement of capillary blood glucose (CBG) of 6–10 mmol/l pre-operatively, adherence to the short-term fasting protocol and intravenous insulin protocol, adherence to recommended frequency of CBG monitoring and the management of non-insulin medications.
Results: We included 10 patients > = 65 years across six surgical wards. All patients had Type 2 DM. Age range was 68–90 years (mean age = 81 years). 8 achieved the target CBG pre-operatively. 5 patients were on insulin therapy at the time of their procedure and 4 of these had their insulin correctly adjusted in line with the protocol. The intravenous insulin protocol was only correctly commenced in 3 out of an eligible 6 patients. Only 4 patients received sufficiently frequent CBG checks. 9 patients had their non-insulin medications managed appropriately peri-operatively. We did not observe any cases of diabetic related emergencies.
Conclusions: Targeted glycaemic control aids in patient recovery, reduces complications and reduces the incidence of diabetes related emergencies in the older population [1]. This review highlights the potential to increase the utilisation of the intravenous insulin protocol in the older patient and a requirement to achieve better CBG monitoring in the peri-operative period in this cohort.
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P-945

Vaccination uptake on Dermatology patient's over the age of 65 years on biological treatment

Abstract Area: Pharmacology

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Background: Biologic and immunosuppressive therapies play important roles in the management of a wide variety of dermatologic diseases. However, immunotherapies can negatively affect normal immune functioning, placing these patients at risk of infection [1]. The strength of the immune system also declines with increasing age. Vaccinations reduce the risk of susceptibility to infections. Thus, it is recommended that vaccinations against influenza, pneumococcal and COVID-19 infections are given to boost patient's defence while on immunosuppressant medications [2]. In addition, people over 65 years are at the highest risk of serious illness from COVID-19 if they have not been vaccinated [3]. Therefore, in accordance with the British Association of Dermatology guidelines (August 2021), patients on biologic therapies can and should have their COVID-19, influenza and pneumococcal vaccinations [2, 4]. MethodologyWe conducted a retrospective audit of all patients over the age of 65 years on biological therapies in the dermatology clinic between March 2021 and March 2022. Data on patients COVID-19, influenza and pneumococcal vaccination status were obtained from the departmental dermatology database (Filemaker Pro®) and patients' medical records. In patients where the vaccine status wasn't documented in their medical records these patients were telephoned about their vaccine status. Findings were compared with the British association guidelines [2, 4], which were our audit standard. The data was subsequently analysed using Microsoft Excel. ResultsEighteen patients over the age of 65 years, were on biological therapies in the Dermatology Department, between March 2021 and March 2022. 44% (n = 8) of patients were between 65 and 70 years old, 28% (n = 5) were between 70 to 75 years old and 28% (n = 5) were above 75 years. The mean age was 71 years (± sd 5.2). The gender distribution was equal: 50% (n = 9) male, 50% (n = 9) female. Biologic therapies were indicated for treatment of psoriasis in 94% (n = 17) of patients and for treatment of eczema in one patient (6%). With regard to biological therapies, 17% (n = 3) of patients were treated with adalimumab, 16% (n = 3) were receiving Etanercept, 28% (n = 5) were receiving secukinumab, 11% (n = 2) were receiving ixekizumab, 11% (n = 2) were receiving guselkumab, 5% (n = 1) were receiving ustekinumab, 5% (n = 1) were receiving dupilumab and 5% (n = 1) were receiving risankizumab. All patients (100%, n = 18) had received all three of their COVID-19 vaccines. 50% (n = 8) were awaiting their 4th covid vaccination. 94% (n = 17) of patients had received their influenza vaccine in 2021. 66% (n = 12) of patients had received their pneumococcal vaccination in the last 5 years. We advised the patients who had not received their recommended vaccinations to receive it.
Conclusion: This audit confirms dermatology patients over the age of sixty-five years, demonstrate excellent compliance receiving their covid-19 vaccinations, as recommended by the BAD2,4. This is important as patients over 65 years who are unvaccinated are recognised as being at the highest risk of serious infection from COVID-19. However, only 66% of patients had received their pneumococcal vaccination in the previous 5 years in contrast with 94% who had received their influenza vaccine in 2021, illustrating the need for educational intervention on the importance of all three vaccinations in this high risk patient group. We plan to perform a reaudit next year to assess compliance with vaccinations following patient education in order to complete the audit cycle.

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P-946

Cross-cultural adaptation and validation into Spanish of the desprescription questionnaire in the elderly patient

Abstract Area: Pharmacology

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Introduction: Desprescription is the main strategy to reduce polypharmacy and its complications. However, its implementation is limited by the existence of numerous barriers associated with the process. In 2017, a questionnaire was developed in Italian, which was later back-translated into English, with the aim of determining the clinicians' perceptions of this practice in the elderly population. The objective is to carry out a cross-cultural adaptation of the desprescription questionnaire from the original Italian version to the Spanish language.
Methods: Cross-cultural validated methodology was followed. Direct translation and back-translation followed by synthesis and adaptation by a third translator were performed. Next, a pilot test was carried out. A panel of experts was created, made up of clinical pharmacists and internists, to guarantee the conceptual, semantic, and content equivalence between the original and the Spanish version. Discrepancies founded between both versions were analyzed. A comprehensibility study was performed on using desprescription questionnaire in a sample of 65 physicians to ensure the cross-cultural equivalence.
Results: The Spanish version of the questionnaire was achieved. The global difficulty of the translators to find an equivalent expression between Italian and Spanish was low/moderate. In the first phase of the expert panel, 4 questions had sections considered "indeterminate" and one question was "doubtful". After the second phase, all questions were considered "adequate" except for one. The validation study proved that the comprehensibility requirement (> 80%) were achieved for all items.
Conclusions: The back-translation and validation of the desprescription questionnaire provides a tool to assess the clinicians' perceptions about deprescription in elderly people. This will allow establishing improvements in the approach to this practice.

P-947

Conduct of a questionnaire on description in elderly patients: clinicians's perception and potential barriers

Abstract Area: Pharmacology

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Introduction: Deprescription, despite being an increasingly established activity in daily healthcare practice, still presents barriers that hinder its implementation. The objective of this study was to know the clinician´s perception regarding deprescription and to identify the main barriers through the application of a specific questionnaire.
Methods: The questionnaire was adapted to an online format. This form was sent to doctors of different ages, specialties and geographical areas in Spain. The dissemination did not follow a specific strategy, but rather broad participation was requested. The degree of agreement was evaluated for each question, scoring them from 1 to 7 (1 strongly disagree, 7 strongly agree).
Results: 72 physicians answered the questionnaire, 48 women (66.7%). The median age was 59 (IQR: 42–62) years. 75% of the participants were family doctors, 18.1% internists and 6.9% other specialties.88.9% stated that they felt safe to deprescribe. In patients with limited life expectancy, 88.9% answered that they were in favour of deprescribing medications with preventive action when the benefits are insufficient. This value was lower when it came to drugs with therapeutic action (70.8%). Regarding the barriers, 65.3% stated that they had no problem when withdrawal drugs prescribed by other professionals, 75% indicated that they had no problem removing drugs, even if the patient considers that they are necessary, and 61.1% revealed not to be afraid of possible side effects associated with deprescription. 50% of the participants stated that they did not have enough time to carry out the deprescription correctly.
Conclusions: Although the results show a trend in favour of deprescription, certain barriers that hinder its execution continue to be identified. The main problem is the lack of time, a consequence of the high care load.

P-948

Efficacy and safety of rivaroxaban for extremely aged patients with venous thromboembolism

Abstract Area: Pharmacology

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Introduction: Rivaroxaban, a non-vitamin K antagonist oral anticoagulant, has become a widely used drug for the treatment of venous thromboembolism (VTE) in adult patients. However, few trials explored the efficacy and safety of Rivaroxaban in patients over the age of 80. This necessitates further real-world studies of Rivaroxaban across elderly populations.

Methods: We performed a retrospective single center study involving extremely aged patients with venous thromboembolism treated with rivaroxaban. The sample comprised 120 patients newly initiated on rivaroxaban diagnosed between January 2018 and January 2020. Patients were followed up for no less than 2 years. The effectiveness outcome was the disappearance of thromboembolism. The safety outcome was the incidence of major bleeding events. Comorbidities and complications were recorded throughout the entire study.
Results: The efficacy outcome occurred in 114 of 120 patients (95%) and the safety outcome occurred in 12 of 120 patients (10%). Increased hemorrhages were observed in patients with infection (15.15% vs 0%; $P = 0.0015$). Patients with Charlson comorbidity index (CCI) score higer than 6 points exhibit higher bleeding rates (14.06% vs 3.51% $P = 0.0438$) and lower thrombus cure rates (87.1% vs 100%; $P = 0.0062$).
Key conclusions: Patients with infection should be more careful of bleeding events during rivaroxaban therapy. CCI score higher than 6, which predicted none ten-year survival, indicated poor safety and efficacy of rivaroxaban.

P-949

Identifying drug classes among a list of prescribing cascades

Abstract Area: Pharmacology

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Introduction: Prescribing cascades occur when a drug (Drug A) is prescribed, a side effect develops that is misinterpreted as a new medical condition, and a new drug (Drug B) is prescribed. The goal of the present study was to identify the number of drug classes represented in a list of prescribing cascades in population-level studies.
Methods: From a list of 139 cascades obtained previously, we removed cascades that included drug therapies involving only over-the-counter drugs. We then identified cascades where both Drug A and Drug B were drug classes, and then where either Drug A or B were for an individual drug therapy. Finally, we determined if these individual drug therapies were already included in one of the previously identified drug classes.
Results: We excluded 5 cascades that included only over-the-counter medications. Of the individual drug therapies, 43 drug classes for Drug A and 47 classes for Drug B were identified. 19 cascades had specific drugs that were included within one of the already identified classes. Accounting for overlap this left 70 unique classes that would need to be identified to evaluate all 139 cascades. Classes of drug therapies that appeared > 7 times in the list were antipsychotics, cholinesterase inhibitors and corticosteroids (Drug A); gastroprotective agents and antiemetic agents (Drug B).
Key conclusions: This approach has benefits in narrowing down cascades of interest but needs further validation from clinicians to confirm whether these cascades are clinically impactful. Specific drug identification numbers will need to be cross-referenced for further in-country analyses.

P-950

Using data from the Canadian Institute for Health Information to identify high-prevalence prescribing cascades

Abstract Area: Pharmacology

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Introduction: Prescribing cascades occur when a medication side-effect from a previous drug (drug A) is treated with a potentially unnecessary and harmful second drug (drug B). A systematic approach is required to identify those with the highest prevalence in the older adult patient population.
Methods: A list of 139 prescribing cascades obtained from prior work was used as a basis to identify cascades with the most common use in older patients. To identify the most common prescribing cascades, we used publicly available 2020 data from the Canadian Institute for Health Information (CIHI) on the top prescribed medications in adults aged over 64 to shortlist cascades where both drug A and drug B classes appear as having a prevalence of at least 5%. ResultsSeventeen prescribing cascades with drug class prevalence of 5% and over were identified. Two cascades whose drug classes for Drug A and Drug B were reported to be at least 10% were identified. These two were (a) corticosteroids leading to hyperglycemia and prescriptions of antihyperglycemic agents and (b) beta blockers (particularly lipophilic e.g., propranolol) leading to depression and prescription of antidepressants. Corticosteroids, gastroprotective agents/proton pump inhibitors, sleep agents and bisphosphonates were the most represented drug classes.
Key conclusions: These results provide one avenue for identifying prescribing cascades with high-prevalence drug classes using publicly available data in Canada. Further validation by clinicians and stratification by age and sex are warranted and would further confirm whether these cascades both are clinically impactful and differ by age group or sex.

P-951

Changes in the numbers of drugs after a admission to an acute geriatric unit

Abstract Area: Pharmacology

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Introduction: Hospital admission to an acute geriatric unit is an opportunity to deprescribe. However, acute conditions also require adding drugs to usual chronic prescriptions. Prescription practices may be different in patients depending on discharge destination and dementia status.
Methods: All admissions to an acute geriatric unit (June 2016–April 2022) are prospectively included in a database. The number of drugs used immediately before hospital admission was assessed by a

hospital pharmacist by personal interviews, prescription records and telephone contacts with caregivers. The number of drugs at discharge was extracted from the discharge letter. A diagnosis of dementia was registered by the attending geriatrician based on all available information.
Results: 3628 patients who were alive at hospital discharge were included (mean age 93.1 years old, 68% females). The mean number of drugs was 8.70 ± 3.70 on admission and 9.34 ± 3.53 on discharge (mean increase 0.58 ± 3.11). Those who were discharged home had a higher increase in the number of drugs than those discharged to a care home/intermediate care centre (0.83 ± 2.97 vs 0.15 ± 3.30, $p < 0.001$). Fifty-five percent had a diagnosis of dementia. Mean increase in the number of drugs was 0.41 ± 3.16 in those with dementia vs 0.78 ± 3.05 in those without dementia ($p < 0.001$). This difference remained significant after adjusting for age and gender.
Key conclusions: Older patients admitted to acute geriatric care receive a higher number of drugs when discharged that before hospital admission. Increase is higher in those who are discharged home and in those without dementia.

P-952

Medication use and costs among older adults aged 90 years and older in Italy

Abstract Area: Pharmacology

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Introduction: Older adults are often affected by multiple chronic conditions and experience geriatric syndromes that may affect the risk/benefit profile of medications. Little is known about the use of such medications in the older population. This article describes medication use and costs in Italian adults aged ≥ 90 years.
Methods: Data from the 2019 Pharmaceutical Prescriptions database, concerning data on medications reimbursed by the Italian National Health Service, were analyzed in terms of prevalence and amount of use expressed as defined daily dose/1000 users (DDD/1,000 users/-day), accounting for different age-groups and sex.
Results: All individuals aged ≥ 90 years used at least one medication, with a mean number of 3128 DDD/1000 users/day corresponding to an annual cost of 683 euros per user. Both use and costs linearly decreased with increasing age, with men accounting for a higher amount of DDD/1000 users and costs than women across all age-groups. Antihypertensives (1330 DDD/1000 inhabitants), antiplatelet agents (337 DDD/1000 inhabitants), medications for peptic ulcer and gastroesophageal reflux (328 DDD/1000 inhabitants), and lipid-lowering agents (166 DDD/1000 inhabitants) were the most frequently used medications. We observed a progressive decrease in the usage of themajority of medications with increasing age, with the exception of antibiotics and antipsychotics.
Key conclusions: Individuals aged ≥ 90 years used a lower DDD/1000 users, with an associated decrease in annual costs. The persistent use of preventive medications highlights the potential lack of awareness regarding medication rationalization and guidance for optimizing prescriptions. Our findings highlight the need for further initiatives to improve medications' appropriateness in these older age-groups.

P-953

β2-adrenoceptor agonists and risk of Parkinson's disease: nested case–control study of people with asthma or chronic obstructive pulmonary disease

Abstract Area: Pharmacology

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Background: β2-adrenoceptor (β2AR) agonists have been associated with a decreased risk of Parkinson's disease (PD). The aim was to study the association between use of inhaled β2AR agonists and risk of PD in persons with asthma/chronic obstructive pulmonary disease (COPD).
Methods: Nested case–control study was conducted within register-based Finnish Parkinson's disease (FINPARK) study and included 1,406 clinically verified PD cases diagnosed during 1999–2015, who also had asthma/COPD > 3 years before PD. PD cases were matched with up to seven controls by age, sex, duration of asthma/COPD, pulmonary diagnosis, and region (N = 8,630). Exposure to short- and long-acting β2AR agonists was extracted from the Prescription Register since 1995 until beginning of 3-year lag period. Cumulative and average annual exposure was assessed with quartiles of defined daily doses (DDDs) and the lowest quartile was used as reference. Adjusted odds ratios (aORs) were calculated with 95% confidence intervals (CIs) using conditional logistic regression adjusted for confounders.
Results: Cumulative exposure to either short- or long-acting β2AR agonists was not associated with risk of PD. With annual exposure, a decreased risk was observed only for the highest quartile of long-acting β2AR agonists (aOR 0.75; 95% CI 0.57–0.97). In stratified analyses the lowest risk estimates (aOR = 0.48) were observed among those with both asthma and COPD diagnoses.
Conclusions: Higher levels of exposure to β2AR agonists were not consistently associated with reduced risk of PD among persons with asthma/COPD. The inverse association in highest category of annual exposure to long-acting β2AR agonists may be explained by unmeasured confounding e.g., disease severity or smoking.

P-954

Development of guidance for initiation and deprescribing PPI

Abstract Area: Pharmacology

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It is important to consider whether the risks outweigh the benefits in long term proton pump inhibitor as there has been increasing use of

PPIs in hospital settings and community especially in elderly care. Data collection was done on the patients admitted to care of elderly wards in Whiston hospital from February to April 2022. 51% of patients were prescribed with PPIs, majority more than 80% of the PPI prescriptions were originated in community. The indication of PPI due to concomitant medications such as antiplatelets, anticoagulants, steroids and NSAIDs is more common than having dyspepsia and GERD related symptoms alone. On the other hand, half of the inpatients receiving above medications are also not prescribed with PPIs, which indicates the controversy on initiation of PPIs on patients with potential ulcerative medications. Moreover, 10% of the patients with PPI prescription from community without evidence of indication were discharged with the continuing prescription. Therefore, in order to in order to optimise safety and avoid unnecessary prescription, the guidance for initiation and deprescribing PPI is developed to apply in St Helens and Knowsley hospital trust.

P-955

Characterization of the patient with recurring Clostridium difficile infection

Abstract Area: Pharmacology

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[1]Doctor

Objective: Study of patients who have presented one or more episodes of recurrence (< 4 weeks between episodes) or reinfection (> 4 weeks between episodes) infection due to Clostridium Difficile (ICD) at the Hospital Universitario de Guadalajara (HUGU). Analyze characteristics, risk factors and treatment received from patients.
Methods: Prospective observational study with 8-week follow-up (January/2018–September/2019, H.U.GU). Demographic variables, comorbidity, diagnose and treatment were evaluated. Statistical analysis performed using SPSSv15.
Results: n = 14. Average age 73 years. Degree of functional independence (Barthel), mean 75 (mild disability), degree of prior cognitive impairment (GDS), 1.4 (no or mild cognitive impairment). 14% lived in residence previously. At the diagnosis of the first episode of diarrhea associated with CD, 85% of the patients were hospitalized, with a mean stay of 17 days (SD 22). The factors related to a 1st episode ICD are: taking PPIs, hospital admission 3 months prior, antibiotic therapy 8 weeks prior to the episode (57%). Among the antibiotics with a causal relationship: quinolones (21%), cephalosporin (21%), amoxicillin-clavulanic (21%). n = 13, with 11 recurrences and 2 reinfections. Mean age 73 years (SD 17). Evaluation of the degree of functional independence using the Barthel Index, mean 75 (mild disability) (SD 41) and the degree of prior cognitive impairment using the GDS Scale of 1.4 (no cognitive impairment or mild). 14% lived in residence previously. At the diagnosis of the first episode of diarrhea associated with CD, 85% of the patients were hospitalized, with a mean stay of 17 days (SD 22). The factors related to the 2nd episode of CDAD were: chronic use of PPIs (92% of the patients in the first and second episodes, rising to 100% of the patients with 3 or more episodes), hospital admission in the previous 3 months (71% of patients in the first and second episode, 60% in the third, and 100% in the fourth and fifth), antibiotic therapy 8 weeks prior to the episode (57%). Among the antibiotics with a causal relationship were quinolones (21%), cephalosporins (21%) and amoxicillin-clavulanic (21%). In the first episode of CD-associated diarrhea, 58% of patients received vancomycin and 42% metronidazole. Diarrhea had a mean duration of 6.6 days, was mild in 28% of cases and moderate-severe in 71%. No patient died as a consequence of the first episode. The SCORE of recurrence risk for CDAD was high (> 3) in 65%. Binary toxin was detected in 57% of cases. Treatment in first recurrence (n = 13) was vancomycin 64%, metronidazole 14%, fildaxomicin 7%. 92% had a high-risk SCORE and binary toxin was detected in 57%. The duration of the diarrhea was 7.86 days, mild in 21%, moderate-severe in 64% and fulminant in 7%. Mortality of 7% of cases. The treatment of the second recurrence was vancomycin 40%, fidaxomicin 40% or vancomycin + FMT (Fecal Microbiota Transplantation) in 20% of the cases. They hadHigh risk SCORE 100% and binary toxin was detected in 20%. The duration of the diarrhea was 8.86 days, mild in 40%, moderate-severe in 60%. Five patients had a second recurrence and associated mortality of 0%. In the third recurrence, (n = 2) all patients had high-risk SCORE, with binary toxin in 50% of cases and severe diarrhea in all of them. Fidaxomicin was treated in 100% of patients with a related mortality of 0%. Two patients had a fourth recurrence, who were treated with 50% vancomycin and 50% FMT, with associated mortality of 0%, SCORE high risk in 100%, and binary toxin in 50%, with severe diarrhea in 100%.
Conclusions: A first episode of recurrence is associated with a higher intrinsic risk of recurrence/SCORE, and greater severity of diarrhea.- The recurrence rate collected in this sample is 12.5% (with respect to the 112 patients in this period with some episode of CD). This does not coincide with what has been described so far in the literature, which amounts to 30%. There is great diversity when applying treatment in each episode. We must establish a treatment protocol, achieving better control of this highly prevalent infection, which is also underdiagnosed. In the second episode, 14% received treatment with metronidazole (not indicated for treatment of the second recurrence). After the second recurrence, only 40% of patients underwent FMT, the treatment of choice in these cases.

P-956

Modified diets and medication in dysphagia: a systematic review

Abstract Area: Pharmacology

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Introduction: Dysphagia is a potentially life-threatening condition, affecting 40,000 patients in the UK every year, at a cost of £400 million each year. Dysphagia is a geriatric syndrome, frequently associated with stroke and dementia. Poly pharmacy is common in approximately 30% of older people (Kim and Parish 2017), which is a concern in people with dysphagia. Thickening agents are widely used to promote safer swallowing. Clinicians are often unaware of the affect, if any, of thickeners on the bioavailability, and thus therapeutic impact, on oral medications taken with it. MethodologyWe performed a literature search of MEDLINE and EMBASE. Search terms were: dysphagia/antibiotics/antivirals/epilepsy/Parkinson's/thickened diet (EMBASE only)/bioavailability or absorption of medicines or pharmacokinetics. We excluded: NG feeds /animal studies and included: all ages/genders/countries, > 18 years and community and hospital settings.

Results: 526 results were found, 20 received a full text review and 4 were included in the review. A further 14 articles were identified by the authors. A combined total of 16 articles were relevant. The majority of results related to the effect on the dissolution profiles of medications. Very few studies assessed bioavailability or used clinical outcome measures. And these were often small studies on a very limited number of medications.
Conclusion: Despite the consensus that dysphagia poses risks to patients and challenges to clinicians, little research has taken place on the ways to combat this for medicines, where there is no suitable alternative formulation. This is a concern for many medications with critical therapeutic windows.

P-957

Polypharmacy in the elderly, pilot study

Abstract Area: Pharmacology

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Introduction: The demographic challenge is one of the fundamental pillars for the hospitals of the future. We want to present Polypharmacy Videoconferences with Health Centers as a non-face-to-face service, strictly focused on polypharmacy, the reason for multiple interactions and adverse effects in the elderly.
Method: Polypharmacy is the reason for a significant health expenditure, the idea arises from an efficient control of it, approaching patients selected by Primary Care with more than 6 drugs by videoconference. The Stopp-Start, Beers and Choosing wisely criteria will apply the deprescription of unnecessary drugs. The objective would be to reduce unnecessary polypharmacy in addition to reducing health spending. A consultation would be carried out by videoconference with two pilot health centers. Patients with polypharmacy (> 6 drugs) would be affiliated and a pharmacist would attend the meetings. Nursing would evaluate hospital admissions, emergency visits, new polypharmacy by telephone per month.
Results: 30 patients were evaluated, managing to reduce unnecessary polypharmacy to less than 6 drugs. In second place, the month following the assessment, a decrease in visits to the emergency room was achieved (3 episodes in total) and no hospitalization.
Conclusions: A pioneering project is exposed in the non-face-to-face approach of the elderly with polypharmacy, where they try to bring together several basic pillars of the medicine of the future. Non-face-to-face, efficient, demographic challenge, with communication between professionals and focused on the patient.

P-958

Second-line treatment of Parkinson's disease in geriatric medicine. Clinical case

Abstract Area: Pharmacology

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Introduction: Geriatric patients with Parkinson's disease are often at an advanced stage. Therefore, the question of initiating second-line treatments is regularly raised.
Methods: Mr S presented the following criteria: more than 5 levodopa doses, 3 h of OFF phase per day and more than 1 h of dyskinesias per day. On the geriatric level: swallowing disorders, sleep disorders and malnutrition. After presentation of the treatment with levodopa/carbidopa intestinal gel, the patient and his wife gave their consent to start the treatment. The patient was scheduled for a short hospital stay for the catheter placement and the dosage calculation.
Results: From the start of treatment, a clear reduction in the OFF phases is first observed. Parenteral nutrition is started after a nutritional assessment of the daily intake. The patient's discharge was prepared with the establishment of a multidisciplinary network and regular monitoring of his evolution under his new treatment. A day hospital is scheduled one month later for assessment. Despite the reticence of the professional community (age of the patient, benefit/risk ratio, strict compliance with eligibility criteria for second-line treatment not always adapted to geriatric patients), the result obtained with our patient is very satisfactory (according to the patient himself).
Conclusions: Practical experience in the management of Parkinson's disease in polypathological patients with, in particular, a second-line treatment such as levodopa/carbidopa intestinal gel shows the direct beneficial effect on the pathology and additional beneficial effects (reduction of sleep disorders, behavioural disorders, parenteral nutrition… and improvement in quality of life).

P-959

The effect of fall assessment on number of prescribed fall-risk increasing drugs among older adults: a Danish register-based study

Abstract Area: Pharmacology

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Introduction: Some drugs are associated with increased risk of falls among older adults. It is recommended to perform a medication review to older adults with a fall to identify and deprescribe the use of fall-risk increasing drugs (FRIDs). We investigated the effect of a fall assessment in Danish geriatric fall clinics on the number of prescribed FRIDs.
Methods: This register-based study included all older patients 65 + years from Danish geriatric outpatient fall clinics from 2008 to 2018. We excluded patients who were not alive or emigrated one year after fall assessment. The use of FRIDs was defined by dispensation of one or more prescriptions in the year prior to the first outpatient contact, and 0–6 months or 6–12 months after the final out-patient contact. We compared the difference in the number of prescribed FRIDs one year before, 0–6 months and 6–12 months after final outpatient contact.
Results: The number of patients aged 65 + years receiving a geriatric fall assessment from 2008 to 2018 was 25,237. In total, 21,294 patients completed fall assessment and were alive one year after. The median number of prescribed FRIDs was lower after the patients had

completed the fall assess-ment than before (1 vs 2, $p < 0.01$). The deprescriptions persisted after 6 months with no signifi-cant difference in the number of FRIDs 0–6 months and 6–12-months following end of fall assessment.
Conclusion: Comprehensive geriatric fall assessment in falls clinics is associated with a long-term reduction in the number of prescribed FRIDs to older adults.

P-960

Views on deprescribing among nursing home residents with a limited life expectancy and their relatives: a qualitative study

Abstract Area: Pharmacology

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Background: The appropriate use of medication in nursing home residents with a limited life expectancy may require the deprescribing of certain chronically and preventively used medicines. It is largely unknown what nursing home residents with a limited life expectancy and their relatives think about this, and how they want to be involved in decision-making.
Objective: To explore [1] views among nursing home residents with a limited life expectancy and their relatives on deprescribing chronic and preventive medicines, and [2] how they want to be involved in the decision-making process.
Methods: Semi-structured interviews were conducted with nursing home residents with a limited life expectancy residing in Dutch long-term care units and their relatives. Data collection continues until data saturation. The interviews were analysed thematically.
Results: Preliminary analysis of the first seven interviews resulted in four interrelated main themes representing the views among nursing home residents and their relatives on reducing and discontinuing medicines: (1) motives for (not) discussing medication; (2) considerations in deciding to (not) discontinue medication; (3) the process of discontinuing medication, and (4) decision-making involvement.
Conclusion: Nursing home residents and their relatives generally rely on the doctor's advice when deciding on deprescribing medication. In addition, nursing home residents and their relatives often do not realize the posibillity of deprescribing medication. Preferences regarding the degree of decision making-involvement varies widely and depends, among other factors, on the importance of the decision.

P-961

Direct oral anticoagulants use in patients ≥ 90 years of age: single centre outcomes in the newly initiated

Abstract Area: Pharmacology

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Introduction: Anticoagulation use in advanced age is increasingly common, but outcomes for those newly initiated have not been fully elucidated. The aim of this study was to describe baseline characteristics and bleeding, thrombosis and mortality outcomes of patients ≥ 90 years, newly initiated on the DOACs (direct oral anticoagulants) edoxaban and rivaroxaban at a London teaching hospital.
Methods: Patients prescribed rivaroxaban or edoxaban between 1/1/2018 and 31/12/2018 were identified using CogStack [1]. Case notes were reviewed to obtain baseline characteristics and bleeding, thrombotic and mortality outcomes within three months of DOAC initiation. Laboratory-based frailty index scores (FI-LAB) were computed (scores > 0.45 suggesting significant frailty) [2].
Results: Sixty-nine patients were identified: 77% female, median age 92 (IQR 91–94) years, median body weight 57.4 (IQR 49.2–65.8) kg and mean creatinine clearance 40.3 (SD 12.3) mL/min. Fifty-five patients (80%) were prescribed ≥ 5 medications and nineteen (28%) were prescribed ≥ 10. Forty-five patients (65%) were anticoagulated for atrial fibrillation with mean CHA2DS2-VASc, HAS-BLED and ORBIT scores of 4.8, 2.6, and 2.2 respectively. The mean FI-LAB score (calculated in 32 patients) was 0.34 (SD 0.12) and 4 patients had scores ≥ 0.45. Eight bleeding episodes occurred in 7 (10%) patients. Major bleeding occurred in 3 (4%) patients. One patient had a new thromboembolic episode. Eight (12%) patients died.
Key conclusions: Patients ≥ 90 years initiating DOACs were mainly female, with low body weight, moderate-severe renal impairment, and polypharmacy was prevalent. Further studies evaluating associations between patient characteristics and outcomes would be valuable to guide safer prescribing in the oldest old.
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P-962

Inappropriate use of proton pump inhibitors in older patients

Abstract Area: Pharmacology

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Introduction: Proton pump inhibitors (PPIs) are commonly used in older people. Their use without a clear clinical indication may favour the development of adverse effects. The aim of this study is to evaluate the clinical profile of a PPI-consuming population in acute care, find if the indication follows NICE guidelines and STOPP-

START criteria, and the presence of complications potentially related to the misuse of PPI.
Methods: Retrospective study of all patients over 70 years on chronic treatment with PPIs admitted to an acute geriatric unit for any reason over a three-month period. Sociodemographic variables, comorbidities, indication for PPI use, complications and six-month survival were collected.
Results: 49 patients were included (47.1% usage prevalence during a 3-month period). 63% female, mean age 92.5 ± 4.5 years. All had polypharmacy and 65.3% hyperpolypharmacy. 28.6% of the patients had had an episode of pneumonia prior to the hospitalisation and 42.9% suffered of osteoporosis. The most frequent diagnosis at admission was congestive heart failure (34.7%). During hospitalization 76.3% of the patients developed delirium and 65.8% developed constipation. The use of PPIs was appropriate by NICE guidelines only in 22.5%, the main reason being gastroesophageal reflux disease (8.1%) and the association of gastrolesive drugs (8.1%). In the rest, use of PPIs was judged as inappropriate. Patients with inappropriate use of PPIs had suffered more episodes of bronchoaspiration (13% vs 0% $p = 0.263$) and more hypocalcemia at arrival (21% vs 0%, $p = 0.096$) compared to patients with appropriate use by NICE guidelines, without other significant differences.68.4% of the total maintained chronic treatment with PPIs at discharge without indication. No differences were found between patients with and without appropriate PPIs use at 6 months in emergency department visits (68.4% vs 81.2%, $p = 0.302$) or mortality (36.8% vs 45.5% $p = 0.429$).
Key conclusions: A majority of older patients chronically using PPIs at hospital admission did not have an indication to use them. Hypocalcemia and episodes of bronchial aspiration were more frequent in patients without indication. In most instanced, they were not deprescribed at discharge.

P-963

Interplay between multimorbidity and polypharmacy in the association with mortality in geriatric inpatients: a Danish nationwide register-based cohort study

Abstract Area: Pharmacology

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Introduction: Multimorbidity, polypharmacy, and functional status affect health status of geriatric patients. This study explores the interplay between multimorbidity and polypharmacy in association with mortality.
Methods: Nationwide population-based study including all patients ≥ 65 years admitted to Danish geriatric medical departments during 2005–2014. National health registers were used to link data on an individual level. Patients were followed until death, emigration, or end of study (31.12.2015). Primary outcome of interest was overall mortality. Multimorbidity scores included Charlson Comorbidity Index (CCI) and Elixhauser Comorbidity Index (ECI) and was categorized: 0, 1, 2, 3, 4, ≥ 5. Number of drugs were categorized: 0, 1–4, 5–9, ≥ 10. Cox regression examined the association of multimorbidity and polypharmacy with mortality adjusting for age, sex, marital status, admission year, BMI, and functional status using Barthel-index-100.
Results: In total, 74,589 patients (63% women) mean age 82.5 (SD 7.5) years were included. Median multimorbidity was 2 (IQR 1–3) using CCI and 3 (IQR 1–4) using ECI and median number of drugs was 6 (IQR 4–9). Median survival was 2.7 (IQR 0.6–5.7) years. Mortality increased with increasing multimorbidity and polypharmacy when examined individually. Assessing the interplay showed an increased risk of mortality with increasing polypharmacy in the adjusted model for all CCI subcategories and for ECI lower subcategories. Risk of mortality did not differ in the highest ECI category across polypharmacy categories.
Conclusion: Polypharmacy is associated with increased mortality in geriatric patients when taking into account increased Charlson comorbidity but not in those with most comorbidity using Elixhauser index. The impact of choice of comorbidity assessments needs further investigation.

P-964

Polypharmacy at the end of life

Abstract Area: Pharmacology

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Introduction: Patients admitted to Geriatric Services are highly complex, several comorbidities, polypharmacy, functional and cognitive impairment and, in many circumstances, in advanced stage of the diseases. Polypharmacy is critical, increase side effect, adverse reactions, iatrogenesis, increase medical complications, and it is an independent factor of mortality.
Methods: To analyze, if, patients admitted to a Geriatrics service received an adequate therapeutic approach, proportional to the degree of advanced disease. Observational, cross-sectional and descriptive retrospective study of patients who died in an Acute Geriatric Unit between October 1, 2021 and December 31, 2021. From the Comprehensive Geriatric Assessment at the admission: demographic data, age, sex, place of residence; clinical data: derivation services, average stay, admission symptoms, main admission diagnosis (dementia, cancer, organ failure and multimorbidity), Charlson index adjusted for age, number of drugs, Pfeiffer test, Barthel Index, Fragil index-VIG and the STOPP-PAL criteria.
Results: A total of 40 medical records. Mean age was 89.3 years (SD 3.9), 57.5% men, 65% from the emergency department and 60% of patients had been hospitalized in the last three months. The most frequent symptoms were: dyspnea, confusion and asthenia-anorexia. The degree of severe functional impairment (BI < 20) 32 cases (80%), Cognitive impairment (Pfeiffer Score > 7 errors) in 32 cases. The mean of comorbidities was 5.45 diseases, Charlson index of 11.05 (SD: 2.96); mean drug consumption was 8.28 (SD: 2.9).. The result when applying the frail-VIG index gave a mean value:0.81 (SD = 0.1). The mean number of inappropriate drugs when applying the STOPP-PAL criteria it was 4.28 with SD = 2.48.
Key conclusions: An adequate pharmacological approach to geriatric patients at the end of life, must start a with a correct deprescription process. It is necessary to adapt the treatment to the situational diagnosis of the patient, assessing risk/benefit and avoiding preventive treatments or treatments that are not clearly indicated.

P-965

Polypharmacy generators in older people

Abstract Area: Pharmacology

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Polypharmacy is a recognized concern especially in older people. Considering the highly prevalent multimorbidity in older patients, it is important to identify the circumstances that generate multiple drug administration. This cross-sectional study was conducted on a number of 350 inpatients 65 years of age and older, admitted for various chronic conditions. Patients with any acute or subacute conditions, surgery in the last month, any infection or neoplasia were excluded. Polypharmacy was defined as five or more medications daily taken continuously for a duration of 3 months or more regardless of the route of administration. Data were collected by interview, checking "medication bag" and from medical records. In our sample, polypharmacy was highly prevalent (76.57%). Over the counter self-administered drugs without a medical prescription and including various supplements were taken by 66.79% of patients (e.g. 32.08% proton pump inhibitors, 27.61% supplements containing silymarin, 34.7% multiple vitamins and/or antioxidants, 45.89% supplements for arthritis and joint pain, 23.5% sleep aids). All patients taking multiple prescribed drugs daily (71.64%) had 3 or more co-existent chronic conditions. The most frequently prescribed drug classes were cardiovascular agents (anti-hypertensive 73,5%, lipid lowering drugs 65.29%, blood thinners 67.53%) blood glucose regulators (38.8%) and central nervous system agents (mood stabilisers 27.61%). The number of medications taken daily was significantly correlated with the number of chronic conditions ($r = 0.72$, $p = 0.003$), female gender ($r = 0.68$, $p = 0.007$) and living in an urban area ($r = 0.38$, $p = 0.03$). Polypharmacy is highly prevalent in older people particularly in patients with chronic conditions such as cardiovascular diseases, diabetes and arthritis and in these cases a frequent re-evaluation of the medication regime is important. Self-medicating with OTC drugs is a common practice in seniors therefore a focused medical history should be performed.

P-966

Use of opioid analgesics and laxatives in patients admitted to the geriatrics unit

Abstract Area: Pharmacology

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Objectives: Describing the prevalence of the use of opioids and laxatives in elderly patients.· To analyze the most commonly used opioids and laxatives and the areas of improvement in its prescription.
Method: Descriptive study of patients admitted during the year 2021 in the Geriatrics Service. All patients treated with opioids and laxatives during this period were included ($N = 126$).

Results: We are observed 60.32% women, mean age: 85.5 years. Unit of admission: 50% acute, 19.05% convalescence with rehabilitation, 16.67% palliative. Most frequent reasons for admission: infectious (41.27%), cardiological (15.87%), surgery convalescence (11.11%).
Background: Cardiological (29.18%), digestive (21.89%), pulmonary (20.17%), oncological (16.31%), previous abdominal interventions (10.73%). Previous Barthel: total dependency (42.06%), severe dependency (16.67%), moderate dependency (15.87%), mild dependency (20.63%), independent (4.76%). Cognitive impairment: 40.4%. Dysphagia: 39.68%. Institutionalised: 42.06%.Usual treatment of patients: major opioids (24.6%), most frequently fentanyl (51.72%), tapentadol (24.14%) and oral morphine (20.69%). During admission: morphine (59.57%), tramadol (21.28%), fentanyl (11.35%). Laxatives: during hospitalized used macrogol (55.28%), lactulose (18.01%) or enemas (15.53%). Etiology of constipation: 56.03% not recorded, 34.75% immobility, 3.55% ionologic, 2.84% fecaloma. Opioid rotation on admission (4.76%). At hospital discharge: use opioids (41.54%) and use laxatives (75.38%).
Conclusions: The prevalence of opioid and laxative use in patients admitted is 14.4%.· The most commonly used opioid in the community is fentanyl. The most commonly used opioid in the hospital is morphine.· The most commonly used laxatives in the community are osmotic laxatives.· An opportunity for improvement is the detection of low opioid turnover due to constipation.

P-967

Psicotropic drugs, hiperpolypharmacy and hiponatremia. An avoidable complication

Abstract Area: Pharmacology

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[1]No

Introduction: We present a multipathological 79 years-old female patient (chronic bipolar disorder follow-up in Psichiatrics out-patient clinic for more than 10 years, multiple cardiovascular risk factors, hypertensive heart disease, stage 3 chronic kidney disease, hypothyroidism, apnea hypoapnea sleep disorder and bilateral hip fracture surgery) who is admitted in acute-geriatrician unit with the diagnosis of recovered syncope. In emergency room was presented < 50 bpm bradycardia and blood-test shown a moderate hyponatremia (125 mEq). Hyperpolypharmacy (14 prescriptions). Geriatrician assessment: Barthel Index 40/100, not cognitive impairment reported, lives at home with her daughter, not documented dysphagia or another nutritional disease.
Methods: Medication was modified the previous month. Bupropion and mirtazapine dosage has been increased and rivotril was added. Also, four days before admission the psychiatrist reduced mirtazapine and increased olanzapine. On admission rivotril and mirtazapine were discontinued. Bupropion and olanzapine were reduced, alongside with carvedilol due to symptomatic bradycardia.
Results: Patient with tendency to somnolency and sodium levels at 125 mEq. Monitorization and cardiological studies were carried out without abnormal findings. As medication was adjusted sodium serum concentrations increased reaching values of 134 mEq, with clinical improvement. Discontinuation of mirtazapine, reduction of olanzapine and bupropion at discharge. Not psychiatric descompensation was presented. Occupational therapist assessed and improved her multifactorial gait disorder.

Key conclusions: Our patient integrates all the characteristics of drug-induced hyponatremia: aged, associated pathologies, female sex, psicotropics (antidepressants, antiepileptics, antipshycotics), hyperpolipharmacy, multimorbidity and multiple organ insufficiency.- Integral geriatric assessment and multidisciplinary approach should be developed for a satisfactory drug-induced hyponatremia assessment and treatment.

P-968

Measuring drug therapy effect on osteoporotic fracture risk by trabecular bone lacunarity. The LOTO study

Abstract Area: Pharmacology

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Introduction: An MRI method to provide one parameter (TBLβ—trabecular bone lacunarity parameter β) sensitive to trabecular bone architecture (TBA) changes in aging and osteoporosis is under study for its clinical validation as a new tool useful in early diagnosis of bone fragility fracture. From LOTO baseline data, we observed that TBA in over-50 s women with prevalent vertebral fractures (VF) is differently characterised by TBLβ as far as osteoporosis treatment is concerned. Here we verify the potential of TBLβ as an index of osteoporosis treatment efficacy.
Methods: An observational, cross-sectional, and prospective study on over-50 s women at risk for bone fragility fracture, was designed to validate the method. Untreated ($N = 156$) and treated ($N = 123$) subjects were considered to assess differences of TBLβ related to osteoporosis treatment.
Results: Prevalent VF were found in 31% subjects, 63% of which under osteoporosis treatment. TBLβ results show that the proposed method is able to discriminate between VF + and VF− patients ($p = 0.001$). This result is further stressed in untreated subjects ($p < 0.0001$). Treatment, any medication, and drug therapy in particular (91% Bisphosphonates), significantly counteracts the difference between VF + and VF− within and between groups: TBLβ values in treated patients are comparable to untreated VF− ($p = 0.319$) and statistically higher than untreated VF + ($p = 0.014$) ones.
Conclusions: These preliminary results stress the usefulness of the method as a diagnostic tool in the assessment of osteoporotic fracture risk and highlight the potential role of TBLβ as a marker of treatment efficacy. We expect more intriguing results from LOTO prospective data.

P-969

Examining the role of gender in clinical decision making for older adults using a qualitative design

Abstract Area: Pharmacology

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Introduction: We designed a qualitative study to explore the potential impact of physicians' implicit gender biases on the initiation of prescribing cascades in older men and women in three countries—Canada, Italy and Ireland. We discuss important considerations and lessons learned in the design of such a study across countries.
Methods: We designed a qualitative study that used clinical vignettes and the "think-aloud" process to interview primary care physicians with experience in prescribing for older adults. We developed two versions of a clinical vignette—identical aside from the patient's gender—to discuss their approach to and rationale for their clinical decisions. Interview transcripts will be analyzed thematically using a within and between-site analysis. This approach maximizes the benefits of both: 1) a local understanding of context and 2) comparison of data across different sites. The application of a sex and gender lens to the work was considered throughout.
Results: Considerations that arose during the design of the study included: (a) selection of a prescribing cascade for the vignette that was not associated with any major sex (i.e., biological) differences; (b) sex/gender of the patient featured in the vignette, the participant, and the Interviewer; and (c) randomization to different vignettes based on sex/gender of the participant and patient featured in the vignette.
Conclusions: Methodological challenges encountered during the design of this qualitative study provided many opportunities for lessons learned about applying a sex and gender lens to transnational, qualitative research aimed at probing physician participants' conscious and unconscious thoughts on prescribing for older adults.

P-970

Quality of prescribing in older adults characterized by multimorbidity, with and without atrial fibrillation: a population-based study

Abstract Area: Pharmacology

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Introduction: Older adults with multimorbidity are often characterized by polypharmacy, which increases the risk of inappropriate prescribing and drug related problems. Our aim was to compare the likelihood of potentially inappropriate prescribing and prescribing omissions between older adults ($\geq$ 65 years) characterized by multimorbidity with and without atrial fibrillation (AF) in a Swedish population-based sample.
Methodology: The Screening Tool of Older Persons Prescriptions/Screening Tool to Alert doctors to Right Treatment (STOPP/START) version2 [1] was applied to the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K) dataset; 72% of the STOPP and 50% of the START criteria could be derived. Quality of prescribing was compared between those with ($n = 309$) and without ($n = 1874$) AF using propensity score adjusted binary logistic regression analyses.

Results: The overall risk of inappropriate prescribing did not differ between AF participants (52.1%, n = 161) and controls (49%, n = 917). AF participants had higher odds of inappropriately prescribed cardiovascular drugs (risk 6.8%; OR 1.94; 95%CI 1.07–3.51) and antiplatelet/anticoagulant drugs (risk 9.4%; OR 2.44; 95%CI 1.47–4.06), compared to propensity score matched controls. AF participants had higher overall odds for having at least one inappropriately omitted drug (risk 64.4%; OR 1.87; 95%CI 1.42–2.47) and higher odds of inappropriately omitted cardiovascular drugs (risk 53.7%; OR 3.05; 95%CI 2.32–4.02) but lower odds of inappropriately prescribed endocrine drugs (risk 7.1%; OR 0.54; 95%CI 0.34–0.88), compared to propensity score matched controls.
Conclusion: The quality of cardiovascular drug prescribing is worse in older adults characterized by multimorbidity with AF compared to those without AF.
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P-971

Inappropriate prescription of cardiovascular medications in patients with dementia

Abstract Area: Pharmacology

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Introduction: Evidence shows that having dementia leads to inappropriate prescription (IP). The impact of cardiovascular (CV) IP in this population remains uncertain. We wanted to identify the CV IP in patients with dementia applying a medication review (MR) through a patient centred prescription (PCP) model.
Methods: Quasi-experimental study (September 2021–February 2022 3 months follow-up). An interdisciplinary team (psychogeriatric physician, pharmacist) applied a PCP model and reviewed pharmacotherapeutic plan in patients with dementia admitted in a psychogeriatric unit. Medications were classified with the anatomical therapeutic chemical (ATC) system.
Results: 78 subjects were included (mean age 84.25–7.8), 66.7% women. The Barthel index and the Frail-VIG [1] were calculated (mean of 42.21–26.5, 0.47–0.09 respectively). 61.5% had advanced dementia (GDS $\geq$ 6D). 14 patients died during follow-up. We obtained significant differences within the average number of CV medications pre-MR and post-MR (mean of 1.88–1.8, 0.69–0.81 respectively) 0.18 patients didn't have CV medications pre-MR or post-MR. Pre-MR, 46 patients had at least one CV medication and after MR 14 of them ended without any ($p < 0.001$). 15.97% of total medications were ATC-C (cardiovascular system) pre-MR and, after MR only 6.91%.The mean of CV IP was 1.81–1.5. 49(84.5%) patients had at least one CV IP. ATC-C represented 29.47% of total IP identified.
Conclusions: A MR in patients with dementia with a PCP model can identify more than 80% of patients with at least one CV IP and decreased significantly the mean of CV IP medications.
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P-972

Dress syndrome and ciprofloxacin: an association not to be ignored

Abstract Area: Pharmacology

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Introduction: Drug rush with eosinophilia and systemic symptoms (DRESS syndrome) also called drug induced hypersensitivity syndrome is a rare and severe life threatening adverse drug reaction. It is characterized by fever, skin eruption,multiple organ failure and hematologic abnormalities. If unrecognized, this condition may be fatal with a mortality rate of up to 10%.it has been described in association with many medications;yet, rare cases have been reported in the literature in combination with ciprofloxacin. We are presenting a rare case of ciprofloxacin-induced DRESS syndrome with symptom onset 2 days after exposure.
Observation: A 76 year old female with diabetes, adrenal insufficiency, hypothyroidism, hypertension, renal insufficiency, ischemic stroke, heart failure and giant cell arteritis, was prescribed ciprofloxacin for urinary tract infection. Two days later, she presented fever of 38.3c, generalized pruritic erythematous, maculopapular rash and swelling face. Biological evaluation revealed hyperleukocytosis 16010 cells/mm^3, hypereosinophilia 2110 cells/mm^3. Renal and liver function tests were normal. Skin biopsy showed a polymorphic dermal inflammatory infiltrate associated with dermal oedema without necrosis, consistent with toxidermia. The patient improved quickly after withdrawal of ciprofloxacin and treatment with systemic corticosteroids. She was completely asymptomatic by the 6th day of treatment. The blood count was normalized after one week: white blood cells and eosinophil were 9280 cell/$mm^3$and 40 cell/mm^3.
Conclusion: Given the widespread use of ciprofloxacin, the potentially life-threatening nature of DRESS syndrome and the commonly delayed time course in establishing the diagnosis, it is important to remember that, albeit rare, ciprofloxacin can be a cause of DRESS syndrome.

P-973

The effect of potentially inappropriate medication on length of stay, readmissions and mortality in hospitalized older patients—a systematic review

Abstract Area: Pharmacology

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Introduction: Use of potentially inappropriate medication (PIM) is common in older patients and it has been associated with adverse drug events. Our objective was to study whether PIM use is associated with adverse outcomes in hospitalized older patients.
Methods: We systematically searched Cochrane, MEDLINE Ovid, Scopus, and Web of Sciences databases for original studies concerning the effect of PIM use on length of hospital stay, in-hospital and overall mortality and readmissions in patients aged $\geq$ 65 years, published in 2000–2020 in English, according to protocol registered to the PROSPERO database (CRD42021223199). The results are reported descriptively.
Results: The literature search yielded 1102 studies, of which 25 studies (including 147,926 patients aged 65–103 years) were included. Length of stay was assessed in 15 articles, of which ten reported longer hospital stays in PIM users. Three studies concluded that in-hospital mortality was higher among PIM users whereas another three studies observed no difference. Only three of the 13 articles assessing overall mortality reported an association with PIM use. Readmissions were assessed in 14 articles, five of which reported greater risk of readmissions among PIM users. In the largest study (including 82,935 patients), PIM use was associated with readmissions (OR 1.14, 95% CI 1.13–1.14) and mortality (OR 1.11, 95% CI 1.10–1.12) also after adjustment for sex, age, comorbidities and the number of medications.
Key conclusions: PIM use seems to be associated with a prolonged hospital stay in most settings but the existing literature about PIM use and mortality or readmissions is conflicting.

P-974

Treatment of older people with type 2 diabetes with new glucose regulating agents

Abstract Area: Pharmacology

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Introduction: GLP1-analogues, DPP4-inhibitors and SGLT2-inhibitors have become available to treat type 2 diabetes. Little is known to what extent these agents are prescribed to older patients. We describe the prescription prevalence of these new glucose regulating agents (GRA) in a clinical population of older patients with type 2 diabetes and the difference between fit and frail patients.
Methods: We performed a retrospective observational cohort study in Catharina Hospital Eindhoven. We selected all clinical admissions of patients aged 70 years and older who had one or more prescriptions for non-insulin GRA between 2017 and 2021 in the hospital electronic prescription system. Prescription data during hospitalization were collected from electronic patient files. Prescription prevalences were calculated and we described differences in these outcomes for frail and fit older patients.
Results: A total of 7659 admissions met eligibility criteria. New GRA prescription prevalence was 11.5%; specifically 1.6%, 7.3% and 2.3% for GLP1-analogues, DPP4-inibitors, and SGLT2-inibitors, respectively. Total prescription prevalence increased from 8.4% to 16.3% between 2017 and 2021 ($p < 0.001$) (GLP1-analogues from 1.4% to 2.6% ($p = 0.005$), SGLT2-inhibitors from 0.7% to 5.1% ($p < 0.001$), and DPP4-inhibitors from 6.1% to 7.9% ($p = 0.101$)). GRA prescription prevalence was 14.5% ($N = 350$) in admissions of fit patients versus 11.1% ($N = 132$) of frail patients ($p = 0.006$). The difference in prescription prevalence was highest for the SGLT2-inhibitors (4.1% versus 1.8%, $p = 0.001$).
Conclusion: Prescription prevalence of the new GRA in clinical admissions of older patients increased from 2017 up until 2021. This prevalence was higher for admissions of fit patients compared to admissions of frail patients.

P-975

Orthostatic blood pressure recovery in older males using alpha-blockers for lower urinary tract symptoms

Abstract Area: Pharmacology

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Introduction: Alpha-blockers are associated with orthostatic hypotension (OH). We assessed the prevalence of OH measured with beat-to-beat blood pressure monitoring in older male outpatients who used alpha-blockers for lower urinary tract symptoms (LUTS). In addition, we investigated associations of OH with concomitant medication use and comorbidity.
Methods: Cross-sectional explorative study in a urology outpatient clinic. White males $\geq$ 65 years using alpha-blockers for LUTS were included. Blood pressure responses to standing up from supine were recorded using a validated beat-to-beat blood pressure device (Finapres). Prevalence rates were derived from the beat-to-beat data to include OH measured between 60–110 s (OH), impaired recovery OH at 40 s (OH(40)), initial OH (IOH) and normal orthostatic response. Subgroups were defined based on polypharmacy and Charlson Comorbidity Index (CCI), to obtain relative risks.
Results: Sixty-five patients were included. Median age was 75 years (range 65–92). The prevalence of OH was 7.7% ($n = 5$). The prevalence of OH(40) was 16.9% ($n = 11$) and of IOH 38.5% ($n = 25$). Thirty-six patients (55.4%) had a normal orthostatic response. The relative risk of OH for the subgroup using $\geq$ 10 medications ($n = 13$) was 6.0 (95%CI 1.1–32.3). For the subgroup with multimorbidity (CCI $\geq$ 3, $n = 11$) this was 7.4 (95%CI 1.4–39.0). Key conclusions: The prevalence of OH was low and comparable to age-matched population prevalence, suggesting that the relative contribution of alpha-blockers to OH was small. However, OH risk significantly increased in patients with multimorbidity or polypharmacy. For these patients, the benefits of starting alpha-blockers for LUTS should be weighed against the increased risk of OH.

P-976

Drug related problems identified by pharmacist at the Geriatric Ward in teaching hospital in Serbia

Abstract Area: Pharmacology

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Background and objectives: The elderly population is often exposed to complex medication regimens, which may lead to drug-related problems (DRPs). The primary objective of this study was to define and classify DRPs in patients admitted at the geriatric ward of Zvezdara University Medical Center, Belgrade, Serbia.
Methods: Patient demographics, medications, and medical history were evaluated by the pharmacist during a weekly 3-h visit for a period of 5 months. The DRPs were identified via V9.0 PCNE classification. Lexicomp® was used to assess the drug–drug interactions.
Results: A total of 100 geriatric patients were included in the study (mean age 79.7 ± 7.88 years; median [IQR] of prescribed drugs 8, 5 [6–10]). Total 236 potential DRP were identified and at least one potential DRP was seen in 85% of the patients. The most common underlying DRP concerned incorrect dose (36%), inappropriate drug combination (17.8%), untreated indication (17.4%) and drugs without indication (16.5%). There were significant correlations ($p \leq 0.05$) between DRPs and number of comorbidities ($r = 0.33$) and number of drugs used ($r = 0.6$). Patients with atrial fibrillation, cardiomyopathy, diabetes mellitus and chronic kidney failure had significantly more DRPs in comparison to the patients without these comorbidities.
Conclusions: Detecting DRPs is crucial in pharmaceutical care since they may interfere with optimal patient outcome and increase healthcare expenditures. When working in collaboration with other healthcare professionals, clinical pharmacists play an important role in ensuring the rational use of drugs by identifying and resolving DRPs. The role of the clinical pharmacist might be to improve treatement safety, to adjust the dosage, to detect the over- and underuse of drugs, since these were the most encountered causes of DRPs.

P-977

Prevalence of pregabalin and gabapentin treatment in patients admitted to a geriatric hospitalization unit

Abstract Area: Pharmacology

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Introduction: In recent years, gabapentinoid drugs are prescribed more frequently, especially in the elderly population. Given the side effects profile, the clinical benefit is not entirely clear. This study aims to determine the prevalence of pregabalin and gabapentin use in patients admitted to a Geriatric Hospitalization Unit and the most frequent indications for their prescription.
Methods: A retrospective descriptive study with patients admitted to a Geriatric Hospitalization Unit for six months (January–June 2021). We excluded readmissions in less than three months and in-hospital mortality.
Results: We obtained a sample of 318 patients. 65.1% were women, mean age of 91.9 years, 76.1% had cognitive impairment, 92.5% had polypharmacy, and 10% had a history of neuropathy due to spinal pathology. Of the total, 15 patients (4.7%) took gabapentinoids (ten of them pregabalin and five of them gabapentin). The main indication for prescription was peripheral neuropathy (43.8%), spinal pathology (18.8%) and off label use (20%). Only 25% described symptom improvement, and the gabapentinoids were suspended at discharge in 22% of patients. The leading cause of deprescription was the lack of clinical benefits.
Conclusions: The prevalence of pregabalin and gabapentin use is low in our study, similar to previous studies that have evaluated it. The leading indication was neuropathic pain treatment. The low percentage of clinical improvement and the low rate of deprescription in the context of polypharmacy stand out. Therefore, we should consider gabapentinoids in the deprescription process and their inclusion in the next update of the STOPP-START criteria.

P-978

Adverse drug reactions due to opioid use in oldest-old patients visiting the emergency unit of the Geneva geriatric Hospital

Abstract Area: Pharmacology

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Opioid use has much increased in several countries during the last two decades, accompanied by a rise in associated morbidity and mortality, especially in the United States. Data on a possible opioid crisis are scarcer in Europe. We performed a study aiming to assess the frequency of adverse drug reactions (ADR) related to opioids in patients presenting to the emergency unit (EU) of a geriatric tertiary Swiss University Hospital. This particular setting is intended for patients aged 75 and older. Our retrospective, monocentric survey of opioid use and related ADR was conducted over two months in 2018. The main and secondary outcomes were the frequency of EU visits considered due to an opioid ADR and insufficient pain relief, respectively. Current opioid use was identified in 20.3% ($n = 99$) of the 487 included EU visits (mean age 86). An ADR was the suspected cause of the EU visit in 22 opioid users, mainly fall-related injury and gastrointestinal disorders. All these patients had at least one comorbid condition. In 19/22 cases (86%) of ADR, a drug-drug interaction might have been involved. In 12 opioid users (12%), insufficient pain relief was suspected as the cause of the EU visit. In conclusion, one-third of opioid users visiting a geriatric EU consulted for a problem related to its use mainly adverse drug-related reaction (22%) followed by insufficient pain relief (12%).

P-979

Lornoxicam as a treatment of geriatric golden age male patients with chronic neck pain

Abstract Area: Pharmacology

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Aim: Aim of this study was to evaluate the use of use of meloxicam in geriatric golden age male patients (> 80 years old), with chronic neck pain.
Material and methods: 10 male geriatric golden age patients were participated in this study. For 14 days (2 weeks) they receive 8 mg lornoxicam, two times a day. Range of age 82–92 years and mean age 85. We used specific performance pain tests in order to evaluate our results.
Results: 9 of them (90%) reported optimal results and good reaction to the treatment. 1 of them (10%) reported moderate results and mild reaction to the treatment.
Conclusions: We need more patients but this therapeutic path seems to be an optimal and safe treatment, specially for golden age elderly male patients with chronic neck pain.

P-980

A randomized clinical trial on the effect of two weeks of treatment with capsaicin in older patients with oropharyngeal dysphagia

Abstract Area: Pharmacology

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Introduction: We previously found in acute studies that oral stimulation with TRPV1 agonists improved the biomechanical and neurophysiology of swallowing response. The aim of this randomized clinical trial (RCT) is to assess the effect of two weeks of treatment with capsaicin (TRPV1 agonist) in older patients with OD.
Methods: Prospective, doble-blind, RCT performed with 51 patients (54.9% women, 78.5 ± 6.0 years) with OD (PAS > 2): 19 treated with placebo and 32 with capsaicin 10 μM, three times a day before meals for two weeks. Biomechanics of swallowing were evaluated using videofluoroscopy (VFS), including VFS signs of safety (penetrations and aspirations) and efficacy (oropharyngeal residue), PAS score and the timing of oropharyngeal swallow response (OSR) (time to laryngeal vestibule closure -LVC-). Neurophysiological swallow responses were assessed using pharyngeal sensory (pSEP) and motor evoked potentials (pMEP) to electrical stimulation and to transcranial magnetic stimulation, respectively. All the evaluations were performed before and after the treatment.
Results: Two weeks of treatment with capsaicin 10 μM caused a significant reduction of PAS score (4.7 ± 1.7 vs 3.9 ± 1.5, $p = 0.02$) and time to LVC (405.3 ± 124.2 ms vs 366.6 ± 154.4 ms, $p = 0.04$), latency of N1 peak of pSEPs was significantly shortened (88.3 ± 17.1 ms vs 74.4 ± 17.6 ms, $p = 0.007$). In contrast, the placebo group did not show any significant improvement neither in biomechanical (PAS: 4.2 ± 2.0 vs 4.0 ± 1.9, $p = 0.331$; LVC: 334.2 ± 105.9 ms vs 375 ± 97.2 ms, $p = 0.111$) nor neurophysiological swallow response.
Key conclusions: Two weeks of capsaicin 10 μM treatment strongly improved the safety of swallow, the kinematics of OSR and the neurophysiological swallow response by speeding the conduction of sensory stimuli and without significant side effects.

P-981

The prevalence of psychotropics use before and after traumatic brain injury in people with and without Parkinson's disease

Abstract Area: Pharmacology

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Introduction: Persons with Parkinson's disease (PD) have higher risk for fall-related injuries including traumatic brain injuries (TBI). Psychotropic drugs have been associated with risk of TBI, and TBI also increases the risk of psychotropic drug initiation. In this study we evaluate psychotropics use before and after TBI in people with and without PD.
Methods: This register-based study was conducted on the FINPARK cohort which includes 22,189 persons who were diagnosed with PD in Finland 1996–2015 and their up to seven matched comparison persons. Altogether 837 persons with PD and 3,780 persons without PD, diagnosed with TBI, were included. Prevalence of psychotropics use in three-month periods before and after TBI was studied. Psychotropics included were antidepressants, antipsychotics, and benzodiazepines.
Results: Psychotropics use prevalence was 32.1% [95% confidence interval (CI) 28.9–35.4] 9–12 months and 35.9% (95% CI 32.6–39.4) 3 months before TBI among persons with PD. The prevalence was 23.1% (95% CI 21.8–24.5) and 26.1% (95% CI 24.7–27.6) respectively among persons without PD. Three months after TBI psychotropic use prevalence was 35.6% (95% CI 32.1–39.3) among persons with PD and 28.1% (95% CI 26.6–29.6%) among persons without PD. 9–12 months after TBI the prevalence was 33.1% (95% CI 29.5–36.8) and 24.3% (95% CI 22.8–25.8) respectively. Key conclusions: Approximately one third of persons with PD used psychotropics before and after TBI. Psychotropics use did not decrease considerably after TBI among persons with or without PD. These persons remain in a high risk of falling and injurious falls after TBI.

P-982

Deprescribing or re-prescribing? Are positive–negative drugs lists (like the FORTA list) more appropriate than PIM-lists?

Abstract Area: Pharmacology

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Multimorbidity and polypharmacy are highly present in older people and multiple medications often lead to inappropriate drug treatment and side effects. Consequently, numerous listing approaches such as the Beers Criteria® or Hong Kong-specifc criteria have been

developed to detect potentially inappropriate medications (PIM). These 'negative lists' only aim at avoiding and/or stopping the use of inappropriate medications (deprescribing) in older patients. As shown in randomized controlled trials (RCT), their clinical impact on relevant geriatric outcomes has largely failed. In contrast, 'positive–negative drug lists' such as the FORTA (Fit fOR The Aged) list and STOPP (Screening Tool of Older Persons' Prescriptions)/START (Screening Tool to Alert to Right Treatment) criteria which also address the issue of potentially omitted drugs (POM) have been more successful in improving clinical outcomes in older patients. Such lists can assist prescribers both in stopping inappropriate drugs as well as starting appropriate drug treatments ('represcribing'). For instance, the VALFORTA trial showed that the use of FORTA not only improves medication quality but also relevant clinical outcomes such as activities of daily living (ADL) or the occurrence of adverse drug reactions (number needed to treat of only 5) in older hospitalized patients. This success is comprehensible as PIM lists cannot sufficiently address older patients' needs and, thus, cannot identify chances of improved outcomes elicited by positively labelled drugs. Based on the existing evidence, the use of 'positive–negative drug lists' which require detailed medical knowledge about the patient for medication optimization and individualization of treatment appears to be preferable.

P-983

The sex-specific impact of the FORTA (Fit-fOR-The-Aged) list on medication quality and relevant clinical outcomes in older patients

Abstract Area: Pharmacology

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There are few reports on the gender-specific impact of listing approaches such as the Fit fOR The Aged (FORTA) list on drug use and relevant geriatric outcomes in older patients. In this secondary analysis, we aimed to identify gender differences of interventional effects on medication quality and related clinical endpoints in a randomized controlled trial. A gender-specific analysis of data from over 400 geriatric patients comparing the control and FORTA intervention groups was conducted. Changes of the FORTA score, the incidence of adverse drug events (ADEs), and clinically relevant outcomes such as the Activities of Daily Living (ADL) were tested for equivalence at a 20% margin. "Success"or "failure" for the development of these clinical endpoints was defined and their frequencies compared by a risk reduction analysis. Gender differences were insignificant for the reduction of the FORTA score, the improvement of ADL, or over- and undertreatment errors. In women only, the FORTA intervention significantly increased the number of patients without an ADE. Statistical sex equivalence was detected for the improvement of the FORTA scores, ADL, and the number of prevented events, but not for the improvement of specific mistreatments or over and undertreatment scores under altered inclusion criteria. Male and female patients benefit equally from the FORTA intervention regarding the improvement of the quality of pharmacotherapy as well as several clinically relevant endpoints. Moreover, the positive impact of the FORTA intervention on the number of adverse drug events appears to be larger in women.

P-984

Consensus validation of the FORTA (Fit fOR The Aged) list in several European Countries/Regions: EURO-FORTA 2022

Abstract Area: Pharmacology

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Numerous of studies have demonstrated that the use of medications in older adults is often inappropriate. It is also known that for most of the medications there is no evidence for efficacy and safety in older people. This problem is intensified by the presence of multimorbidity and therefore polypharmacy in this group. To increase the appropriateness of pharmacotherapy in geriatric patients the FORTA list was developed. Later, FORTA's utility was assessed in a pilot clinical trial as well as in a controlled prospective study. Both trials showed that FORTA significantly improves the quality of drug treatment as well as relevant clinical outcomes in older hospitalized patients. Encouraged by these results, the FORTA list was validated in several European countries/regions. Based on the new evidence in the field of geriatric pharmacotherapy and experiences with the previous versions, we aimed to update the existing country-specific FORTA lists as well as the EURO-FORTA list. All former participants were invited to participate in this study. If required, additional participants were chosen using our previously developed algorithm. Over 50 experts have agreed to take part in this project. The results of the first Delphi round are going to be evaluated. In the next round, the newly proposed substances and medications for which there was a low consensus among participants are going to be re-assessed. Based on the country/region specific FORTA lists, a novel EURO-FORTA list will be published.

P-985

Laxatives prescription monitoring for an overlooked problem

Abstract Area: Pharmacology

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Introduction: Constipation is a common among hospitalised patients. It results in considerable morbidity, healthcare utilization and economic burden. Laxatives are prescribed to treat constipation but poorly monitored due to benign side effect perception.
Aim: We undertook a review to examine the quality of laxative prescribing and their monitoring among hospitalised patients, and proposed new standards: Medication review at least once weekly-Documented rationale for choice of medication used. A specified timeframe for review and outcome documented for new laxatives.
Method: Patient notes and medication charts were reviewed across medical wards in Trafford General Hospital, Manchester. Data was collected on types of laxatives, reason for prescription, date of review, length of course, compliance and effect of laxatives. Two rounds of audit were performed 6 months apart, with an interim intervention of staff education and local introduction of a new constipation

management guideline. The guideline consisted of decision algorithm and suggested treatment.
Results: 47 individual prescriptions were audited in round 1 and 72 prescriptions in round 2, this represented 23 and 32 patients respectively. Across two rounds of audit, review of medications within first week of prescription improved from 17 to 83.7%. Documentation of constipation diagnosis improved from 52.2 to 97.2%. There were large percentage improvements in documentation of specified treatment outcomes across all audited fields, despite overall poorer medication compliance in round 2 (56.9% versus 66% in round 1). Documentation of laxative review improved from 28 to 81.9%. Record of constipation resolution improved from 59.6 to 72%.
Conclusion: Staff education and implementation of treatment guidelines make a substantial improvement to the medical management of constipation in hospitalised patients.

P-986

Severe hyponatremia secondary to escitalopram—induced SIADH in elderly women: a case report

Abstract Area: Pharmacology

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Case: An 86-year-old female presents to the ER due to altered alertness; with a history of systemic arterial hypertension in treatment with candesartan, hypothyroidism and hypoparathyroidism secondary to thyroidectomy for non-toxic multinodular goiter 50 years ago, treated with levothyroxine 100 mcg every 24 h, calcium/vitamin D 600/400 mg/IU every 24 h, and calcitriol 0.25 mcg every 24 h; major depressive disorder diagnosed 3 years ago in treatment with escitalopram 10 mg every 24 h. She started with asthenia, adynamia, and hyporexia, which progressed to altered alertness. Vital signs were normal; muscle spasms were reported; fever, headache, or vomiting were denied. She presented drowsiness and disorientation; the rest of the physical examination was unremarkable. Head CT and electrocardiogram without alterations. Serum glucose 108 mg/dL, hypocalcemia 7.3 mg/dL, albumin 3.2 g/dL, severe hyponatremia 111 mmol/L, decreased uric acid 3.1 mg/dL, low serum osmolarity of 235 mOsm/kg, urinary osmolarity of 312 mOsm/kg, and high urinary sodium of 56 mmol/L were found. Liver and kidney function, thyroid profile and 8 am serum cortisol without alterations. A fluid challenge was performed without response, with slight improvement after hypertonic infusions. SIADH was diagnosed; his sodium levels gradually increased after fluid restriction, a high-sodium diet, and discontinuation of escitalopram.
Conclusion: Selective serotonin reuptake inhibitors (SSRI) are a known etiology of Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH), it is a diagnosis of exclusion and represents a diagnostic challenge. The use of escitalopram suggests a cause-effect relationship, however, although this effect is known, it is little reported (0.5–32%) [1,2,3,4,5].
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P-987

Interventions to prevent medication-related deterioration in acutely hospitalized older patients: preliminary data from a scoping review of clinical studies

Abstract Area: Pharmacology

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Background: Adverse drug events (ADE) among hospitalized patients are known to cause clinical deterioration, leading to increased level of care, increased length of stay and increased risk of death. Observational studies have shown many of these ADEs to be preventable, but little is known about interventions to reduce the risk of acute medication-related clinical deterioration in hospitalized older patients.
Method: A scoping review was conducted of clinical studies to reduce medication-related harm in hospitalized older patients. Bibliographic databases (PubMed and Embase) were searched, using database-specific MeSH and Emtree subject-headings regarding population (e.g. "aged") intervention (e.g. "deprescription", "pharmacist") and outcome (e.g. "adverse drug event"). The search was supplemented by a hand search of reference lists and grey literature. The identified abstracts were screened by two independent researchers and included in the review if relevant. A trial was considered relevant if it included older patients acutely admitted to hospital, an early (i.e. within 24–48 h) intervention aimed at reducing the risk of ADEs, and reported on clinical outcomes during hospital stay.
Results: A total of 711 articles were identified in the initial search and abstracts from 116 studies were screened for inclusion. Preliminary results indicate that most interventions were either pharmacist- or physician led and focused on medication reconciliation or identification of high-risk medication. The effect of the interventions was mixed, hinting at the complexity of the topic.

P-988

Polypharmacy in older inpatients at admission and discharge

Abstract Area: Pharmacology

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Introduction: Polypharmacy is associated with adverse outcomes such as adverse drug reactions, rehospitalizations, increased morbidity and mortality. Besides, hospitalizations might increase polypharmacy. So, we aimed to evaluate the prevalence of polypharmacy at admission and discharge in an internal medicine department among different wards.
Material methods: Hospitalized patients $\geq$ 60 years of age in an internal medicine department were included. Sociodemografic data, anthropometry, handgrip strength (HGS) comorbidities, the number of medications at admission and discharge, the length of hospital stay (LOS) were noted. Polypharmacy was categorized as use of 5–10 drugs, and $\geq$ 10.
Results: A total of 175 older patients (53.1% women, mean age: 71.9 $\pm$ 8.3) were enrolled. Mean LOS, the number of medications at admission and discharge were; 13.2 $\pm$ 13.6, 6.1 $\pm$ 3.4, and 6.7 $\pm$ 3.2. The prevalance of polypharmacy as 5 to 10 drugs, and $\geq$ 10, at admission and discharge were 53.1% and 13.7% (total 66.8%) vs. 55.9% and 19.4% (total 75.3%), respectively ($p < 001$). Polypharmacy at discharge was higher in diabetics ($P < 0.001$), patients with respiratory problems ($p = 0.043$), but not in different wards, with comorbidities such as hypertension and coronary artery disease, in patients living alone as well as according to income, education and gender. The number of medications at discharge positively correlated with the number of medications at admission ($r = 0.735$, $p < 0.001$), and the number of comorbidities ($r = 0.371$, $p < 0.001$), but not with age, LOS, body mass index, and HGS.
Conclusion: The rate of polypharmacy increased at discharge. Poypharmacy at discharge was associated with the number of medications at admission, comorbidities, diabetes, and respiratory problems.

P-989

What do osteoporosis guidelines say about deprescribing of bisphosphonates? A systematic review

Abstract Area: Pharmacology

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Introduction: Advancing age, declining health status, and a shift in balance of benefits and harms warrants re-evaluation of preventive medication use among older persons. This may include consideration of reducing and stopping medications (deprescribing). Prescribers need guidance on whether and how to stop preventive medications, such as bisphosphonates. We evaluated how international osteoporosis guidelines include deprescribing considerations.
Methods: We performed a systematic review searching PubMed, Embase, and grey literature. We included guidelines on treatment of primary osteoporosis covering treatment with bisphosphonates. Two reviewers independently screened and extracted data. Recommendations for deprescribing were divided into two categories: non-specific cowering discontinuation recommendations classified as a drug holiday and specific cowering discontinuation recommendations based on individual health context. Practical recommendations for deprescribing and recommendations for when deprescribing should not be considered were also extracted.
Results: Among 9345 articles, 42 guidelines were included. A total of 32 (76%) guidelines recommended deprescribing: 29 (69%) guidelines included non-specific deprescribing recommendations framed as a drug holiday, of which two (5%) also included specific deprescribing recommendations based on individual health context (e.g., life expectancy, frailty, function, preferences/goals). Practical recommendations were included in 24 (57%) guidelines, and 27 (64%) guidelines included recommendations for when deprescribing should not be considered.
Conclusion: Deprescribing recommendations were primarily framed as drug holidays, with limited guidance on how to make individualized deprescribing decisions based on individual health context. This suggests a need for evidence-based and specific recommendations in international osteoporosis guidelines on deprescribing bisphosphonates for older people.

P-990

Sex and gender influences on inappropriate prescribing patterns and selected prescribing cascades in multimorbid older people: lessons from the SENATOR clinical trial

Abstract Area: Pharmacology

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Retrospective assessment of the SENATOR clinical trial data on 1537 older hospitalized patients has been undertaken as part of the GENDERNET-funded iKASCADE multi-centre project. Significant sex differences have previously been reported in relation to STOPP criteria—potentially inappropriate medications (PIMs) and START criteria—potential prescribing omissions (PPOs). Among STOPP criteria, 9 of 11 triggered criteria showing a significant sex difference occurred more often in females than males. Among 4 START criteria showing a significant sex difference, all occurred significantly more often in females. Analysis of 9 potential post-hospital-acquired prescribing cascades in patients participating in the SENATOR trial was also undertaken. Drug A was present at admission and at discharge but not drug B, which was introduced sometime between index hospital discharge and 12-week follow-up. Among the 9 potential cascades, only the calcium channel blocker (CCB)-diuretic cascade occurred in the SENATOR patient population to a statistically significant level. This potential cascade was observed only in females aged 75–84 years. Although several significant sex differences were observed for PIMs and PPOs, only one of 9 potential prescribing cascades showed a sex difference in the 75–84 age group. In this age group in SENATOR, prevalence of hypertension and coronary artery

disease as indications for CCB therapy was not significantly different between males and females, making it likely that the CCB-diuretic potential cascade represents a true gender influence on prescriber behaviour. This finding is consistent with the significantly higher rate of diuretic prescription following CCB prescription recently demonstrated among community dwelling older people in Ontario[1]

Reference

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P-991

Anti-resorptive or anabolic bone treatment: a therapeutic dilemma

Abstract Area: Pharmacology

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A frail 89 years old female, had a fall on her left side with immediate left hip pain and was unable to weight bear. Her past medical history included malignant tumour of the left parotid gland, treated with surgery then radiation therapy. Subsequently she had osteo-radio necrosis of the left petrous temporal bone. Years later she had exposed bone in the floor of the left external auditory canal with recurrent infections. She used to live at home, was mobile without aids and was independent for activities of daily living. On admission she was haemodynamically stable, and heart, chest and abdominal examination was unremarkable. She was anaemic; her Hb was 104, MCV 87, WCC 14.2 and platelets 275. Her kidney and liver functions and Calcium profile were normal. XR showed left neck of femur extracapsular fracture. The patient had dynamic hip screw. Postoperatively she had chest infection and was treated with antibiotics. Osteonecrosis of the jaw and osteonecrosis of the external auditory canal are rare side effects of Bisphosphonate and Denosumab therapy (incidence: $\geq$ 1/10,000, $<$ 1/1,000). In view of her previous necrosis of the left petrous temporal bone and exposed bone in the floor of the left external auditory canal with recurrent infections, these options were not considered as suitable choices. Bone metastases, skeletal malignancies and previous radiation therapy to the skeleton are contraindications to use teriparatide. Therefore, the patient was not a candidate for Teriparatide due to her previous radiation to the mandible. Although the use of Strontium has been limited in practice, due to its cardiovascular risk, the patient did not have any contraindications to its use, namely uncontrolled hypertension, cerebrovascular disease, ischaemic heart disease, peripheral arterial disease, current or previous venous thromboembolic event or temporary or permanent immobilisation. So Strontium was started and she would be followed up for the above. This case highlights the importance of a detailed past medical history, and an MDT approach paired with in-depth pharmacological considerations of available options, to include full review of side effect profiles and contraindications of the available therapeutic options. Some old or infrequently used medications still have their role to play.

P-992

Patterns of inappropriate prescription in an acute geriatric ward and 6-month follow-up

Abstract Area: Pharmacology

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Introduction: Many studies have shown a high prevalence of inappropriate prescription (IP) in older adults. It includes polypharmacy, potentially inappropriate medications (PIMs), potential prescribing omissions (PPOs) and anticholinergic burden. Relationship between these patterns are poorly described.

Objective: Identify the association between the different IP patterns in patients admitted to an acute geriatric ward with emergency room visits, readmissions and mortality at 6 months of follow-up.

Methods: Demographic data of the admitted patients and the different patterns of IP such as polypharmacy, PIMs according to the STOPP-D criteria, PPO with the START-A criteria and anticholinergic burden with the Drug Burden Index (DBI) were collected. Telephone interviews were performed to collect data on emergency room visits, readmissions, and mortality at 6 months of discharge.

Results: A total of 93 patients admitted, with a mean age of 82.84 years (SD 7.50), 51.6% were men with high comorbidity (Charlson 3.30, SD 2.27). They had a FRAIL score of 2.95 (SD 1.23), GDS-Reisberg of 2.25 (SD 1.27), and a baseline Barthel of 76.56 (SD 19.73). According to IP patterns, polypharmacy was associated with more readmissions (65.5% vs 41.7%, $p = 0.049$) and emergency room visits (64.6% vs 31.8%, $p = 0.011$) at 6-month follow-up. The other IP patterns did not present statistically significant differences.

Conclusions: Polypharmacy is associated with more readmissions and emergency room visits 6 months after discharge from an acute geriatric unit. Other IP patterns did not have statistically significant differences.

P-993

Prevalence of STOPPFall Falls-Risk-Increasing Drugs (FRIDs) in patients presenting to hospital with a fall

Abstract Area: Pharmacology

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Background: Falls cause presentation and admission to hospital. Falls-risk-increasing-drugs (FRIDs) are a modifiable risk factor. STOPPFalls criteria[1]was developed, using an expert Delphi panel, to achieve consensus on a comprehensive list of FRIDs. The aim of this study was to identify the prevalence of STOPPFall PRIDs in patients presenting to hospital with falls and identify whether review by a specialist falls and syncope service (FASS) reduces FRIDs.

Methods: This was a retrospective observational study. Patients ≥ 65 years reviewed by the hospital FASS in the emergency department (over 6-months) and in house (over 2-months), were included. Medication appropriateness at admission and discharge were assessed using STOPPFall criteria. Ethical approval was received from the local research and innovation office (ref7013).
Results: Of 156 patients, 87(55.8%) were ≥ 65 years; 46% female, mean age 78.1(SD7.5) years. The mean number of conditions was 4(SD4.4); the mean number of regular medications was 6.9(SD4.5). Reasons for referral to FASS included falls (34.5%), dizziness/near fall (35.6%), and transient loss of consciousness (29.9%). For 21.8% there was an associated injury; 11.5% a fracture. Thirty-seven (42.5%) had experienced at least one fall in the previous 12-months. Sixty-four (73.6%) were on ≥ 1 STOPPFall FRID. The most common STOPPFall FRID prescribed to older adults were diuretics (24.1%), anti-depressants (20.7%) and benzodiazepines/benzodiazepine-related drugs (13.8%). At least 1 STOPPFall FRID was stopped in 31.3%. The most commonly deprescribed STOPPFall FRIDs were diuretics (20%), alpha blockers (6%) and benzodiazepines/benzodiazepine-related drugs (4.7%). Adults < 65 years (n = 69) were more likely to be prescribed a STOPPFall FRID at admission than older adults (≥ 65 years); 88.4% vs 73.6%, p = 0.021.
Conclusion: STOPPFall FRIDs are prevalent in fallers of all ages. Even one review by a specialist FASS leads to medication optimization. The effectiveness of STOPPFalls criteria in the prevention of falls should be evaluated further in intervention studies.
Reference
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P-994

Chronic medical conditions and willingness to deprescribe in older adults

Abstract Area: Pharmacology

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Introduction: Deprescribing is the process of withdrawal (or dose reduction) of an inappropriate medication. It is a complex process that faces several barriers, including patients' attitudes towards deprescribing. There is growing evidence that patients' attitudes to deprescribing may differ depending on their clinical situation. This study aims to identify if specific clinical conditions are predictors of "willingness to deprescribe".
Methods: A cross-sectional study of community-dwelling patients aged ≥ 65 years taking at least 1 regular medication. Data collection included demographic and clinical characteristics, self-reported health status, and trust in the physician. The patient's "willingness to deprescribe" was assessed by the Portuguese Revised Patients' Attitudes Towards Deprescribing (rPATD) Questionnaire. Binary logistic regression was performed after dichotomizing one of the rPATD global questions (willingness to deprescribe).
Results: The median of chronic medical conditions was 6 (IQR = 5–7); 68,7% of the patients had 4 to 7 chronic medical conditions, being osteoarthrosis (97,9%), hypertension (85,4%), dyslipidemia (76,6%), and gastric disease (40,6%) the most prevalent conditions. Significant predictors of "willingness to deprescribe" were gastric disease (adjusted odds ratio (aOR) = 18.08; 95% IC 3.614, 92.971), chronic pulmonary disease (aOR = 0.127; 95% IC 0.029, 0.935), higher trust in the physician (aOR = 10.184; 95% 1,445, 71.798), and the rPATD concerns about stopping medications score (aOR = 0.293; 95% IC 0.142, 0.605).
Key conclusions: The presence of gastric disease significantly increases the odds of the patient's willingness to deprescribe; on the contrary, the odds are reduced by the presence of chronic pulmonary disease.

P-995

The polypharmacy syndrome: an epidemic in the 21st century. about a case

Abstract Area: Pharmacology

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An 81-year-old man was referred by his Primary Care Physician to the Service of Geriatric Care at Home for studying a cognitive impairment because of refusing his medication in the last 11 months. Functionally independent for BADLs (IBmod 88/100, FAC 4) with occasional disorientation in time, opposition to home care and occasional visual hallucinations (CRM 2/5). He lived with his wife, without social assistance due to patient refusal. Repeated falls, diabetes mellitus type II (last Hb1ac: 6,6%) and carotid atheromatosis highlighted as antecedents. Furthermore, a polypharmacy of 10 drugs that the patient had suspended voluntarily, because he explained: "the doctor has not seen my face, everything has been over the phone" "the doctor's job is to order things, and the patient's job is not to take them if he doesn't want to". He reported that he had improved physically after stopping the medication, and no more falls. After assessing the patient in person, we reduced the medication to 3 drugs (Adiro, Atorvastatin and Omeprazole), achieving a good therapeutic adherence. In addition, he was introduced to the Cognitive Impairment stimulation therapy of the hospital. The increasing longevity of the population, morbidity and the consumption of medicines have caused that polypharmacy is a priority health problem that favors the functional deterioration of the patient. Their Prevalence in Spain ranges between 34 and 73%. The clinical situation of the patients is

variable, being precise adjust medication by assessing frailty, level of dependency and functional impairment, with tools of aid to the deprescription for it.

P-996

Willingness to deprescribe in community-dwelling older adults: the importance of age, sex, and having concerns about stopping medicines

Abstract Area: Pharmacology

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Introduction: Deprescribing is a complex process that requires a patient-centered approach. One frequently expressed barrier to deprescribing is patients' attitudes toward stopping a medication. This study aims to identify the patients' characteristics that are most associated with willingness to deprescribe.
Methods: Cross-sectional study with 192 community-dwelling patients aged $\geq$ 65 years and taking at least 1 regular medication. Data collection included demographic and clinical characteristics. The patient's willingness to deprescribe was assessed by one of the global questions from the Portuguese Revised Patients' Attitudes Towards Deprescribing (rPATD) Questionnaire. Multiple binary logistic regression with the backward likelihood ratio method was performed in order to examine for associations and predictors of patients' willingness to deprescribe. All the binary logistic regression assumptions were verified. P values ≤ 0.05 were considered statistically significant. Results: The final model was significant [X2 (5) = 26,730; $p < 0.001$], explaining 28,2% of the variance (Nagelkerke R Square) and correctly predicted 85,7% of the results. There was a good model fit (Hosmer–Lemeshow test nonsignificant, $p = 0.295$). The significant predictors of willingness to deprescribe were age (adjusted odds ratio (aOR) = 1.136; 95%CI 1.026,1.258), sex (aOR = 3.036; 95% CI 1.059, 8.708), and the rPATD concerns about stopping (aOR = 0.391; 95% CI 0.203, 0.754) The odds of willingness to deprescribe increase 1.136 times by one year of age and increase 3.036-fold in female patients.
Key conclusions: Older age, female gender and concerns about stopping medicines are significant predictors of willingness to deprescribe in older adults.

P-997

A novel screening tool to detect potentially clinically relevant prescribing cascades in older adults: STOPPCascade

Abstract Area: Pharmacology

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Background: Prescribing cascades, an often-overlooked cause of potentially problematic polypharmacy, occur when an adverse drug event (ADE) is misinterpreted as a new symptom or medical condition, with the subsequent prescription of another, potentially inappropriate drug. We aimed to develop a list of potentially clinically relevant prescribing cascades in older adults to facilitate the detection clinically important prescribing cascades and assist clinicians in medication review.
Method: A structured literature search of PubMed, Cinahl and Google Scholar was undertaken using the following search terms: Prescribing Cascades OR Cascades OR Cascade AND Older Adults OR Adults Over 65 OR Older People OR Gero* OR Geri*. Studies in all settings and all study designs were included in the literature search. Studies that didn't include prescribing cascades in the abstract, studies without access to full text article or English version of article and studies exclusively describing patients aged $\leq$ 65 were excluded. Three assessment panellists (academic geriatricians) were asked to evaluate each individual published cascade and the accompanying evidence, using a 5-point Likert scale to evaluate each cascade for inclusion/exclusion in the list. Potential cascades scored Likert 4 or 5 by 2 or 3 of the panellists were included in the final list.
Results: A physiological systems-based short-list of 131 potential cascades was reviewed by the panel, 71 individual cascades were accepted, involving 41 drugs/drugs classes.
Conclusion: The STOPPCascade list comprises 71 potentially important prescribing cascades in older adults. This novel explicit list is designed to help identify potential prescribing cascades and to facilitate appropriate deprescribing.

P-998

Polypharmacy and patients' willingness to deprescribe: a study with community-dwelling older adults

Abstract Area: Pharmacology

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Introduction: Polypharmacy, defined as the intake of 5 or more regular medicines, is associated with several negative health outcomes, such as falls, adverse drug events, a decline in physical function and cognition, frailty, and mortality. Deprescribing is a patient-centered strategy to address inappropriate polypharmacy that faces several barriers. One of such barriers is the patients' attitudes towards deprescribing. This study aims to assess the association of polypharmacy with older adult patients' attitudes toward deprescribing.
Methods: Cross-sectional study of older patients aged $\geq$ 65 years taking at least 1 regular medication. The participants answered the Portuguese Revised Patients' Attitudes Towards Deprescribing (rPATD) Questionnaire. Demographic and clinical data were also obtained. Overall patients' willingness to deprescribe (agree vs. disagree) was compared for age, sex, and the number of regular medications using the Mann–Whitney and Chi-square (X2) tests. A p-value < 0.05 was considered statistically significant.
Results: 192 older adults were included; the median age was 72 years (IQR = 69–77), and the majority were female (65.6%). Most (76.1%) presented polypharmacy, 59.9% took 5 to 9 medicines and 16.2% took 10 or more. The great majority (83,3%) were willing to deprescribe. An association between "willingness to deprescribe" and "sex" ($p = 0.041$) and "trust in the physician" ($p = 0.001$) was observed. The total number of regular medications had a significant effect ($p = 0.024$) on the "willingness to deprescribe".

Key conclusions: Polypharmacy prevalence was very high and significantly associated with patients' willingness to deprescribe. Most patients were willing to discontinue one or more of their medications if their doctor said so.

P-999

Use of a pharmacy prioritisation toolkit in frail older adults presenting to the Emergency Department

Abstract Area: Pharmacology

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Background: A pharmacy prioritisation toolkit (PPT) was adopted for use by a frailty at the front door multidisciplinary team to direct pharmacist review.
Methods: Over a 4 period pharmacist referrals based on a toolkit used by the team were reviewed. Data was recorded in Excel including age, reason for referral and outcome of medicines optimisation review (MOR). Pharmacy-identified patients were also analysed.
Results: 45 patients were referred by the team using the PPT and 25 were pharmacist-identified for review, of which most would have been identified by the toolkit. Reason for referral were use of high risk medication (20/45), suspected medication related admission (9/45), chronic kidney disease or acute kidney injury (7/45), specific pharmaceutical concerns (5/45) > 10 regular medications (4/45). Of those reviewed, 29 MORs were made. Of patients who were pharmacist identified, 10 MORs were made (53% of patients). The toolkit was retrospectively applied to these patients and would have selected all but 3. As a result of analysis of these recommendations, antimicrobial prophylaxis for urinary tract infections will be added to the high risk medicines list on the PPT.
Conclusions: The PPT was successfully used by the team to generate 45 referrals for pharmacist review over a 4 week period. Development of the toolkit is ongoing using a plan, do, study, act model with input from all members of the team to further improve both it's efficacy and utility.

P-1000

Compromised NAD + -mitophagy axis in ageing and Alzheimer's disease and AI-based drug development

Abstract Area: Ageing biology

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Accumulation of damaged mitochondria is a hallmark of aging and age-related neurodegeneration, including Alzheimer's disease (AD). However, the molecular mechanisms of impaired mitochondrial homeostasis and their relationship to AD are still elusive. Mitophagy is the cellular self-clearing process of damaged and superfluous mitochondria, and therefore plays a fundamental role in maintaining neuronal function and survival1. We hypothesize that age-susceptible defective mitophagy causes accumulation of damaged mitochondria, which in combination with the two AD-defining pathologies, Aβ plaques and tau tangles, further exacerbates AD progression. Restoration of mitophagy through upregulation of cellular NAD + , a primary molecule in human health and life, and genetic approaches, forestalls pathology and cognitive decline in animal models of AD and improves mitochondrial function in the AD iPSC neurons2, 3. We are now involved in more than 5 clinical trials on the use of NAD + precursors to treat AD, PD, ALS, and premature ageing diseases, etc4. Additionally, we have successfully identified two new mitophagy inducers, via artificial intelligence (AI) and wet lab validation, as anti-AD drug candidates.

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P-1001

Prevalence of sarcopenia in acutely admitted older medical patients—results from the Copenhagen PROTECT Study

Abstract Area: Sarcopenia

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Introduction: Sarcopenia increases the risk of prolonged hospitalization, readmission, frailty, and mortality. Despite of this, there is still a lack of knowledge surrounding the prevalence in hospitalized older patients.
Methods: Acutely admitted older (≥ 65 years) medical patients from Copenhagen University Hospital, Bispebjerg and Frederiksberg, were included from November 2019 to November 2021. Handgrip strength (HGS) was measured using a handheld dynamometer. Skeletal Muscle Index (SMI) was measured by direct segmental multi-frequency bioimpedance analyses (S10, InBody). All measurements were performed within 24 h of admission. The prevalence of sarcopenia was assessed using cut-off values from the European Working Group on Sarcopenia in Older People (EWGSOP2).
Results: A total of 638 patients with complete records of both SMI and HGS were included in the current analyses (mean age: 78.2 ± 7.6 years old, 55% female). Mean HGS was 28.7 kg ± 8.6 kg in men and 18.0 kg ± 6.0 kg in women, with low HGS being present in 41.3% and 37.2% of men and women, respectively. Mean

SMI was 7.6 kg/m^2 ± 1.3 kg/m^2 in men and 6.1 kg/m^2 ± 1.4 kg/m^2 in women, with low SMI being present in 33.6% and 32.4% of men and women, respectively. Sarcopenia was present in 33% of both men and women.
Conclusions: The present data demonstrate that sarcopenia is present in 33% of acutely admitted older medical patients. Of note, approximately 40% have low muscle strength, whereas approximately 33% have low muscle mass.

Late-Breaking posters—EuGMS CONGRESS 2022

LB-O1

Identifying Older Frail Patients Suitable for Same Day Emergency Care (SDEC); The Applicability of Patient Selection Scoring Systems

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Aim: Several selection scores identify patients for Same Day Emergency Care (SDEC) in the Emergency Department (ED) and medical intake. Studies have compared scoring systems; none specifically in frail older adults (1–4). This compared Glasgow Admission Prediction Score (GAPS), Sydney Triage to Admission Risk Tool (START) and Ambulatory Score (Ambs) alongside the Acutely Presenting Older Patient (APOP) program.
Methods: Older Person's Assessment service (OPAS) is-ED based, accepting patients with frailty syndromes aged > 70 years (falls, confusion, care dependence, polypharmacy and poor mobility). The service achieves same-day discharge for > 75% of patients. The OPAS databank was retrospectively analysed. Interactions between clinical outcomes with age, Charlson Co-morbidity index (CCMI) and Clinical Frailty Score (CFS) were evaluated alongside each score. ED documentation was used to gain triage data.
Results: 350 attendances analysed, 78 (22.28%) admitted, 226 (64.57%) presented with falls. 139 (39.7%) male, mean age 82.7 years (IQR 77–90), CFS 5 and CCMI 6.5. Ambs: IQR 3–5.5. Sensitivity 0.18, Specificity 0.71, Positive Predictive Value (PPV) 0.30, Negative Predictive value (NPV) 0.57, Area under Curve (AUC) 0.67. GAPS: IQR 18–24. Sensitivity 0.25, Specificity 0.80, PPV 0.85, NPV 0.19, AUC 0.61. START: IQR 21–25. Sensitivity 0.26, Specificity 0.83, PPV 0.86, NPV 0.22, AUC 0.61. APOP score predicted admission in people with cognitive impairment ($p = 0.04$) or functionally/cognitively impairment ($p = 0.02$) rather than functionally impairment ($p = 0.43$).
Conclusion: Sensitivity was low for all scores and none could be reliably used as a screen for suitable patients for SDEC. We have shown that clinical judgement is superior in our population.

LB-O2

Diabetes management in older adults: a retrospective cohort study

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Introduction: Type 2 diabetes mellitus (T2DM) is associated with poor health outcomes (1) and few people aged > 70 years likely benefit from HbA1c < 53 mmol/mol(2) with ≤ 64 mmol/mol generally accepted in people with moderate-severe frailty. We analysed fallers with T2DM to evaluate their outcomes and frailty status.
Methods: Older Persons Assessment Service (OPAS) is an Emergency Department service which accepts patients on frailty criteria. OPAS databank was retrospectively analysed for people with T2DM admitted with a fall, June 2020 to April 2022. Interactions between clinical outcomes with therapeutic agents used, age, Charlson Co-morbidity index (CCMI) and Clinical Frailty Score (CFS) were evaluated.
Results: Six-hundred and seventy-nine patients; 191 (28.1%) had diabetes with a mean HbA1c 56.7 (IQR: 43.0–61.5) mmol/mol, 245 (36.1%) male. Patients with diabetes had a similar mean CFS (5.3 vs 5.3, $p = 0.52$) and age (83.8 vs 83.2 years, $p = 0.28$) as those without diabetes, but had a higher mean CCMI (5.0 vs 7.0, $p < 0.001$). People with diabetes were more likely to die within 12 months (31.4% vs 25%, $p < 0.05$). Greater mortality in patients with diabetes who used insulin and/or gliclazide was trending compared to those who used other agents (49.6% vs 30.9%, $p = 0.12$).
Conclusions: Falls are a significant burden, and hypoglycaemic agents may contribute to the greater mortality observed in people with diabetes. Clinician awareness of the poorer prognosis associated with diabetes to support de-prescribing diabetes therapies (2) for patients with significant frailty and HbA1c < 64 mmol/mol. A frailty assessment should be part of any interaction(3) in the older T2DM patient.

LB-O3

Serological tests for syphilis in the differential diagnosis of cognitive decline and polyneuropathy in geriatric patients

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Background: In the nineteenth century, neurosyphilis was the most frequent cause of dementia in Western Europe. Now dementia caused by syphilis has become rare in Germany. We studied whether routine testing of patients with cognitive abnormalities or neuropathy for antibodies against Treponema pallidum has therapeutic consequences in geriatric patients.
Methods: From October 2015 to January 2022 (76 months) a Treponema pallidum electrochemiluminescence immunoassay (TP-ECLIA) was performed in all patients treated as in-patients at our institution with cognitve decline or neuropathy and no or insufficient previous diagnostic workup. In cases of positive TP-ECLIA, further specific laboratory investigations were performed to assess whether antibiotic therapy was indicated.
Results: In 42 of 4116 patients (1.0%), TP-ECLIA detected antibodies directed against Treponema in serum. Specifity of these antibodies was ensured by immunoblot in 22 patients (11 × positiv, 11 × borderline values). Treponema-specific IgM was detectable in the serum of one patient, in 3 patients the Rapid plasma reagin (RPR) test, a modified Venereal Disease Research Laboratory test (VDRL), in serum was positiv. CSF analysis was performed in 10 patients. One patient had CSF pleocytosis. In 2 other patients, the Treponema-

specific IgG antibody index was ceftriaxone 2 g/d i.v., 1 × doxycycline 300 mg/d p.o.).
Conclusion: Approx. 1‰ of patients with previously undiagnosed or not sufficiently diagnosed cognitive decline or neuropathy, the diagnostic workup for active syphilis resulted in a course of antibiotic treatment.

LB-O4

Ambulance offload delays in the Emergency Department—Is age and frailty a factor?

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Introduction: Ambulance offload delays at the Emergency Department (ED) are linked to adverse outcomes. By 2030, 25% patients attending the ED are projected to be > 80 years old. Geriatric frailty syndromes can be difficult for triage systems to assess, leading to older people being allocated lower priority status and a higher chance of a 4-h breach vs a younger patient(1). We assessed whether ambulance offload time is associated with frailty, death or re-attendance at an emergency department at a large regional centre.
Methods: Retrospective analysis of adult ambulance offload data from February to June 2022 looking at age, frailty (CFS), length of stay (LOS), ED re-attendance within 6 months and death.
Results: We included 1000 people transported by ambulance to ED February to June 2022. > 65 years old– 622 patients (47% Male). Mean 406.3 min' offload, CFS 5.4, LOS 11.75 days, Age 80.21 (IQR 73–87), 193 re-presented (32.76%), 135 deaths (22.9%). < 65—378 patients (52.9% Male). Mean 189 min' offload, LOS 5.1 days, Age 43.81 (IQR 33–56), 116 re-presented (31.86%), 24 deaths (6.34%). Significant associations ($P < 0.05$) for CFS vs LOS, CFS vs Av.offload, Av.offload vs Age and LOS vs Av.Offload, Death vs CFS but not re-presentation vs CFS.
Conclusions: Longer ambulance offload times are associated with greater 6-month mortality and re-attendance for older, frailer people in ED. Those directly offloaded to OPAS had decreased LOS (5.1 days) and offload time (121 min') despite a mean CFS 6.41, indicating a need to increase OPAS capacity including direct offloads into OPAS.

LB-O5

Correlation of different skeletal muscle mass indexes with each other and hand grip strength

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Introduction: Malnutrition and sarcopenia are geriatric syndromes that are common in older adults and associated with increased rates of disability, frailty and mortality. In diagnosis of both geriatric syndromes, skeletal muscle mass should be measured and determined whether it is low. After measuring the skeletal muscle mass (SMM) in kg, the skeletal muscle mass index (SMMI) should be determined according to the body structure/size of the individual, and then it should be evaluated whether it is within the normal limits. The most commonly used methods in SMMI calculation are the adjustments made with height2, weight and body mass index (BMI) ([SMM(kg)/height2 (m2)]; [SMM(kg)/weight(kg)]; [SMM(kg)/BMI (kg/m2), respectively]. In this study, our aim is to investigate the correlation of all 3 SMMI values with each other and with hand grip strength.
Methods: We included outpatients evaluated in the geriatrics outpatient clinic of a university between July 2012- July 2022 with muscle mass and handgrip strength (HGS) measurement. Muscle mass was evaluated with bio-electrical impedance analysis (TANITA BC532) in the morning after fasting and handgrip strength with JAMAR brand hydraulic hand dynamometer. National cut-off values were used for all parameters related to sarcopenia. EWGSOP2 (UK) cut-off values (males, 27/females, 16 kg) were used as alternative cut-offs for handgrip strength. Correlation coefficient (r): < 0.3; negligible; r: 0.3–0.5; weak, r: 0.5–0.7; moderate, r: > 0.7 were accepted as strong correlation.
Results: We included 1791 patients. The mean (SD) age was 75.1 ± 6.5 (min–max: 65–99). The prevalence of low muscle mass was 2.3% with SMMI (height 2), 45.8% with SMMI (weight), and 64.5% with SMMI (BMI). Low HGS prevalences were 38.6% with Turkish cut-offs (35/20 kg) and 12.1% with EWGSOP2 (England) cut-offs (27//16 kg). The best correlation between SMMI values was found between SMMI(BMI) and SMMMI(weight) which was a strong correlation ($r = 0.857$, $p < 0.001$). No relationship was found between SMMI(height2) and SMMI(weight) or SMMI(height2) and SMMI(BMI). All three SMMI parameters were significantly associated with HGS ($p < 0.001$, for all). The most strongly associated SMMI parameter with HGS was SMMI(BMI) ($r = 0.584$, $p < 0.001$). The relationships between HGS and SMMI (weight) and SMMI (height2) were negligible ($r = 0.302$, $r = 0.284$; respectively).
Conclusions: There was a strong correlation between SMMI(BMI) and SMMMI(weight), while SMMI(height2) was not correlated with other SMMI parameters. The most related SMMI with HGS, which is the functional parameter of the muscle, was the adjustment of skeletal muscle mass with BMI [SMMI(BMI)]. Low muscle mass detected by SMMI(height2) had a negligible frequency and seems unsuitable for determining low muscle mass. Our study suggests that SMMI (BMI) is the most appropriate SMMI parameter in the determination of skeletal muscle mass index and subsequently in the evaluation of malnutrition and sarcopenia.

LB-O6

Use of antiviral medications in older people affected by COVID-19: an observational, prospective, multicenter study

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Background: The literature regarding the use of antiviral medications for treating patients affected by coronavirus disease (COVID-19) is still conflicting. In particular, data regarding the importance of prognostic tools is largely unexplored. The aim of this research was to evaluate if the Multidimensional Prognostic Index (MPI), based on

the Comprehensive Geriatric Assessment (CGA), may help physicians in identifying older hospitalized patients affected by COVID-19 who might benefit from the use of antiviral medications in hospital.
Methods: Older people hospitalized for COVID-19 in ten European hospitals were followed-up for 90 days after hospital discharge. MPI was calculated using eight different domains typical of the CGA. A propensity score, Cox's regression analysis was used for assessing the impact of antivirals on mortality (overall and in hospital), stratified by MPI = 0.50.
Results: Among 502 older people hospitalized for COVID-19 (mean age: 80 years), 140 were treated with antiviral medications. During the 90 days of follow-up, 175 deaths were reported, 115 in hospital. The use of antiviral medications significantly decreased the risk of overall mortality (hazard ratio, HR: 0.70; 95% confidence intervals, CIs: 0.48–0.991; HR = 0.54; 95%CI: 0.35–0.83 in propensity score analysis) in the sample as whole. However, the effect was present only in less frail participants (HR = 0.46; 95%CI: 0.22–0.96; HR = 0.47; 95%CI: 0.22–0.96 in propensity score analysis), but not in frailer individuals. No effect on in hospital mortality was observed.
Conclusions: MPI could be useful for better individualizing older people hospitalized by COVID-19 who could benefit from antivirals.

LB-O7

Prevalence of sarcopenia and associations of mortality in community-dwelling older individuals by EWGSOP1 and EWGSOP2 definitions: a comparative study

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Background: Sarcopenia is a well-defined geriatric syndrome and a major cause of disability and mortality. We aimed to determine the prevalence of sarcopenia and associations of mortality in community-dwelling older individuals by EWGSOP1 and EWGSOP2 probable sarcopenia definitions comparatively.
Material and Methods: We defined sarcopenia by the EWGSOP1 and EWGSOP2 criteria. We considered standard handgrip strength (HGS) cut-offs (30/20 kg) in EWGSOP1 definition and the standard (27/16 kg) HGS cut-offs in the EWGSOP2 definition. Alternatively, we considered national HGS cut-offs (35/20) in the context of the EWGSOP2 definition. We assessed the 5-year mortality rate in participants that could be reached. The relationship of mortality with EWGSOP1-defined sarcopenia, and two alternative EWGSOP2-defined probable sarcopenia definitions and mortality were analyzed by Cox regression survival analyses. We gave the results as a hazard ratio (HR) and a 95% confidence interval (CI).
Results: We included 204 older adults [110 (54%), females; mean age, 74.5 + 7.0]. The prevalence of sarcopenia was 5.5% according to the EWGSOP1 criterion, while the prevalence of probable sarcopenia was 31% by the 27/16 kg HGS cut-offs and 50% by the national (35/20 kg) cut-offs. We determined the mortality rate of 103 individuals. The mortality rate was 30.1% (n = 31). In univariate analyses considering age, sex, number of medications and co-morbidities, and presence of cognitive impairment and alternative sarcopenia definitions, the only 2 parameters related to increased mortality risk were advanced age and the probable sarcopenia defined by national HGS cut-offs (35/20 kg) (p = 0.004 and p = 0.005, respectively). In multivariate Cox-regression analyses, including age and alternative sarcopenia definitions in 3 different models, EWGSOP1 sarcopenia definition (HR = 4.26, 95% CI = 1.45–12.42, p = 0.008) and EWGSOP2 probable sarcopenia definition with population specific-cut offs (HR = 2.58, 95% CI = 1.12–5.93, p = 0.03) were associated with higher mortality risk, while EWGSOP2 probable sarcopenia definition with standard-cut offs (p = 0.09) was not.
Conclusion: In this study, probable sarcopenia defined by standard HGS cut-offs (27/16 kg) was not associated with mortality risk, while probable sarcopenia by population-specific HGS cut-offs (35/20 kg) and the EWGSOP1 sarcopenia definition were significantly associated. We suggest that population-specific HGS cut-offs reveal a better association for poor outcomes related to sarcopenia and shall be used whenever available.

LB-O8

Validation of a modified Quick Mild Cognitive Impairment (Qmci) screen to measure cognition in the Survey of Health, Ageing and Retirement in Europe

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Background: The Survey of Health, Ageing and Retirement in Europe (SHARE) is a large longitudinal multi-country survey. Although including questions relating to cognitive function, to date, no cognitive screening instrument has been validated for use in the SHARE.
Methods: A modified Quick Mild Cognitive Impairment (Qmci) screen was generated using questions available in the SHARE (wave 8), incorporating the following cognitive domains: orientation (8 points), word registration (5 points), clock drawing (15 points), delayed recall (20 points), and verbal fluency (20 points). It was rescaled to provide the usual scoring range, from 0–100. Diagnostic accuracy for self-reported dementia was assessed using the area under the receiver operating characteristic curve (AUC), compared using the DeLong method.
Results: There were 25,701 people aged ≥ 65 available, mean age 75.23 (± 7.01); 56% were female and 2% self-reported dementia. The AUC (95% CI) for the modified Qmci screen was 0.85 (0.83–0.86) and 22% screened positive at a cut-off < 59/100 providing 74% sensitivity and 79% specificity. The AUC of the subtests varied significantly: the lowest diagnostic accuracy was for clock drawing (AUC: 0.72) and orientation (AUC: 0.75) and the highest was for delayed recall (AUC: 0.81). Removing the two lowest performing subtests (clock and orientation) had little effect on predictive accuracy for dementia (AUC: 0.84, p = 0.043).
Conclusions: A combination of three readily-available subtests (word registration, verbal fluency and delayed recall), based on a shortened (modified) Qmci screen, has good diagnostic accuracy for dementia

and could be applied in the SHARE to compare cognitive function across European countries and over time.

LB-O9

Does Square-Stepping Exercise improve physical function of inpatients in acute geriatric rehabilitation? A randomized controlled pilot study

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Introduction: Mobility in older people is influenced by walking ability and cognitive performance. Square-Stepping Exercise (SSE) is hypothesized to be superior to conventional physiotherapy because it trains physical function and cognitive performance simultaneously. To date SSE has only been studied in community-dwelling older people.
Methods: 58 eligible inpatients (29 per group) in geriatric acute rehabilitation were randomized to the control group (CG) or intervention group (IG). The IG received at least six sessions of SSE alternating with conventional physiotherapy during their hospital stay. The patterns were progressively adapted according to performance. At hospital admission and at hospital discharge data were collected. Physical function, gait parameters and cognition were evaluated with standardized and validated tests. Physical function was measured with the Short Physical Performance Battery (SPPB).
Results: The total SPPB score significantly improved in both groups (CG + 1.9 points; IG + 2.55 points, $p = 0.254$). Both groups improved in the Chair Rise score with a significant difference in favour of the IG (CG + 0.62 points; IG + 1.1 points, $p = 0.025$, $\eta 2p = 0.087$).
Key conclusions: SSE is as effective as conventional physiotherapy for inpatients in geriatric acute rehabilitation to increase physical function measured with the SPPB. In the Chair Rise test SSE appears to be more effective. Our results highlight that SSE is effective, and may serve as an alternative to conventional physiotherapy for older adults requiring geriatric acute care.

LB-O10

Post-vaccination SARS-cov-2 infection in Long Term Care Facilities: the GeroCovid VAX data

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Both individual and organizational factors can play a role in the transmission of SARS CoV-2 infection in Long-Term Care Facilities (LTCF). This study aims to evaluate which factors can influence the transmission of SARS-CoV-2 infection among vaccinated residents during the period between July 2021-June 2022.
Methods: This study was performed on 77 Italian LTCFs enrolled in GeroCovid VAX study, a multicenter study carried out from February 2021 to June 2022, including 3272 residents aged $\geq$ 60 years [1]. All participants had received anti-SARS-CoV-2 vaccine. The association between LTCFs' and participants' characteristics, and incident SARS-CoV-2 infections was analyzed using multilevel logistic regression models.
Results: During the observation period, 33.8% of the facilities reported 261 cases of SARS-CoV-2 infection. Of these, 65.5% had an asymptomatic or paucisymptomatic clinical course and were managed in the facilities. Among the characteristics of the participants, sex and age were not associated with the onset of SARS-CoV-2, while having received the vaccine booster dose was a protective factor for infection by COVID-19. On the other hand, having set up protected areas for family visits was significantly associated with a lower risk of infection. Overall, about 66% of the variability in the probability of SARS-CoV-2 infection was attributable to characteristics of the facilities, while the 86% of the variability in the probability of death was due to individual characteristics.
Key conclusions: These data suggest that the vaccination booster doses and the visit control are still needed to make safer the LTCFs versus SARS CoV-2 infection.1. Abbatecola AM, et al.; GeroCovid

Vax Working Group. Monitoring COVID-19 vaccine use in Italian long term care centers: The GeroCovid VAX study. Vaccine. 2022 Apr 1;40(15):2324–2330. Doi: 10.1016/j.

LB-O11

A 'Smart Home'-based hospital discharge program for frail elderly patients. preliminary data from the "Pro-Home" Project

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Introduction: Planning the discharge from the hospital of frail elderly patients is an important step to avoid inadequate prolonged hospital stays and prevent the risks associated with prolonged hospitalization.
Methods: As part of the MULTIPLAT-AGE network project co-financed by the Italian Ministry of Health, we have developed an experimental model of protected discharge ("PRO-HOME" project) for elderly subjects (65 years and over) hospitalized for an acute disease. The main objective of the study is to reduce the length of hospital stay (LOS) of frail elderly patients through the construction of a small family-type apartment within the hospital, equipped with automation solutions and low-cost technological devices. Secondary objectives: functional status, falls, hospital readmission, institutionalization in a follow-up period of 6 months. This study is a two-arm randomized experimental clinical trial, with a multicomponent intervention protocol for subjects in the experimental group (EG) and a traditional hospital stay for participants in the control group (CG).
Results: Of the 60 patients to be enrolled according to the protocol, 33 patients have been included in the study to date (mean age 84.6 ± 6.4 years; male/female ratio: 1.2). The mean length of hospital stay was significantly shorter in subjects enrolled in EG compared to CG (2.0 ± 0.7 vs 6.3 ± 3.8 days, respectively; $p < 0.001$).
Key conclusions: These preliminary data indicate the effectiveness of a 'smart home'-based protected hospital discharge program in reducing hospital LOS of frail elderly patients. At the end of the study, the analysis of data derived from digital monitoring will also allow the identification of predictors of clinical negative events.

LB-O12

DANZARTE: sensitivity technology-based physical activity and memory training program for older adults. a feasibility study in a nursing home and in the Community

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Introduction: DanzArTe is a program of physical activity and memory training for older people which is based on real-time interaction and uses visual stimuli (art works) and auditory feedback (interactive sounds).
Objectives: The project has several objectives: (i) medical: to analyze multidimensional indicators of frailty; (ii) technological: to develop computational models for quality of movement analysis; (iii) performative: to develop choreographic practices related to the psychophysical characteristics of older people; (iv) to remodel the museum experience through active and affective exploitation.
Methods: Phase 1: development of interactive technologies, tuning and testing the DanzArTe program. Phase 2: prospective case–control clinical trial performed in a nursing home (N° 20 NH participants: 10 cases vs. 10 controls) and in the community (N° 24 Community-dwelling [CD]: 12 cases vs. 12 controls). The program consists of four 45-min sessions (twice a week for 2 weeks) involving 3–5 persons. Inclusion criteria were: 1) age ≥ 65 years; 2) Clinical Dementia Rate-CDR ≤ 2; 3) signed informed consent. All participants underwent assessment of multidimensional frailty (CGA-based Multidimensional Prognostic Index-MPI), resilience (Resilience Scale-RS), Psychological General Well-Being Index (PGWBI) and Customer Satisfaction Questionnaire (CSQ-8). NH participants were also tested by means of the Short Physical Performance Battery (SPPB) and Hand Grip tests.
Results: On enrollment, NH-participants were older than CD-participants (mean age = 84.2 ± 7.5 vs 73.7 ± 3.7 years, $p < 0.001$), had a higher MPI (0.65 ± 0.11 vs 0.15 ± 0.11, $p < 0.001$) and a lower RS (70.55 ± 16.3 vs 94.46 ± 10.94, $p < 0.001$) and PGWBI (18.05 ± 2.72 vs 21.71 ± 4.42, $p = 0.002$). After the DanzArTe sessions, only CD-participants showed a significant improvement in RS ($p < 0.05$) and PGWBI ($p = 0.002$), while no significant changes in MPI, SPPB and Hand Grip were observed in either group. All participants completed this program and both groups expressed a good level of satisfaction (NH-CSQ-8 = 23.8 ± 3.0 vs community-CSQ8 = 27 ± 2.6, $p = 0.018$).
Conclusion: The DanzArTe program is feasible in older adults, can improve resilience and global well-being and arouses the satisfaction of participants both in residential facilities and the community.

LB-O13

Correlation of anthropometric measures with muscular mass, strength and performance and their associations with sarcopenia diagnosis in + 80 older adults

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Background: Estimation of body composition by anthropometric measurements may be useful in the assessment of sarcopenia. Body Mass Index (BMI), arm circumference (AC) and calf circumference (PC) are related with physical function, nutritional status, body mass

muscle, increased risk of frailty, worse clinical outcomes, and mortality in older adults.Objective: To identify the correlation between calf circumference (CC), arm circumference (AC) and body mass index (BMI) with measures of muscle mass, strength performance and diagnosis of sarcopenia in 80 + older adults.

Methods: Cross-sectional study with a sample of older adults aged ≥ 80 years, followed up in an outpatient clinic. For the diagnosis of sarcopenia, the criteria of the European Working Group on Sarcopenia in Older People (EWGSOP) were used. To measure muscle mass, a bioelectrical impedance test was used. Muscle function was measured by handgrip dynamometry and muscle performance by a 4-m gait test. Pearson's correlation test was performed for correlation between continuous variables.

Results: The sample consisted of 119 participants, most of whom were female (56.3%) and with a mean age of 83.4 ± 3.0 years. The prevalence of sarcopenia was 18.5%, being higher among women (25.4%) and in those with BMI < 18.5 kg/m^2, with values of CC < 31 cm, adequacy of AC < 70%, caloric-protein malnutrition, low strength and low muscle mass. There was a positive correlation between the variables PC and appendicular skeletal muscle mass ($r = 0.46$; $p = 0.000$), PC and handgrip strength ($r = 0.300$; $p = 0.300$) and BMI with appendicular skeletal muscle mass ($r = 0.210$; $p = 0.022$).

Conclusion: The study showed a high prevalence of sarcopenia among the 80 + older adults and a moderate significant correlation between CC and measures of muscle mass and strength, unlike BMI and AC.

LB-O14

Detection of intrinsic capacity: validity and psychometric indicators of ICOPE screening tool in community-dwelling older people from Spain

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Background and objectives: The WHO Integrated Care for Older People (ICOPE) screening tool to measure intrinsic capacity (IC) has been implemented as a pilot in several countries. We are not aware of previous studies assessing its validity and psychometric properties.

Aim: To assess sensibility, specificity, and diagnostic accuracy of ICOPE screening tool and its agreement with reference tools available in clinical practice. Methods: Cross-sectional analysis.

Setting: primary care centers and outpatient clinics from five rural and urban territories in Catalonia (Spain). Participants: 207 community dwelling people aged 70 or more with Barthel ≥ 90, without dementia or advanced chronic conditions.

Outcomes: IC was assessed using ICOPE screening tool and reference tests (SPPB, MNA, Snellen chart, audiometry, MMSE, GDS5). Sensibility and specificity were assessed by Youden's index. Agreement between ICOPE screening tool and reference tests was assessed with Gwet index. Results: Sensibility ranged for most domains between 0.438 and 0.569 being higher for cognition (0.889). Specificity ranged from 0.682 to 0.96, diagnostic accuracy from 0.627 to 0.879, Youden index from 0.12 to 0.619, and Gwet from 0.275 to 0.842. Conclusions: ICOPE screening tool is an inexpensive tool easy to administer in short time. It has modest sensibility but good specificity for the screening of IC decline. Diagnostic accuracy was found acceptable for all IC domains. To our knowledge this is the first study assessing validity and psychometric properties of ICOPE screening tool. Further research is needed to deepen into those factors that can facilitate or hinder the implementation of ICOPE strategy.

LB-O15

Prevalence of Mental Health Conditions in the elderly: A community-based cross-sectional study

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Introduction: Mental health such as depression and anxiety are the most important health indicators that cause considerable morbidity in elderly people. Providing elderly mental healthcare in Elbasan city, especially during the pandemic Covid-19 time is challenging due to many reasons such as the unusual situation that this pandemic caused, also the growth of the elderly population, and limited health resources.

Objective: We examined the prevalence of depression, and anxiety, as well as the risk factors of these mental health issues among elderly over 65 years old in Elbasan city.

Method: This is a cross-sectional study conducted on 617 persons ≥ 65 years old that living in Elbasan city. A google form or a face-to-face interview with a pre-tested questionnaire was carried out by all participants. General Anxiety Disorder Assessment (GAD) for anxiety assessment and Patient Health Questionnaire (PHQ-9) for depression assessment was incorporated into the questionnaire. Data were analyzed by chi-square test. All statistical analyses were done using SPSS version 20.0. P-values less than 0.05 were considered statistically significant.Results: The prevalence of depression and anxiety in this study resulted in 87.8% and 88% respectively. More of the patients 80.2% (495/617) had passed the COVID-19 disease. According to the severity of anxiety and depression, in most of the cases, 77.9% (325/417) resulted in mild anxiety, while 71.4% (302/417) resulted in mild depression. The highest prevalence is observed in age groups (65 to 75 years old). Women were an almost double number of cases 66% compared to males. The women were 1.8 times at risk for anxiety compared to males for 95% CI [0.45–3.42] p-value resulted = 0.02 and 1.4 times in risk for occurrence of depression compared to men for CI 95% [0.39–3.12] p-value resulted = 0.03. There was found a strong association between marital status, level of monthly income, comorbidities, and living conditions with anxiety and depression.

Conclusion: The findings of this study suggested a higher prevalence of anxiety and depression during the covid-19 pandemic time. Women were the most affected gender and persons between the ages of 65–75 years old. We strongly recommended raising community awareness of mental health, encouraging social participation, and supportive counseling is also essential in combating anxiety and depression among adults. Taking action to address the burden of major depressive disorder and anxiety disorders should be an immediate option for all medical staff and stakeholders.Keywords: Adults, Anxiety, Depression, Elbasan patients.

LB-O16

Physiotherapists' experiences of using movement strategies to manage walking in people with Parkinson's

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Introduction: Walking problems result in functional limitations of daily activities and negatively impact the quality of life in people with Parkinson's (PwP) [1]. Physiotherapists use movement strategies to improve walking; however, our scoping review has demonstrated the lack of primary studies on physiotherapists' experiences of using such strategies. Addressing this gap is important to understand how physiotherapists adapt movement strategies to patients' needs and build a better understanding to optimise their use in clinical practice. **Methods:** Semi-structured online interviews were conducted to gain a depth understanding of how and why physiotherapists use movement strategies. A purposive sample of physiotherapists with current or recent experiences working with PwP in the United Kingdom were recruited. Reflexive thematic analysis was used. ResultsThirteen physiotherapists were recruited. Two main themes were developed from the data. (1) "Optimising movement strategies through personalised care" discussed physiotherapists' approach to optimising movement strategies, which was driven by their awareness of tailoring movement strategies according to PwP characteristics, needs, and preferences. (2) "Delivering movement strategies effectively" ascribed to challenges and support that physiotherapists draw on with organisational context, experience, and family involvement.
Conclusion: These findings suggest personalising movement strategies is important to optimise them, taking into account the physiotherapists' experiences and work settings that could enhance delivering movement strategies effectively. Future research is needed to understand PwP experiences of using such strategies. ReferenceMirelman, A.et al., Gait impairments in Parkinson's disease. The Lancet Neurology, 2019. 18(7): p. 697–708.

LB-O17

Types of personality and frailty: pilot study

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This pilot study is part of the Doctoral degree in Gerontology Research of the Maimónides University, Buenos Aires Argentina.IntroductionDemographic Aging has raised concerns about its adverse health related outcomes. Variability in ageing process, risk factors, environmental stressors and the increase risk of functional decline and associated consequences such as disability, high frequency of hospitalization, increase of health problems originated the definition of Frailty. To identify frail individuals, several criteria have been proposed since 1990, the most accepted definition that conceptualizes frailty as a clinical syndrome with increase vulnerability to stressors and decreases physiological reserves defined as the compound of weight loss, weakness, exhaustion, low walking speed and low physical activity derived from the Cardiovascular Health Study (CHS) by Fried and collegues and also recommended by the American Geriatrics Society. On the other hand, there is enough evidence that types of personality (neuroticism, extraversion, conscientiousness), a largely stable set of traits and characteristics that influence behavior, thoughts and feelings and associated with health behaviors and high risk of health outcomes such as Frailty.Deeping in the idea that frailty could be associated with several biopsychosocial factors and following several studies that associate the relationship between the types of personality and frailty levels have become and make sense our study. The hypothesis of this study is that frail people has higher level of neuroticism and lower level of extraversion than not frail and/or prefrail people. This pilot study aims to associate psychological aspects with frailty and a hypothesis generator reliable for the study.Method and MaterialThis is a cross-sectional study with individuals from the outpatient Geriatric Unit at the Monterrey University Hospital, México. During June and July 2022 patients included were those over 60 years old who accept to participate, with MMSE over 23 and capable to read and write. A complete geriatric assessment was done, including the evaluation of physical frailty with the phenotype criteria, and categorizing accordingly. Personality test (NEO FFI) was done by specialized personnel, independent of the CGA (that included: geriatric depression scale, BMI, Calf circumference, SPPB, gait speed, handgrip strength) and implementing the five-factor model (Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness).Results: from the total sample of 19 older adults, the mean age was 73.26 (SD 7.06) with level of education of 7 years (SD 5.49). Frail older adults had highest levels of neuroticism, with a mean score of 29.58 (SD 6.93) for the NEO FFI, in comparison to those categorized as not physically frail (19 SD 7.07)), $p < 0.001$. This trend was also present for SPPB, those with low scores on SPPB had the highest scores on neuroticism. On the other hand, there was no significant difference for the extraversion trait, $p = 0.232$. Conclusion: the results show that there is an association between neuroticism and physical frailty and lower physical performance. This is in line with previous reports showing higher adverse personality traits in frail individuals. Further research should explore the underpinnings of this association.

LB-O18

Renal disorders in elderly patients with Covid-19 pneumonia

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Introduction: Covid-19 pneumonia in Elderly patients has a wide spectrum of symptoms and signs, ranging from typical presentation to atypical and misleading forms. Metabolic disorders are common during Covid-19 pneumonia and its rather more common in elderly patients.

Methods: Retrospective and descriptive study conducted from September 2020 to February 2022 in the Covid-19 unit in the internal medicine ward in Ben Arous regional hospital, including patients with confirmed Covid-19 pneumonia, who are aged 65 and above.
Results: The study included 400 patients, 222 women (55.5%) and 178 men. Most patients were aged between 65 and 79 (77%). The mean age was 74 years [65–97]. The most frequent chronic diseases were high blood pressure (55.75%), diabetes mellitus (50%); hyperlipemia (25.25%), obesity in 25% of cases and coronary disease (12.25%). Routine blood tests were run systematically; 25% of the study population had acute renal failure; the mean creatinine level was 108.4 µmol/l [28.4–994.5], the mean urea level was 8.11 mmol/L [1.2–64]. The most common ionic disorders were hypokalemia (16.5%), hyponatremia (15.3%), hyperkaliemia (10%) and hypernatremia (2%). Ionic disorders were noted on admission and they were reversible in patients who fully recovered (83.5). The overall death rate was 8%. The duration of hospital stay ranged from one to 33 days with a mean of seven days.
Conlusion: Metabolic disorders and particularly renal and ionic disorders are common in elderly patients. In the context of Covid-19 pneumonia they were remarkably noted and associated to poor prognosis since they prolongate the hospital stay and aggravate cardiac complications.

LB-O19

Heart disease in people older than 95 years—the Cardiogeriatric Clinic experience in Mexico

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Introduction: Very old patients form an increasing population in cardiology consultation, then specialized geriatric care is needed. Objective:To describe cardiovascular and geriatric profile in patients older than 95 years with heart disease.
Methods: We performed a cross-sectional study collecting data through clinical record and a telephone survey to complete a geriatric comprehensive assessment (GCA) and cardiovascular variables of patients older than 95 years attending a tertiary referral hospital during 2021.
Results: Of a total 74 patients older than 95 years, 36 participated in this study. 19 were deceased and 19 were unreachable. Mean age is 97 ± 1.79 years, and 75% were female. Mean years attending Cardiogeriatric Clinic is 6.2 ± 3.46. The most common diagnosis was hypertension (75%) followed by arrythmia (61%). Atrial fibrillation was the most common arrythmia (40%). 36% of patients have pacemaker. Ten patients are anticoagulated and in reduced dose. Only 3 participants visited emergency room in the last year. None of them was for bleeding. Prefrailty is present in 42% and Frailty in 53% of patients. Sarcopenia screening was positive in 69%. 13.8% had 2 or more falls. All patients have caregivers, and the majority self-reported a good health status. Even thought, 33% have depression and 28% have dementia.
Conclusions: Geriatricians trained in heart diseases may improve outcomes in this population. Implementation of a Cardiogeriatric Clinic in a tertiary referral hospital is preparing new physicians' generations to design interventions for patients older than 95 years, especially in frailty, sarcopenia and falls.

LB-O20

Clinical teaching in sport and movement gerontology: effects of a student-led journal club

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Introduction: Even though journal clubs are implemented in higher medical education, no concepts, and effects of its use in clinical teaching of Sport and Movement Gerontology (SMG) were reported. Therefore, this project aims to investigate the effects of a student-led journal club on students' critical thinking and clinical application skills.
Methods: A longitudinal study over four semesters of the module "Research in clinical health care of older adults" in the program M.Sc. SMG was conducted. Each student assigned to a study, led the journal club discussion and published a summary of the journal club via graphical abstract on social media. In a pre-post design, the students rated their confidence to explore and summarize the evidence, to present it in a journal club and to lead the discussion within a survey via questionnaire and 5-point Likert-Scales.Results: 41 students (32 women) were included. The journal club was rated overall as "very good" (median 2, IQR 1). Students' confidence on participating, leading the journal club and transferring the results into clinical practice improved significantly from T0 to T1 ($p < 0.01$) – e.g.: "I feel confident in leading a discussion on the literature presented", T0: "undecided" (median 3, IQR 2) to T1: "rather agree" (median 4, IQR 1, $Z = -541$, $p < 0.01$).Key
Conclusion: The student-led journal club shows to be an effective approach in clinical teaching of SMG. Especially the students' self-assignment to the studies and involving the scientific community via social media was rated as useful and highly motivating for students and lecturers.

LB-O21

A retrospective service evaluation of a community hospital reablement unit

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Introduction: Gorseinon Hospital (GH) is a community rehabilitation facility which offers reablement following an acute illness. Between 2015–2019 GH had median length of stay (LOS) 32 days. In 2018, 81% of patients returned to their own homes.
Methodology: A retrospective review of all admissions to GH from January to December 2021 ($n = 256$) to identify opportunities for service improvement.

Results: Median GH LOS was 53 days.Patients transferred from acute frailty and stroke services who received early Comprehensive Geriatric Assessment (CGA) were considered as a separate subgroup; this group (r-CGA) was compared to patients who did not receive early CGA (nr-CGA). The median overall LOS for group nr-CGA is 56 days vs r-CGA median of 51.5 days ($Z = -2.591$, $p < 0.05$)0.18% of patients returned to the acute hospital. A detailed analysis showed 32.26% patients from general surgical wards returned to hospital. While the proportion of patients in the r-CGA group who returned to hospital was 16.33% and group nr-CGA 18.6%.Median LOS for COVID-19 positive patients:-79 days vs 52 days ($p < 0.01$)0.66% of patients returned home; 13% were discharged to institutional care.
Conclusion: Patients were observed to have a longer length of stay at GH and an increased risk of being discharged to institutional care. Deconditioning associated with hospitalisation, Covid-19 infection and the lockdown periods enforced by the pandemic are potential factors. Early implementation of CGA is likely to reduce acute hospital returns and overall LOS.

LB-O22

Short-and long-term disability prevention through exercise and virtual reality in hospitalised older adults: a randomised clinical trial—Study Protocol

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Introduction: Hospital associated disability in the older adults is an important area to improve within traditional health systems, usually focused on the disease and excluding functional or cognitive aspects. Our team has previously demonstrated how an individualized exercise program is capable of modifying the functional and cognitive trajectory.
Objective: To analyse whether an intervention through a multicomponent training programme facilitated with virtual technology in patients over 75 years hospitalised for medical illness improves functional and cognitive capacity in the short-and long-term.Methods: This is a randomized clinical trial to be conducted in the Geriatric Medicine Department of a tertiary hospital. There will be a control group ($n = 185$) and an intervention group ($n = 185$).
Inclusion criteria: Patients > 75 years old admitted to the geriatric acute-care-unit. Exclusion criteria: refusal to sign the informed consent; life expectancy of less than 3 months or end-stage disease; inability to participate in a multicomponent exercise program; severe neurocognitive disorder in major stage; severe disability (Barthel-index < 35). The intervention consists of a multi-component physical training based on the VIVIFRAIL program and will be complemented by an innovative technology with an immersive virtual reality component for 4–5 consecutive days. This project will be innovative, as it is one of the first to design and implement a combination of physical training technologies and virtual reality technology for cognitive and emotional stimulation and immersion in virtual environments. Personalized to the preferences and characteristics of the elderly person.
Results and key conclusions: The expected results are to increase the benefits of multicomponent training in both finitional and cognitive variables.

LB-O23

Hospital Frailty Risk Score (HFRS)—Identifying Frailty in the Emergency Department (ED)

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Aim: There been several studies validating the Hospital Frailty Risk Score (HFRS) to identify frailty. (1–2). We propose it could identify patients in the Emergency Department (ED) who would benefit from Older Persons Assessment Service (OPAS).
Methods: OPAS, an ED-based service, accepts frailty-syndrome patients (aged > 70 years, falls, confusion, care dependence, polypharmacy and poor mobility). The OPAS databank was retrospectively analysed using HFRS to divide patients in High/Intermediate and Low Frailty Risk, considering Age, Clinical Frailty Score (CFS), Post-code with Welsh Deprivation Index (WDI) and death within a year.
Results: 700 admissions: 400 High/Intermediate HFRS and 300 Low HFRS. High/Intermediate HFRS: 170 (42.5%) male, mean age 83.69 years, CFS 5.7. Low HFRS: 102 (34%) male, mean age 81.46 years, CFS 4.5. High HFRS vs Low HFRS had similar deaths ($p = 0.2$) but a significant difference in CFS ($p < 0.05$). HFRS detected frailty in those < 75 years old ($p < 0.01$) not > 76 years old ($p = 0.08$). There was no association between WDI and Frailty or Death. HFRS Sensitivity: 0.44, Specificity: 0.83, Positive Predictive Value: 0.66, Negative Predictive value: 0.34, Area under the curve: 0.39. Conclusion: The HFRS identified 57% of OPAS cohort, with adding > 80yrs old our modified score identifies > 85% of service users. We found that controlling for socio-economic status, quality of discharge summaries and coding had no relationship to HFRS screening efficacy. We have developed an electronic, real-time Frailty Flag to signpost appropriate patients who would benefit from OPAS, Orthogeriatric or POPs services and currently being tested in clinical practice.

LB-O24

Association of nutritional patterns in 80 + older adults and bmi ranges

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Background: Aging affects muscle physiology, with consequent slowness, weakness and reduced mobility. There is an exchange of muscle fast fibers for slow fibers, causing loss of muscle strength, quality and mass. In addition, there are also changes in nutrient requirements and food consumption patterns.

Objective: To assess the association of different dietary patterns and BMI classification ranges.
Methods: A cross-sectional study included 80 + older adults, at outpatient follow-up in a tertiary hospital in southern Brazil, between March and October 2018. To obtain data on energy consumption and macronutrients, we used the 24-h Food Reminder (R24h) and the Healthy Eating Index to discriminate the food groups. Anthropometric data were obtained by measuring weight, height and subsequent classification of BMI.
Results: A total of 119 participants were included, 56.3% were women and the mean age was 83.4 ± 3.0 years. The mean BMI of the sample was 27.7 ± 4.6 kg/m^2 . Nutritional assessment classified 2.5% as underweighted, 26.9% as eutrophic, 40.3% as overweighted and 30.3% as obese. Individuals with greater compliance of vegetables consumption and less compliance of meat consumption were classified as underweight. The prevalence of type 2 Diabetes Mellitus (T2DM) was 37% in the whole sample and 28.1%, 35.4% and 50% in eutrophic, overweighted and obese older adults, respectively.
Conclusion: Despite the significant difference found between BMI ranges and the "vegetables" and "meat" components of the Healthy Eating Index instrument, further studies are needed to confirm this hypothesis. In addition, this study remarks an expected correlation between higher BMI and prevalence of T2DM.

LB-O25

Functional, cognitive, emotional status among COVID-19 patients recovering after hospitalization or in the community compared to people who did not get corona

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Background: Some COVID-19 patients suffer from Long COVID (LC) symptoms such as cognitive difficulties, changes in emotional, physical and functional states.
Objective: Evaluate the effects of LC on functional, cognitive and emotional status among hospitalized and non-hospitalized patients recovering from COVID-19, compared to people not affected.
Methods: Research tools: bio-demographic, medical questionnaire and the Functional Status Questionnaire (FSQ). Cognitive tests: Four Item Tablet Test (4ITT), Web Based Neurocognitive Assessment Battery (WebNeuro). Sample: 59 independent adults (32 men, 27 women), aged 40 + years (mean: 57.1, SD:11.0, range: 41–85), of which 26 recovered after hospitalization, 12 were not hospitalized and 21 did not have COVID-19. The first two groups were sampled ≥ 3 months after their recovery.Results: Significant differences were found between the two recovering groups compared to those who didn't suffer COVID-19 regards the performance of the research tools: WebNeuro in Processing Speed ($F(2,54) = 3.12$, $p = 0.052$), Anxiety index ($F(2,56) = 3.85$, $p = 0.027$), Depression index ($F(2,56) = 4.33$, $p = 0.018$), Identifying Emotions ($F(2,56) = 4.28$, $p = 0.018$) and Emotional state ($F(2,56) = 4.71$, $p = 0.013$). 4ITT: in the number of correct items ($F(2,53) = 15.42$, $p = 0.000$) and number of incorrect items ($F(2,53) = 10.65$, $p = 0.000$, FSQ: in psychological functioning, mental health ($F(2,56) = 3.28$, $p = 0.045$) and quality of social interactions sections ($F(2,56) = 5.03$, $p = 0.010$).
Conclusions: The findings add important information to understanding LC. They emphasize the differences in cognitive, emotional and functional state between recovering from COVID-19 and those not affected. It reinforces the need to develop services for the well-being of those recovering, while continuing to conduct research on the subject.

LB-O26

Long COVID: a look at the geriatric population

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Introduction: The pandemic caused by the SARS-CoV2 virus has affected much of the world's population, particularly the elderly and those with more comorbidities. Patients have been found to have "Long-COVID" symptoms, having an impact on the person's quality of life. This work aims to characterize patients with Long COVID, as well as to evaluate the relationship of Long COVID symptoms in the geriatric population (≥ 65 years).
Methods: This is a prospective, non-interventional, protocolized study. Patients with SARS-CoV2 infection for at least 3 months were included. Surveys were carried out [Modified Rankin Scale (mRS); Post-COVID functional status scale (PCSF); General Anxiety Disorder-7 (GAD-7); Fatigue Severity Scale (FSS); Modified Medical Research Council Dyspnea Scale (mMRC)]. Statistical analysis was performed using SPSS® v.27, considering $p < 0.05$ as statistically significant. Results: A population of 70 patients was obtained, 21 of them with ≥ 65 years. In the geriatric population, 13 male (61,9%), 19 with an autonomy assessed by the mRS of 0 (95,2%). Regarding the severity of COVID, 9,5% of patients had mild illness, 9,5% moderate illness, 61,9% severe illness and 19% critical illness. 20 patients (95,2%) required hospitalization, 4 of them (19%) required admission to the intensive care unit. The most common complaints were fatigue, dyspnea, cough, hair loss and memory changes. The geriatric population showed lower post-COVID functionality, evaluated by PCFS ($p = 0.004$), as well as greater complaints of dyspnea, evaluated by mMRC ($p = 0.022$). No differences found regarding fatigue or anxiety.
Conclusions: As the geriatric population is more vulnerable, it is extremely important to have studies that assess the most prevalent signs and symptoms of "LONG COVID" in this population, in order to direct and personalize their rehabilition.

LB-O27

Impact of frailty in patients admitted for elective trauma and orthopaedic surgery

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Introduction: Frailty is a significant risk factor for post-operative complications in elective and emergency surgery however despite this frailty is not routinely assessed in the perioperative setting.Objective: To document the prevalence of frailty in older adults undergoing

elective orthopaedic surgery within Sandwell and West Birmingham (SWBH) NHS Trust, and to explore the relationships between frailty, length of stay and post-operative complications.
Methods: Retrospective observational study of patients > /65 years old admitted for elective trauma and orthopaedic surgery between June and December 2021 within SWBH NHS Trust. Data collected from Unity clinical noting including patient demographics, clinical frailty score (CFS), length of stay and post-operative complications. If CFS was not documented, it was estimated based on documented functional status.
Results: Data analysis included 62 patients with a mean age of 76.4. 29 (47.5%) patients were identified as living with frailty (CFS > /5). Average (mean) length of stay was 4.21 days in those living with frailty compared with 3.03 days in those living without frailty. 31% of patients living with frailty experienced post-operative complications, compared with 17% in those living without frailty.
Conclusion: Frailty alone should not be a limiting factor for patients undergoing elective surgery however there is a strong argument to run perioperative multidisciplinary clinics as patients living with frailty have an increased risk of post-operative complications and increased length of stay. Integrating frailty scoring into the elective surgical pathway would enable patients living with frailty to be identified and reviewed by the MDT to assess risk and optimise medically prior to surgery.

LB-O28

Psychological correlates of anorexia of aging

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Introduction: Anorexia of aging may affect up to 30% of geriatric patients leading to caloric restriction, resulting in worse nutritional status and treatment outcomes. The aim of the study was to assess whether indicators of illness adaptation such as depressiveness, functional status, and resilience, are important factors connected with appetite levels of hospitalized patients.
Methods: Patients aged 60 and over were recruited from June 2022 to August 2022 while hospitalized on internal medicine wards of the University Hospital in Cracow. Data were collected using hospital documentation and patient interviews. We assessed adaptation to illness and hospitalization using the Hospital Anxiety and Depression Scale (HADS), Instrumental Activities of Daily Living Scale (IADL), and the "optimistic approach to life and ability to mobilize oneself in difficult situations" component of the Resiliency Assessment Scale (SPP-25). Appetite was assessed using the Council on Nutrition Appetite Questionnaire (CNAQ). Results: 55 patients were included. According to CNAQ, appetite disturbances were present in 63.6%. Weak correlations were identified between appetite and independence measured with IADL (rho – 0.292, p – 0.031), depressiveness measured with the depression subscale of HADS (rho—-0.362, p – 0.026) and optimistic approach to life and the ability to mobilize oneself in difficult situations (rho – 0.349, p – 0.009). No correlation between number of medications, chronic comorbidities and length of hospital stay was shown.
Conclusion: Independence, depressiveness, and optimistic attitude are correlated with hunger and satiety regulation in geriatric patients. Further research in psychological correlates of appetite disturbances in this group of patients is needed.

LB-O29

Current geriatrics training on long-term care in Mexico

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Introduction: By 2020, there are 15 million 60-year-old Mexicans and 742 geriatricians nationwide. Annually, there is an increasing number of geriatrics resident physicians (GRP). Locally in Nuevo León, for every 100 working individuals, there are 11 dependent older adults. Many of these will live in long-term care (LTC) facilities. ObjectivesDescribe current educational and research programs in the training of geriatricians in long-term care.
Methods: Cross-sectional, descriptive, analytical study in which a digital survey was applied to geriatricians and GRP currently practicing in Nuevo León, Mexico about current educational and research programs in LTC. Convenient sampling was performed.
Results: Of the 42 participants, 16 were geriatricians and 26 were GRP. About geriatricians, 75% were men, 25% work in LTC, 44% work in Mexican Institute of Social Security (IMSS), 44% work in public hospitals, 44% work in private hospitals. Only 38% of geriatricians received training on how to manage LTC. However, 88% of geriatricians consider that GRP should have proper training on LTC. Only 62% of GRP report that their educational program considers training in LTC and only 42% have had these clinical rotations. On one hand, 38% would like to work in an LTC facility when they graduate, and 58% are uncertain of it. On the other hand, 42% would like to run their own LTC facility, and 50% are uncertain of it. Regarding LTC research: 31% of geriatricians and 8% of resident physicians have participated in research papers that include LTC residents as the study population. All geriatricians and 92% of GRP consider that clinical research in LTC should be mandatory for graduation. Among the limiting factors to conduct clinical research in LTC that were most frequently underscored among geriatricians and GRP were funding, ethical aspects, and LTC owners.
Conclusions: Educational and research programs on LTC are cardinal in GRP to impact our aging community. Geriatricians are the experts in this care setting and it is important to encourage LTC research to improve outcomes. Collaborative work between faculties and government could enhance LTC research. Keywords: training, geriatrics, long-term care.

LB-O30

A Snapshot of Geriatric Rehabilitation: One Year Experience

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Objective: Frailty is a common condition in older adults, characterized by multimorbidity, physical weakness and nutritional deficit.

Frailty can be detected early and a prehabilitation treatment could reduce the incidence of disability.
Materials and Methods: Two-hundred-fifteen elderly patients were admitted to the Rehabilitation and Physical Medicine Unit of Policlinico Gemelli during one year. Patients were clinically assessed by Charlson Comorbidity Index (CCI) and blood sample values. Numerical Pain Rating Scale (NRS) and Hand Grip Test were assessed before (T0) and after (T1) hospitalization. Number of drugs and number of infections were recorded.
Results: Patients were originally hospitalized in orthopaedic, neurology and medical ward. Most patients (68%) after discharge return home. Negative correlations between albumin and CCI and between total protein and CCI were recorded. Positive correlation between CCI cognitive subscore and number of drugs and a negative correlation between that subscore and Vitamin D were detected. An improvement in NRS and in the handgrip strength were recorded. At discharge an increase in the number of drugs and the number of infections was noted.
Conclusions: The handgrip strength improvement increases quality of life. Pain management and NRS indicates a better recovery of activities of daily living. Malnutrition is a real problem, albumin is the principal negative acute-phase reactant and is related to a worse clinical condition and low vitamin D levels are associated with worse cognitive function. The goal of a Rehabilitation Unit is to create an effective multidisciplinary transitional care plan, involving the patient and caregivers, creating a continuity of care after discharge and a sustainable project.

LB-O31

30-day Readmissions Amongst Older Persons with Acute Stroke during COVID 19 pandemic: a single tertiary centre retrospective cohort study

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Introduction: Geriatric patients discharged after an acute stroke or transient ischaemic attack (TIA) are often readmitted due to different factors. This study aims to determine the patient factors and healthcare factors associated with hospital readmission within 30 days after acute stroke/TIA amongst the geriatric patients in a tertiary center during the COVID-19 pandemic.
Methods: We used data from the stroke database of the Geriatric department (February–December 2020) and hospital admissions data from the electronic medical records of UMMC. The first readmission for discharged patients was examined within 30, and 180 days. Covariates included age, level of dependency on admission and discharge (modified Barthel index), presence of delirium and the Charlson Comorbidity Index.
Results: Of the 68 patients in the sample, 8 (11.8%) were readmitted within 30 days. Among the 8 who were readmitted, 4 (50%) were due to infection (eg, pneumonia, sepsis, liver abscess), 2 (25%) were due to elective procedure (eg, brain computer tomography), 1 (12.5%) was due to recurrent stroke, and 1 (12.5%) was due to unstable angina. Though not statistically significant, there were higher 30-day readmissions in patients with severe CCI [$\geq$ 5] 7 (13.2%), those who were discharged home 6 (13%), those with hypoactive delirium 7 (15.9%), those who were discharged on a weekend 3 (21.4%), and those that had no carer training 4 (12.9%).
Key Conclusions: Multiple individual factors are associated with higher readmissions after a stroke/TIA. Patients discharged home after acute stroke/TIA needs to be intervened with better transition of care to reduce readmissions.

LB-O32

The Impact of the First and Second Wave of COVID-19 on the Nursing-sensitive and Rehabilitation Outcomes of Older Persons Presenting with Acute Stroke in a Geriatric Ward: a Single Tertiary Center Retrospective Cohort Study

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Introduction: The COVID-19 pandemic caused many hospitals to have a change in management of elderly stroke patients due to insufficient medical equipment and professionals leading to reduced or delayed admissions driving poorer outcomes. Objective: This study is to understand the impact of COVID-19 on the care of elderly patients with acute stroke and its effect on the rehabilitation and nursing outcomes of the patients in the Geriatric Ward of University Malaya Medical Center (UMMC).
Methods: A retrospective, single-center study was conducted in UMMC. Patients diagnosed with acute stroke, who were admitted into the Geriatric Ward from 2 eras, pre-pandemic (1st February 2019 to 31st July 2019) and pandemic (1st February 2020 to 31st July 2020) were collected and compared. Results: 67 patients were included in the study, with 33 patients in the pre-pandemic group and 34 patients in the pandemic group. The rehabilitation service provided was found to be slightly better during the pandemic with a shorter waiting period between admission into the ward and the first rehabilitation session and more rehabilitation sessions throughout the stay. However, this is not translated into better stroke outcomes as the results show no significant improvement in the mRS of patients. The results show that pressure ulcers were more common in the pandemic group (17 patients, 50%) compared to the pre-pandemic group (10 patients, 30.3%).
Conclusion: The COVID-19 pandemic did not significantly affect rehabilitation outcomes. However, the nursing outcomes were better in the pre-pandemic group compared to pandemic group.

LB-O33

After the Covid-19 Pandemic; Evaluation of the Change in Nutritional Habits of the Older Adults in Turkey

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The Covid-19 Pandemic has caused changes in many areas of life. In this process, institutions such as cafes, bars and restaurants in Turkey were kept closed and the population over the age of 65 was prohibited from going out. Considering that the pandemic process left traces on the daily living habits of society, the effects of the pandemic on various groups were investigated. With all these developments, as the changes in our eating habits are going from Covid 19 to normalization, it has been determined as the subject of the research to examine the change in the nutritional habits of the 65 + population, which is most exposed to these restrictions, and to evaluate the factors affecting this change. This study, it is aimed to determine the change in the eating habits of the elderly after the Covid-19 pandemic in Turkey and to present a unique study to the literature by determining the effective factors in the change of habits. A questionnaire was applied to 203 people 65 + randomly residing in Turkey. Consumption of fruits, vegetables, legumes and nuts increased.

Consumption of red and white meat, confectionery and packaged food and bread decreased. As a result of multiple regression analyses with SPSS no statistically significant relationship was found between gender, age, education level, income level, anxiety level, physical activity and changes in eating habits, a significant relationship was found between alcohol and cigarette use and dietary changes.

LB-O34

Atypical presentation of spondylodiscitis

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Case report: A 73-years-old woman, living with moderate dementia, carrier of a prosthetic mitral valve, and suffering aortic stenosis, consulting in emergency department with 2–3 weeks of functional impairment, low intakes and increasing backache. In the emergency department, we found her in a lethargic state. Laboratory tests showed a minimum increase of C-reactive protein, without leukocytosis. The patient was admitted to our acute geriatric unit for study (Barthel Index at admission 5/100). Surprisingly, an Enterococcus faecalis grew in blood cultures, so we startedintravenous treatment with Ampicillin and Ceftriaxone. In order to discard an infectious endocarditis, we executed up to 3 transthoracic echocardiography, without vegetations affecting any valve. We dismiss the transesophageal echocardiography due to her functional status (moderate frailty, leading to functional and cognitive impairment).Parallelly, considering the existence of bacteremia as well as a progressive backache, we decided to practice a dorso-lumbar computerized tomography (magnetic resonance was contraindicated). Diagnosis of L4-L5 spondylodiscitis was made and improvement began to be noticed as weeks went by with antibioticotherapy and rehabilitation treatment. Finally, after 3 weeks of intravenous treatment, the patient was discharged to an intermediate care center so as to complete rehabilitation and oral Amoxicillin treatment. Barthel index at discharge was 60/100.DiscussionSpondylodiscitis and endocarditis should be always borne in mind in our differential diagnosis of a bacteremia by E. faecalis, especially with non-specific backache. The atypical presentation of diseases remains a classic giant in geriatric medicine.

LB-O35

Is Inappropriate sexual behavior a forgotten pathology in nursing homes?

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Introduction: Old age is a time when sexuality is not well perceived. Research shows that sexuality plays an essential role in old age. However, inappropriate sexual behavior (ISB) are verbal or physical acts of an explicit or perceived sexual nature that are unacceptable in the social context in which they occur.
Medical history: diabetes mellitus, benign prostatic hypertrophy, bilateral hearing loss (hearing aids), urinary incontinence, COVID-19 infection.
Baseline Geriatric assessment: Functional: independent ambulation. Barthel index 100/100Cognitive: No cognitive impairment. Social: divorced, has two children, no family support. Clinical case: 89-year-old male patient living in a nursing home (Fundación-Ozanam in Zaragoza-Spain), presenting ISB for several years.
Evolution: The patient, over the years, had social problems at work, at home and also in the nursing home. He seeks sexual intimacy with impulsive, indiscriminate and invasive behaviors, losing control in front of the woman. He did not have adequate medical intervention for his sexual and social problems. Medical history shows a long-standing prescription of sildenafil 100 mg by Urology without any psychiatric or psychological intervention. After a multidisciplinary evaluation (psychology, urologist, nurses, social worker), he was prescribed a new medication (Sertraline 50 mg daily, Quetiapine 25 mg/12 h and Cyproterone acetate 50 mg/12 h). The patient improved his social/sexual behavior. He is now better integrated.Conclusion: Most elderly patients with IBS do not have multidisciplinary intervention; even this disease can damage their lives through loneliness and depression due to social problems. Early intervention is necessary.

LB-O36

Multiple myeloma (MM) IgA lambda in an elderly patient. about a case

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Introduction: MM is a hematologic neoplasm with abnormal destruction of immunoglobulins and their chains in the blood. Kidney failure is a serious and common complication that can lead to kidney failure in 20% of cases and may require renal replacement therapy. When debuting with such non-specific symptoms, early diagnosis and treatment are important to avoid kidney damage, since it aggravates complications and determines survival.
Methods: Analysis of the clinical case of an octogenarian female patient who consulted for bilateral low back pain and was admitted to the ward due to analytical findings of acute renal failure and mild hypercalcemia, completing the study with a diagnosis of MM IgA Lambda.
Clinical case: An 84-year-old female patient independent for basic activities of daily living, with no history of cognitive impairment and with good family support, who consulted for bilateral low back pain, predominantly left, not irradiated, associated with dyspneic sensation at moderate exertion and decreased intake. In the Emergency Department, laboratory tests were requested, which highlighted impaired renal function, mild hypercalcemia, and normocytic anemia, as well as protein in the urine test. He was admitted to the hospitalization floor for treatment continuity and to complete the study. Fluid therapy was adjusted, a transfusion was given, and zolendronic acid

was administered due to hypercalcaemia. Immunoelectrophoresis revealed a monoclonal component of 12%, and a bone marrow biopsy was requested by Hematology, revealing infiltration of aberrant plasma cells suggestive of MM. In the report on immunological markers, it stands out: 19.8% of plasma cells, 99.8% of them (19.74% of cell cellularity) are phenotypically aberrant: CD 138 + , weak CD38 + , CD19-, CD81-, CD56 + , CD28 + , CD27-/ + weak, CD117- and with monoclonal pattern CyIgLambda + . The DNA content of the cells is aneuploid (IADN 1.42) with an overall proliferative rate (S + G2/M) of approx 4%. A bone series is performed without typical punched-out lesions. PET-CT was requested with data of vertebral crushing of the metabolically active L3, probably osteoporotic, being assessed by Traumatology, prescribing a corset. After stabilizing the patient, chemotherapy treatment with lenalidomide and dexamethasone was started, ending the therapeutic cycle without incident.

Conclusions: Multiple myeloma represents 1% of all malignant tumors and 10% of hematological ones. There are related symptoms that can precede diagnosis by years and that by their nature can be very easily confused with other diseases, especially in elderly patients.

LB-O37

Right pertrochanteric fracture in a centenarian patient with trifascicular block. About a case

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Introduction: Surgical treatment of hip fractures in centenarian patients is a topic scarcely collected in the bibliography, despite being increasingly frequent due to the increase in population age. Similarly, in this population group thecomorbidity is high, highlighting the high prevalence of cognitive alterations and cardiorespiratory.

Methods: Analysis of the clinical case of an 102-year-old men with a right pertrochanteric fracture and trifascicular block. Results: 102-year-old patient admitted to the Traumatology Department after presenting an accidental fall with subsequent pain and impotence Functional right lower limb. They deny associated head trauma, being asymptomatic the previous days. In the initial anamnesis, the daughter refers to several episodes previous year of loss of consciousness with spontaneous recovery, which have associated courtship previously vegetative. As background, he is hypertensive, ex-smoker, diagnosed with recurrent bronchitis, previous episode of transient ischemic attack, intervened for right inguinal hernia. At the time of admission to treatment with: pantoprazole 40 mg, acetylsalicylic acid 100 mg, doxazosin 2 mg and valsartan/hydrochlorothiazide 160/12.5 mg. His baseline functional status is mild dependence for basic activities of the family. daily life with a Barthel index of 70, being occasional mixed incontinent and needing aid for personal hygiene. No history of cognitive impairment. The patient lived in his daughter's home for two years, without barriers architectural, not studied dependency law.

On physical examination: sounds rhythmic heartbeats at 40 bpm, no audible murmurs, with respect to limbs, we observed the right lower limb shortened and rotated, with pain to the palpation of the right femoral head. On admission, assessed by the Geriatrics socio-health unit, an electrocardiogram is reviewed observing trifascicular block at 42 beats per minute, given the presence of block of right bundle branch, left anterior hemiblock and first degree atrioventricular block in a patient with a history of syncopal episodes, the patient is monitored, evidencing episodes of Mobitz II type second-degree atrioventricular block were recorded. A consultation is made to the Cardiology Service, who, taking into account the previous baseline situation of the patient, they proceed to implant a permanent pacemaker. After placement of the definitive pacemaker, an evaluation is performed by the Anesthesiology prior to intervention for pertrochanteric fracture of the right femur, being the favorable result. Physiotherapy exercises were started in the room, tolerating without incidents.

Conclusion: Given the medical, functional and psychosocial complexity of the elderly patient suffering from hip fracture, several interdisciplinary treatment models have been designed, based on the importance of carrying out a holistic approach to these patients, worked on specific units whose common element is the combined treatment geriatric, orthopedic and rehabilitator.

LB-O38

Consequences of the COVID-19 pandemic in older people: "Maskfishing"

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81-year-old female with acute deterioration of independence in instrumental activities with impairment with a marked decrease in her sociability, and a marked decrease in the number of patients with of one month of evolution, associated with marked apathy to carry out leisure activities in company, without leisure activities in company, not previous. Lawton and Brody scale 6/8). No previous psychiatric history, laboratory tests were anodyne, no previous hospital admissions. The reintroduction of the chronology of the debut in the deterioration of social attitudes and instrumental activities was and instrumental activities, attention was drawn to the trigger of the end of the compulsory use of masks in the use of face masks indoors in Spain, with the exception of health care centers, nursing homes and and public transport (on April 20, 2022). In addition, the patient reported her need to wear a mask to hide her lack of mask to hide the lack of teeth in her smile, even at home, where she lived with her husband.The patient was diagnosed with social phobia in the context of the absence of a protective mask (recently known by the term "Empty Face Syndrome; Maskfishing "). She was benzodiazepines were prescribed in small doses for anxiety crises on an ad hoc rescue basis and on a scheduled outpatient basis, progressive psychological therapy was started with gradual removal of the mask in familiar places and in small groups.